

DESCRIPTION OF AMENDMENT

1. The purpose of this amendment is to delete Work Item 009, D-009 Potable Water Pneumatic Tank, Clean and Inspect from the Schedule of Pricing Attachment #1 and Specification Attachment #2 and extend receipt of proposals.
2. The Government has revised Attachment #2 Scope of Work dated Revision #1 dated 09/05/2023 in lieu of Scope of Work, Revision 0 dated 06/23/2023 to **delete** Work Item 009, Potable Water Pneumatic Tank, Clean and Inspect CANCELLED. See revised SOW on this amendment.
3. The Government has revised Attachment #1 Schedule of Pricing for the removal of Definite Item, D-009 Potable Water Pneumatic Tank, Clean and Inspect being cancelled from requirement.

The time and date set for receipt of proposal is extended to 06 October 2023 at 1:00 p.m. Pacific Time).

70Z08523Q2193700
AMENDMENT 0001



USCGC MIDGETT (WMSL 757)
SPECIFICATION FOR DOCKSIDE REPAIRS
FY2024

Developed By: Christian L Jaictin

(Rev-1, 05 September 2023)

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REVISIONS RECORD

This page is used to record specification revisions, which may have occurred subsequent to a Revision 0 (Rev-0) package. Information listed is intended to provide contractors and field unit personnel a means to ensure all the current specification revision pages are present when reviewing or utilizing this specification package.

DATE	REV#	WORK ITEM#	CHANGES MADE

NOTE : All work item and paragraph numbers listed above for a given revision correspond to same numbers in the previous revision. This revised specification is self-contained with all of the above listed changes incorporated.

CONSOLIDATED LIST OF REFERENCES

The below-listed documents form a part of this specification to the extent specified herein. Approval/publication dates or revision dates/numbers are also identified, to ensure that same document versions are used at the time of specification writing and during contract execution.

All Coast guard drawings, technical publications, and standard specifications will be provided to contractors by the Coast Guard at an appropriate time, or upon request, free of charge. Other Government documents may be accessed – free of charge – from links located on the SFLC website. Commercial sites provide access to their respective documents.

COAST GUARD DRAWINGS

- Coast Guard Drawing 418A-WMSL 801-001, Rev A, Booklet of General Plans
- Coast Guard Drawing 418A-WMSL-100-001, Rev A, General Arrangement
- Coast Guard Drawing 418A-WMSL-100-001, Rev B, General Arrangements
- Coast Guard Drawing 418A-WMSL-100-001, Rev B, General Arrangements
- Coast Guard Drawing 418A-WMSL-100-006, Rev A, Inboard and Outboard Profiles
- Coast Guard Drawing 418A-WMSL-101-005, Rev A, Shell Expansion Scantlings
- Coast Guard Drawing 418A-WMSL-114-001, Rev -, Fairwaters and Rope Guard Installation Details & L/M
- Coast Guard Drawing 418A-WMSL-114-002, Rev N-A, Stern Tube Bossing and Shaft Handling Padeyes
- Coast Guard Drawing 418A-WMSL-528-001, Rev A, Plumbing and Interior Deck Drain Diagram
- Coast Guard Drawing 418A-WMSL-530-001, Rev C, Potable Water System Diagram
- Coast Guard Drawing 418A-WMSL-530-001, Rev C, Potable Water Systems Diagram
- Coast Guard Drawing 418A-WMSL-540-001, Rev B, Fuel Oil Diagram
- Coast Guard Drawing 418A-WMSL-540-002, Rev A, Diesel Engine and Gas Turbine LO fill, Trans, & Service System
- Coast Guard Drawing 418A-WMSL-542-001, Rev A, JP-5 System Diagram
- Coast Guard Drawing 418A-WMSL-551-001, Rev A, Compressed Air Diagram
- Coast Guard Drawing 418A-WMSL-555-001, Rev A, AFFF System Diagram
- Coast Guard Drawing 418A-WMSL-593-001, Rev A, Bilge & Oil Pollution Control System Diagram
- Coast Guard Drawing 418A-WMSL-593-002, Rev B, Sewage System Diagram
- Coast Guard Drawing 418A-WMSL-801-001 Rev B, Booklet of General Plan
- Coast Guard Drawing 418A-WMSL-801-001, Rev -, Booklet of General Plans
- Coast Guard Drawing 418A-WMSL-801-001, Rev A Booklet of General Plans
- Coast Guard Drawing 418A-WMSL-801-001, Rev A, Booklet of General Plans
- Coast Guard Drawing 418A-WMSL-801-004, Rev A, Booklet of General Plans
- Coast Guard Drawing 750-WMSL_100_023, Rev J, Unit 2120 Structure – 1st Pltf to 2nd Deck Fr 35 to Fr 44 (ASC100212)
- Coast Guard Drawing 750-WMSL_100_13, Rev L, Unit 1210 Structure – Inner Bottom to 1st Platform – Fr 10 to Fr 22 (ASC100121)

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Coast Guard Drawing 750-WMSL_100_17, Rev L, Unit 1310 Structure – Inner Bottom to 1st Platform – Fr 22 to Fr 35 (ASC100131)

Coast Guard Drawing 750-WMSL_100_23, Rev J, Unit 2120 Structure – 1st Platf to 2nd Deck Fr 35 to Fr 44 (ASC100212)

Coast Guard Drawing 750-WMSL_100_40, Rev L, Unit 3210 Structure – Inner Bot to 1st Platform – Fr 76 to Fr 88 (ASC100321)

Coast Guard Drawing 750-WMSL_100_40, Rev L, Unit 3210 Structure – Inner Bot To 1st Platform – Fr 76 To Fr 88 (ASC100321)

Coast Guard Drawing 750-WMSL_520_1, Rev H, Seawater Cooling System Diagram (ASC520001)

Coast Guard Drawing 750-WMSL-085-012, Rev B, Docking Drawing (NSC 8 SRD) (ASC085007H)

Coast Guard Drawing 750-WMSL-085-025, Rev -, Compartment Areas & Volumes NSC 3 & Follow (AS3085012)

Coast Guard Drawing 750-WMSL-100-083 Rev A, General Arrangements NSC5 & Follow (AS5100001)

Coast Guard Drawing 750-WMSL-100-083, Rev A, General Arrangements NSC 5 & Follow

Coast Guard Drawing 750-WMSL-100-36, Rev N, Unit 3110 Structure 1st Platform and Below Frs 65-77 (ASC100311)

Coast Guard Drawing 750-WMSL-100-37, Rev H, Unit 3120 Structure – 1st Platf to 2nd Dk- Fr 64 to Fr 76 (ASC100312)

Coast Guard Drawing 750-WMSL-100-531, Rev D, Structural Mods Iwo New Aft Folding Cranes, Hamilton, James & Munro

Coast Guard Drawing 750-WMSL-114-012, Rev -, Rudder and Appendages Drawing (ASC114006H) (NSC 8)

Coast Guard Drawing 750-WMSL-161-001, Rev F, Strut Castings (ASC161001)

Coast Guard Drawing 750-WMSL-161-002, Rev A, Stern Tube & L/M (ASC161002)

Coast Guard Drawing 750-WMSL-167-001, Rev J, Manhole List Installation and Fabrication Details Ship Wide (ASC167001)

Coast Guard Drawing 750-WMSL-169-001, Rev E, HELO Hangar Door Installation (ASC169001)

Coast Guard Drawing 750-WMSL-243-007, Rev E, Propulsion Shafting System Arrangement (ASC243008)

Coast Guard Drawing 750-WMSL-243-021, Rev -, Propulsion Shafting and Appendage (ASC243001H) (SRD) (NSC 8)

Coast Guard Drawing 750-WMSL-300-024, Rev C, Unit 2240 - Main Dk Fr 44 to Fr 52 Arr of Elect Eqpt (ASC300224)

Coast Guard Drawing 750-WMSL-303-002, Rev D, Coordination of Protective Devices (ASC303004)

Coast Guard Drawing 750-WMSL-320-010, Rev G, Power Sys Deck Plan – Second Dk, Aft of Fr 52 (ASC3200016)

Coast Guard Drawing 750-WMSL-320-012, Rev G, Power Sys Deck Plan – Main Deck Fwd of Fr 52 (ASC320007)

Coast Guard Drawing 750-WMSL-320-016, Rev F, Power Sys Deck Plan – 01 Level (ASC320009)

Coast Guard Drawing 750-WMSL-320-038, Rev B, Electrical One Line Diagram (ASC320001)

Coast Guard Drawing 750-WMSL-320-579, Rev -, Electrical Installations Iwo New Aft Folding Cranes

Coast Guard Drawing 750-WMSL-436-011, Rev E, Fire Detection Sys Deck Plan (ASC436009)

Coast Guard Drawing 750-WMSL-436-013, Rev C, Fire Detection Sys Cable Running Sheets (ASC436010)

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Coast Guard Drawing 750-WMSL-436-014, Rev -, Fire Detection and Control System Schematic (ASC436028)

Coast Guard Drawing 750-WMSL-500-002, Rev E, Resilient Hanger Details & Installation (ASC500002)

Coast Guard Drawing 750-WMSL-501-004, Rev D, Misc Independent Tanks Design and Details and L/M (ASC501004)

Coast Guard Drawing 750-WMSL-505-001, Rev C, List of Relief Valves (ASC505001)

Coast Guard Drawing 750-WMSL-505-006, Rev D, List of Hoses (ASC505006)

Coast Guard Drawing 750-WMSL-508-001, Rev C, Piping And Machinery Insulation And L/M (ASC508001)

Coast Guard Drawing 750-WMSL-516-002, Rev J, Chilled Water System Diagram (ASC516002)

Coast Guard Drawing 750-WMSL-528-015, Rev E, Plumbing & Interior Deck Drains and Vent System Unit 2110 (ASC528211-PD)

Coast Guard Drawing 750-WMSL-528-502, Rev -, Forward Gray Water Tank Transfer to Aft Tank

Coast Guard Drawing 750-WMSL-528-503, Rev A, Aft Gray Water Tank Strainer Install

Coast Guard Drawing 750-WMSL-528-504, Rev -, FWD Gray Water Tank Strainer Install

Coast Guard Drawing 750-WMSL-530-001, Rev G, Potable Water Systems Diagram

Coast Guard Drawing 750-WMSL-530-019, Rev D, Potable Water Unit 3120

Coast Guard Drawing 750-WMSL-530-019, Rev E, Potable Water Unit 3120 (ASC 530312-PW)

Coast Guard Drawing 750-WMSL-556-008, Rev D, Anchor Windlass Hydraulic Diagram (ASC556005)

Coast Guard Drawing 750-WMSL-556-019, Rev D, Misc. Hydraulic Piping Unit 1240 (ASC556124-HY)

Coast Guard Drawing 750-WMSL-562-002, Rev C, Rudder (ASC562002)

Coast Guard Drawing 750-WMSL-572-002, Rev D, Elevator Arr & Instl (ASC572002)

Coast Guard Drawing 750-WMSL-582-001, Rev D, Anchoring, Mooring, and Towing Arrangement (ASC582001)

Coast Guard Drawing 750-WMSL-582-002, Rev H, Mooring and Towing Arrangement (ASC582002) (Unsigned)

Coast Guard Drawing 750-WMSL-582-503, Rev -, Mooring Arrangement

Coast Guard Drawing 750-WMSL-583-004, Rev K, Stern Launch & Recovery Arrangement & Details (ASC583004)

Coast Guard Drawing 750-WMSL-583-508, Rev -, Installations IWO Aft Folding Cranes

Coast Guard Drawing 750-WMSL-593-011, Rev B, Solid Waste System Schematic (ASC593026)

Coast Guard Drawing 750-WMSL-801-013, Rev -, Booklet of General Plans (ASC801001H) (SRD) (NSC 8)

Coast Guard Drawing FL-1702-11, Rev -, Inspection Of Sheaves

Coast Guard Fleet Drawing FL-1702-11, Rev -, Inspection of Sheaves

COAST GUARD PUBLICATIONS

Coast Guard Commandant Instruction (COMDTINST) M10360.3, Jun 2006, Coatings and Colors Manual

Coast Guard Technical Publication (TP) 7082, SWBS 533, Dec 2020, Potable and Chilled Water Tanks

Coast Guard Technical Publication (TP) 7087, Jan 2022, Pressure Relief Valve

Coast Guard Technical Publication (TP) 7107, SWBS 531, Jun 2007, Reverse Osmosis Water Purifier-SW6994463CNG

Coast Guard Technical Publication (TP) 7108A, SWBS 573, Jan 2022, Stores Elevator - Model 20833

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Coast Guard Technical Publication (TP) 7165, 7-Feb 2019, Ship Service Switchboards 1S, 2S, 3S and 1SP Shore Power Volume 1

Coast Guard Technical Publication (TP) 7166, 7-Feb 2019, Ship Service Switchboards 1S, 2S, 3S and 1SP Shore Power Volume 2

Coast Guard Technical Publication (TP) 7167, 7-Feb 2019, Ship Service Switchboards 1S, 2S, 3S and 1SP Shore Power Volume 3

Coast Guard Technical Publication (TP) 7181A, SWBS 169, Jan 2022, Helo-Hangar Doors - operation & Maintenance Manual

Coast Guard Technical Publication (TP) 7346A, SWBS 593, May 2019, Bilge Water Separator Ultra-Sep

Coast Guard Technical Publication (TP) 7809, SWBS 583, Apr 2021, Boat Retrieval Equipment – Boat Hoist, Centerline & Carriage Winches

Coast Guard Technical Publication (TP) 7903, SWBS 583, Apr 2019, Aft Boat handling system –Model FB90-28

Coast Guard Technical Publication (TP) 7946, SWBS 593, May 2021, Incineration Plant - Installation, Operation, Maintenance & Spare Parts

Coast Guard Technical Publication (TP) 9556, SWBS 436, Feb 2022, Fire Detection System (For Hull 755)

Coast Guard Technical Publication (TP) 9557, SWBS 582, Jun 2021, Forward & Aft Capstan – Model 4A0100

Coast Guard Technical Publication (TP) 9701, SWBS 436, Sept 2020, Fire Detection System (For Hull 756)

Coast Guard Technical Publication (TP) 9847, SWBS 436, July 2022, Fire Detection System (For Hull 758)

Fire Prevention and Response

Surface Force Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020 General Requirements

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), Latest Version, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), Latest Version, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 0850 (SFLC Std Spec 0850), 2022, General Requirements for Drawing Preparation

Surface Forces Logistics Center Standard Specification 3020 (SFLC Std Spec 3020), 2022, Overhaul AC Electrical Motors

Surface Forces Logistics Center Standard Specification 3041 (SFLC Std Spec 3041), 2020, Shipboard Electrical Cable Test

Surface Forces Logistics Center Standard Specification 3041 (SFLC Std Spec 3041), 2022, Shipboard Electrical Cable Test

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- Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2020, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation
- Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2022, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation
- Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2022, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, And Installation
- Surface Forces Logistics Center Standard Specification 3100 (SFLC Std Spec 3100), 2022, Inspect, Test and Recondition AC Synchronous Machines In-Place
- Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2020, Auxiliary Machine Systems
- Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2022, Auxiliary Machine Systems
- Surface Forces Logistics Center Standard Specification 5550 (SFLC Std Spec 5550), Latest Version, Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures
- Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures
- Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), Latest Version, Requirements for Preservation of Ship Structures
- Surface Forces Logistics Center Standard Specification 6341 (SFLC Std Spec 6341), 2022, Install Interior Deck Covering Systems
- Surface Forces Logistics Center Standard Specification 8634 (SFLC Std Spec 8634), 2022, Drydocking

OTHER REFERENCES

- Air Capable Ship Aviation Bulletin 1L (2009)
- American National Standards Institute (ANSI/EASA) AR100-2020, Recommended Practice for the Repair of Rotating Electrical Apparatus
- American National Standards Institute/American Water Works Association (ANSI/AWWA) C652, 2019, Disinfection of Water-Storage Facilities
- American Society of Mechanical Engineers (ASME) A17.2, Guide for the Inspection of Elevators, Escalators and Moving Walks.
- ANSI/EASA Standard AR100-2015: Recommended Practice for the Repair of Rotating Electrical Apparatus
- ANSI/EASA Standard AR100-2020, Recommended Practice for the Repair of Rotating Electrical Apparatus.
- ASTM International (ASTM) D1330, 2022, Standard Specification for Rubber Sheet Gaskets
- Code of Federal Regulations (CFR) Title 29, Part 1910, Subpart T, 2023, Commercial Diving Operations
- Code of Federal Regulations (CFR) Title 29, Part 1915, Occupational Safety and Health Standards for Shipyard Employment
- MIL-D-16791G, 2020, Detergents, General Purpose (Liquid, Nonionic)
- MIL-PRF-24613A, 2017, Deck Covering Materials, Interior, Cosmetic Polymeric
- MIL-PRF-24667C w/Int. Amendment 1, 2018, Coating System, Non-Skid, for Roll, Spray, or Self-Adhering Application
- National Fire Protection Association (NFPA) 72, 2019 Edition, National Fire Alarm and Signaling Code

USCGC MIDGETT (WMSL-418) DOCKSIDE AVAILABILITY FY2024

- Naval Sea System Command (NAVSEA) Technical Manual (TM) S6435-TP-MMI-010, Rev 5, Angle Relief Valves BCS Series for Air/Gas Service
- Naval Sea Systems Command (NAVSEA) Technical Manual (TM) S6435-TL-MMI-010, Rev 9, Angle Relief Valve – Type D50
- Naval Sea Systems Command (NAVSEA) Technical Manual (TM) S6435-UU-MMO-010, Rev 5, Angle Relief Valve – Model D50FF
- NAVSEA 4730/3, 2004, Driver Hull Inspection Data
- NAVSEA S0600-AA-PRO-170, Rev 2 Change A, 2014, Underwater Ship Husbandry Manual, Chapter 17 Inspections
- NAVSEA Technical Publication T9074-AD-GIB-010/1688, (TP 1688), July 2012, Requirements for Fabrication, Welding, and Inspection of Submarine Structure
- NFPA 70E: 2015 Edition Standard for Electrical Safety in the Work Place
- Schneider Electric Maintenance and Field Testing Guide for Masterpact NT and NW Circuit Breaker Instruction Bulletin No.06131b1202 Oct 2014
- The Society for Protective Coatings (SSPC) Surface Preparation Specification No. 1 (SSPC-SP 1), 2016, Solvent Cleaning
- The Society for Protective Coatings (SSPC) Surface Preparation Specification No. 11 (SSPC-SP 11), 2016, Bare Metal Power Tool Cleaning
- The Society for Protective Coatings (SSPC) Surface Preparation Specification No.11 (SSPC-SP 11), 2013, Power Tool Cleaning to Bare Metal
- The Society for Protective Coatings (SSPC) Surface Preparation Specification No.3 (SSPC-SP 3), 2018, Power Tool Cleaning
- Underwater Ship Husbandry Manuals
- USEPA Test Method 1664, Feb 1999, N-Hexane Extractable Material and Silica Cell Treated N-Hexane Extractable Material by Extraction and Gravimetry.

CONSOLIDATED LIST OF GOVERNMENT-FURNISHED PROPERTY

The following is a list of property, which the Government will furnish. This list supersedes any other material obligations indicated or implied by referenced drawings.

WORK ITEM	MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST (\$/UNIT)
9	N	Bladder, Water	NSN: 4510-01-601-2564 PN: 660603996	1 ea.	2,506.00
15	N	Spring, Sheave	NSN: 5360-01-672-8829 PN: P2-965-0024	8 ea.	185.00
15	N	Pins, Spring	NSN: 5315-01-672-8220 PN: B2-066-0056	6 ea.	400.00
15	N	Pins, Cotter	NSN: 5315-01-672-8187 PN: 81-E-0628	6 ea.	1.50
15	N	Flat Washer, 2 ½” Nominal, TY A 5”OD x 2 5/8” ID x 0.238” THK	NSN: 5310-01-672-8737 PN: 61-E-16	6 ea.	1.50
15	N	Jacking Bolt, Sheave	NSN: 5306-01-672-9033 PN: B2-033-0026	8 ea.	275.00
15	N	Lubricating Oil, Gear	PN: MOBILGEAR SHC 220	40 gal.	100.00
15	N	Carriage Winch Brake Spring	PN: P2-965-0021 Rev A	2 ea.	1,400.00
15	N	Carriage Winch Brake Band Assembly	PN: C2-423-0007	2 ea.	150.00
15	N	Centerline Winch Brake Spring	PN: P2-965-0021 Rev A	1 ea.	1,400.00
15	N	Centerline Winch Brake Band Mounting Spring	PN: P2-965-0022 NSN: 5360-01-598-3504	1 ea.	1,750.00
15	N	Centerline Winch Brake Band Assembly	PN: C2-423-0005 NSN: 3950-01-598-3240	1 ea.	154.00
15	N	Centerline Winch Clutch Shoe	PN: A2-084-0004	2 ea.	2,700.00
15	N	Centerline Winch Torsional Clutch Spring	PN: P2-965-0020	1 ea.	950.00
15	Y	*CB-OTH Mark IV	N/A	1 ea.	N/A
15	Y	*Long Range Interceptor II	N/A	1 ea.	N/A
16	Y	*CB-OTH Mark IV (Coast Guard Drawing 26B-CB-IV-801-001)	N/A	1 ea.	N/A
16	Y	*Long Range Interceptor II (LRI-II) Cutter Boat	N/A	1 ea.	N/A
22	Y	Monitor, Smart Bilge	NSN: 2040-01-600-0112	1 ea.	4,700.00
26	N	Strainer, Sediment (3	NSN: 4730-01-428-3199	2 ea.	5,500.00

USCGC MIDGETT (WMSL-418) DOCKSIDE AVAILABILITY FY2024

		inch IPS, Simplex Basket, 1/2 inch Perforated)			
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*Government-loaned property, which shall be returned to the vessel upon completion of the availability.

**New or refurbished equipment that the Government may provide for installation in place of existing equipment.

***Government-furnished property, which is to be supplied by either the vessel or the C4IT ServiceCenter

CONSOLIDATED LIST OF CRITICAL INSPECTION ITEMS

The following is a list of work items, which contain Critical Inspection reports, which the Contractor must complete within the first 25% of the availability contract period (see SFLC Std Spec 0000, paragraph 3.2.6.5 (Inspection report particulars)):

Work Item	Title
1	Tanks (Ballast), Clean and Inspect
3	Tanks (MP Fuel Storage and Overflow), Clean and Inspect
5	Circuit Breakers (Draw Out), Inspect and Test
6	Fire Detection System, Inspect and Test
8	Reverse Osmosis, System Groom
12	Anchor Windlass Flexible Hoses, Renew
13	Anchor Windlass Level 2, Inspect and Repair
16	Folding Boom Cranes, Biennial Maintenance, Perform
17	Helo Hangar Door, Inspect and Test
18	Sewage Holding Tank(s), Clean and Inspect
20	Grey Water Holding Tank(s) and Lift Stations, Clean and Inspect
22	Oily Water Separator (OWS) System, Inspect and Groom

PRINCIPAL CHARACTERISTICS

418' WMSL	
PHYSICAL	
Length overall	418' 0"
Length between perpendiculars	390' 0"
Maximum beam	54' 0"
Beam @ 01 level	47' 9-1/8"
Depth (01 level @ side to baseline)	39' 2-3/4"
01 deck camber foredeck	1/4" in 1'-0"
Minimum berth depth	20' 0"
Height of highest projection	Approximately 119'
Draft, design	14.40'
Design displacement	3925 long tons
MACHINERY	
Two diesel engines	MTU 20V, 20-cylinder 9,730 SHP each
One gas turbine	General Electric LM2500; 29,500 SHP
Type of propulsion	CODAG
Electrical system	24 Volt DC
Two controllable pitch propellers	Rolls-Royce 5 blade, 14' 0" diameter; 229 RPM max
Two reduction gears	RENK
One cross connect gear	RENK
HULL	
Hull material	5086 Aluminum
	HSLA-80 Steel
	ABS EH 36 Steel
	ABS AH 36
Frame spacing	
FWD of FR 9	2' 3"
FR 9 to FR 10	6' 9"
FR 10 to FR 98	4' 1"
FR 98 to FR 99	3'-8"
ELECTRICAL	
Power	Three 1360 kW, 450 V, 60 Hz, 3 Phase, 1800 RPM Caterpillar 3512B diesel engines with Baylor ship service generators
Shore tie cable	Seven MIL-C-24368/2 (NATO) shore power receptacles, 400 A each
TANK CAPACITIES	
Diesel oil	220,359 gal
Fresh water	12,454 gal
JP-5 Fuel	35,182 gal

General Requirements

1. SCOPE

1.1 Intent. This standard specification invokes general requirements for conducting vessel repairs performed by commercial contractors at a Coast Guard facility for Coast Guard vessels.

1.2 Term interchangeability. The terms 'Contractor', 'CG Yard', 'NAVSTA EVERETT', 'shipyard', 'Base', and 'Coast Guard Industrial' are used interchangeably in this specification. Where the primary service provider is Coast Guard personnel, references to contractor and other noted descriptors within this specification or within drawings, publications, SFLC Standard Specifications or other commercial and military references are deemed the same as prime service provider.

2. REFERENCES

COAST GUARD DRAWINGS

None

COAST GUARD PUBLICATIONS

Coast Guard Commandant Instruction (COMDTINST) M10360.3 (series), Coatings and Color Manual
Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), Latest Version,
General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), Latest Version,
Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 5550 (SFLC Std Spec 5550), Latest Version,
Fire Prevention and Response

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), Latest Version,
Requirements for Preservation of Ship Structures

OTHER REFERENCES

Code of Federal Regulations (CFR) Title 29, Part 1915, Occupational Safety and Health Standards for
Shipyards Employment

NAVSEA Technical Publication T9074-AD-GIB-010/1688, (TP 1688), July 2012, Requirements for
Fabrication, Welding, and Inspection of Submarine Structure

3. REQUIREMENTS

3.1 General. The Contractor must conform to all requirements specified in SFLC Std Spec 0000 and in this item, as applicable, during the performance of this availability. The requirements of this WI applies to all work under the scope of this contract, whether explicitly stated in all following work items or not, and to all other work subsequently authorized by changes, modifications, or extensions to the contract.

3.1.1 The Contractor must conform to all requirements specified in SFLC Std Spec 5550 and in the Fire Protection and Response work item, as applicable, during the performance of this availability.

3.1.1.1 Fire Safety Plan submission. The Contractor must submit a copy of the CFR 1915, Subpart P, Fire Safety Plan with the Contractor's bid when work will be conducted in a Contractor-owned facility. Include any MOA(s) with local firefighting facilities.

3.1.1.2 Fire Plan submission. The Contractor must submit a copy of the developed availability specific fire plan, as requested in the Fire Protection and Response work item, seven (7) days before the Arrival Conference.

NOTE

NAVSEA drawings listed will be available FOR INSPECTION ONLY from the Coast Guard Port Engineer post-award. SFLC will not redistribute NAVSEA documents. Contractors can apply to NAVSEA headquarters directly for copies.

3.2 Contractor-provided fire watch personnel. The Contractor must provide fire watch personnel and equipment.

3.2 Fire watch requirements. The Contractor must refer to 3.3.1.3 (Fire watch requirements) of SFLC Std Spec 0000, in accomplishing the following task:

- Provide portable fire extinguishers for Coast Guard fire watch personnel. Coast Guard fire watch is in lieu of contractor personnel during the hours of 0800-1600, Monday through Friday, and limited to two Coast Guard fire watch personnel.
- Provide fire watch personnel and fire extinguishers for the duration of the availability period, during and beyond noted Coast Guard fire watch support.

3.3 Preservation requirements. The Contractor must accomplish all preservation tasks, including touch-ups, in accordance with SFLC Std Spec 6310.

3.3.1 Brand name approval. Ensure that all contractor-furnished coatings are in accordance with SFLC Std Spec 6310, Appendix C (Authorized Coatings for Use on Cutters and Boats).

3.3.2 Coating colors and system color schemes. The Contractor must obtain a written KO authorization to deviate from any coatings required in SFLC Std Spec 6310 Appendix C before work.

3.3.3 In-process quality control measures. The Contractor must abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for "critical-coated surfaces").

3.3.3.1 Quality control requirements. The Contractor must abide by the following when performing preservation related inspections. The following measurements must be randomly spaced throughout for the purposes of providing a representation of the entire prepared or coated surface.

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3.3.3.1.1 Surface profile measurements. One surface profile measurement must be taken for every 200 square feet for the first 1000 square feet; for each additional 500 square feet or less, one profile measurement must be taken. Profile measurements must be taken in accordance with SFLC Std Spec 6310, paragraph 3.1.8.3 (Surface profile measurements). A “measurement” for surface profile is defined as follows:

- ASTM D4417, Method B: One profile measurement is the average (mean) of 10 individual readings.
- ASTM D4417, Method C: One profile measurement is the average (mean) of 2 individual readings.

3.3.3.1.2 Soluble salt conductivity measurements. 5 conductivity measurements must be taken every 1000 square feet. For submerged (immersed) applications conductivity measurements must not exceed 30 microsiemens/cm. For non-submerged (non-immersed) applications conductivity measurements must not exceed 70 microsiemens/cm. If a conductivity check fails, clean the surface in accordance with SFLC Std Spec 6310, paragraph 3.1.8.5 (Soluble salt removal).

3.3.3.1.3 Coating thickness measurements. Three area measurements must be taken for the first 1000 square feet; for each additional 1000 square feet, perform an additional area measurement. A “measurements” for coating thickness is defined as follows:

- SSPC-PA 2 defines an area measurement as 5 separate spot measurements randomly spaced throughout a 100 square foot area.
- SSPC-PA 2 defines a spot measurement as 3 gage readings and each new gage reading the probe must be moved to a new location within a 1.5 inch diameter circle defining the spot.

3.4 Welding and brazing requirements. The Contractor must perform all welding and allied processes, and NDE in accordance with SFLC Std Spec 0740.

3.4.1 HY-130 material substitution. The Contractor must be aware that HY-130 steel plating is no longer commercially available. For the purpose of performing flight deck repairs on US Coast Guard WMEC-270 “B-Class” cutters, Weldox 900 steel plating has been approved as a replacement for HY-130. Due to the similarity in material properties and weldability of HY-130 and Weldox 900, all welding procedures and welder qualifications for welding Weldox 900 must be the same as those outlined in NAVSEA TP 1688 as applicable for welding HY-130.

3.4.2 Standard spec modification. For any welding involving HY-130 on the flight deck of WMEC-270 “B-Class” cutters, perform all welding and allied processes, and non-destructive evaluation (NDE) in accordance with NAVSEA TP 1688. The Contractor must be aware that the welding requirements specified in this document take precedence over paragraph 3.3.6 of SFLC Standard Spec 0000 for the purpose of welding involving HY-130.

3.4.3 Approval to weld HY-130. To obtain Coast Guard approval to weld on HY-130 steel for WMEC-270 “B-Class” cutters, the Contractor must provide written Performance Qualification Records (PQR’s) for each process to be used. The PQR’s must be approved by one of the regulatory agencies affirming that the WPS meets the welding requirements of NAVSEA TP 1688. In addition, the Contractor must ensure that all subcontractors, prior to performing welding operations, have qualified procedures by meeting all the requirements set forth in this document.

NOTE

NAVSEA approval is NOT required for welding procedures submitted but the procedures must be reviewed and shown to satisfy the requirements set forth in NAVSEA TP 1688, by a welding regulatory agency. The requirements for welding Weldox 900 are considered the same as those for welding HY-130.

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3.5 Environmental protection requirements. The Contractor must adhere to the following environmental protection requirements in accordance with the SFLC Stand Spec 0000:

3.5.1 USCG facilities. The Contractor must provide and maintain environmental protection as defined in SFLC Std Spec 0000 Appendix B, Requirements for Environmental Protection at USCG Facilities, during the performance of this availability. Contractor must plan for and provide environmental protective measures to control pollution that develops during normal practice, as well as plan for and provide environmental protective measures required to correct conditions that develop during the project. Contractor must comply with applicable Federal, state, and local laws, codes, ordinances, and regulations in their entirety. Any reference to a specific portion of a Federal, state, or local law, code, ordinance, or regulation in this or any other item must not be construed to mean that relief is provided from any other sections of the law, code, ordinance, or regulation.

3.5.1.1 USCG Generator status. The activity Generator Status for the Coast Guard Facility is H1869030036.

3.5.1.2 Plans and permits. The CG Facility has unit specific permits including the following:

- Spill Prevention Control and Countermeasures (SPCC) Plan: Unit has a SPCC Plan which requires certain unit-specific procedures be followed for the storage, inspection, and transfer of petroleum products in containers 55 gallons or greater.
- National Pollutant Discharge Elimination System (NPDES) Storm Water (SW) Permit: Unit has an NPDES SW permit which requires unit-specific procedures be followed for the storage and inspection of equipment and materials which may contribute contaminants to storm water discharges.
- Air Emission Permit: Unit has an Air Emission Permit which requires unit-specific procedures be followed for the emissions of VOCs and hazardous air pollutants.

3.5.2 Test and procedures. The Contractor is required to promptly conduct tests and procedures for the purpose of assessing whether operations are in compliance with applicable Environmental Laws. Analytical work must be done by qualified laboratories; and where required by law, the laboratories must be certified.

3.5.3 Regulatory notifications. The Contractor is responsible for all regulatory notification requirements in accordance with Federal, State and local regulations. In cases where the Coast Guard must also provide public notification, such as storm water permitting, the Contractor must coordinate with the Contracting Officer or COR, and if work is being performed at a USCG Facility, the local Facility Engineer or Engineering Officer. The Contractor must submit copies of all regulatory notifications to the Contracting Officer and the local Facility Engineer or Engineering Officer prior to commencement of work activities. Regulatory notifications must be provided for including but not limited to demolition, renovation, National Pollutant Discharge Elimination System (NPDES) defined site work, and remediation of controlled substances such as asbestos, hazardous waste, and lead paint.

3.5.4 Environmental manager. The Contractor must appoint in writing an Environmental Manager for the project, who is responsible for coordinating Contractor compliance with Federal, State, local, and station environmental requirements. The Environmental Manager must ensure compliance with Hazardous Waste Program requirements, including hazardous waste handling, storage, manifesting, and disposal; implement the Contractors' Environmental Management Plan; ensure that all environmental permits are obtained, maintained, and closed out; ensure compliance with Storm Water Program Management requirements; ensure compliance with Hazardous Materials including storage, handling, and reporting requirements; as well as coordinate any remediation of regulated substances such as lead, asbestos, and polychlorinated biphenyl (PCB). This may be a collateral position; however the individual must be trained to accomplish the following duties; ensure waste segregation and storage compatibility requirements are met; inspect and manage Satellite Accumulation areas; ensure only authorized personnel add wastes to containers; ensure all Contractor personnel are trained in 40 CFR requirements

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and individual position requirements; coordinate removal of waste containers; and maintain the Environmental Records binder and required documentation, including environmental permits compliance and close-out.

3.5.5 HW disposal. Contractor must comply with SFLC Std Spec 0000 Appendix B, Requirements For Environmental Protection At USCG Facilities for HW disposal, and ensure that waste removals are conducted during normal business hours (0800-1600) on Monday through Friday (excluding holidays).

3.5.6 Additional Requirements. The Contractor must be aware of the following:

3.5.6.1 No Contractor or Subcontractor must have the authority to sign a Hazardous Waste Manifest using the Coast Guard facility's EPA Generator ID Number or remove contract generated hazardous waste from the Coast Guard facility without COR or KO-approval.

3.5.6.2 Local environmental regulations at the Government facilities may be more stringent. As with all environmental regulations, the Contractor must prepare for and comply with local and state regulations.

3.5.6.3 Coast Guard facilities do not maintain Facilities Response Plans (FRPs) per 33 CFR 154. Contractor must furnish the FRP when required for over-the-water liquids transfers to and from vessels and is required for oil/fuel transfers to/from vessels for 250 barrels (10,500 gallons) or more.

3.6 Local Policy. The Contractor must refer to site (e.g., Base) Regulations and Instructions for details regarding local policies (e.g. crane services, parking, or facility usage).

3.7 SFLC Standard Specification approved changes. The Contractor must be aware that the following are approved changes to published SFLC 2020 Edition Standard Specifications and supersede published content:

3.7.1 SFLC Standard Specification 8636. Add missing paragraphs between 3.2 and 3.5 of Std Spec 8636 as follows:

“3.3 Access cut boundaries. The Contractor shall ensure that access cuts comply with the requirements and restrictions detailed in the following and in SFLC Std Spec 0740 and referenced codes.

3.3.1 Location of boundaries. Boundaries of access cuts and closure plates shall, in general, be located between principal ship framing, bulkheads, and other structural members and shall be at least three inches from any of these members or from the toes of other welds. A reduction in this three-inch minimum may be approved by the KO on a case-by-case basis provided sufficient clearance is maintained for welding and inspection requirements. The boundaries of access cuts and closure plates should land on existing butts or seams, wherever practicable. The boundaries of prior access cuts should be utilized wherever possible. Boundaries may extend across one or more frames as required for the size of the opening.

3.3.2 Access hole dimensions and arrangements. Holes or access cuts shall be the minimum size necessary and shall be in accordance with the following:

- Rectangular access cuts and closure plates welded into primary hull structure shall be at least 12 inches wide in the lesser dimension.
- For circular access cuts, the minimum diameter shall be $4T$, where T = thickness of the involved structural member, but not less than three inches.
- Circular closure plates for access cuts less than two feet in diameter shall be

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dished 1/16 to 1/8 inch to allow for shrinkage when welded.

- Corners of rectangular access cuts and closure plates shall have a minimum radius of 6 inches except when a boundary lands on an existing hull longitudinal seam or transverse butt weld.
- Corners at an existing seam or butt shall intersect at a 90-degree angle.
- Cuts that are to cross existing butts or seams shall do so at an angle of 90 degrees plus or minus 15 degrees.
- In primary hull structure, existing welds forming the boundary of a cut shall be cut back 3 inches beyond the toe of the access cut, except that the cut back shall not intersect or cross an existing weld, frame, or structural member. In which case, the cut back may be reduced to a minimum of two inches in length.
- Existing welds crossed by the cut shall not be cut back.

3.3.3 Primary hull structure. Primary Hull Structure includes the shell, main strength decks, principal longitudinal bulkheads, vertical keel, deep web girders and stiffeners designed to withstand the ship bending stress.

3.3.4 Mechanically fastened joints. Welding closer than six inches to a mechanically fastened joint should be avoided. When access cuts cross or come within six inches of a mechanically fastened joint, the fasteners shall be checked for tightness and if necessary, loose fasteners shall be seal welded or removed, and replaced for a distance of 6 inches beyond the edge of the cut. When a cut crosses a mechanically fastened seam the cut plates shall be repaired using single V welds backed with glass tape (MIL-C-20079) to prevent fusion between the mechanically fastened plates.

3.4 Ship integrity maintenance. The Contractor shall maintain safety and ship integrity by installing temporary guarding and coaming, in addition to weathertight and watertight closures. Remove these temporary fabrications after closing the hull access, and grind surfaces flush in way of removals. For shell plating cuts made at or below the waterline where temporary closures are impractical, the Contractor shall secure each vulnerable compartment and subdivision to minimize potential damage to the extent permitted by the scope and urgency of the work.

3.4.1 Guarding. Install temporary guards in accordance with 29 CFR 1915.73.

3.4.2 Coaming. Ensure that in areas where flammable liquids may be stored, a 4 inch high metal coaming shall be installed on the surface of the deck with tack welds and fully sealed with caulking compound. The coaming shall encircle the access cut in the deck.

3.4.3 Weathertight and contamination closures. Fabricate temporary closures, using fire retardant material, before cutting access openings and install closures whenever access is not in use. Closures shall be:

- Constructed to protect the access from inclement weather and entry of contaminants (shall include a coaming or dam on the deck to redirect rain runoff away from the opening).
- Fitted with fasteners that permit rapid installation and removal.
- Able to support a minimum of 150 pounds per square foot for horizontal

USCGC MIDGETT (WMSL-418) DOCKSIDE AVAILABILITY FY2024 deck closures.

- Where the access opening is in way of a removed hatch, scuttle or door, the closure shall be configured to allow normal passage of ship's personnel and equipment.

3.4.4 Watertight closures. Ensure that access openings created four feet or less above the maximum anticipated waterline shall include temporary watertight closures when the vessel is waterborne.

NOTE

NAVSEA S0600-AA-PRO-160/CH16 provides requirements for design, fabrication, and installation of temporary watertight closures."

3.7.2 SFLC Standard Specification 0000. Replace paragraph 3.3.4 Vessel access, as follows:

"3.3.4 Vessel access. During work at the Contractor's facility, provide access and/or egress to and from the vessel in accordance with 29 CFR 1915.74, Subpart E. Provide a minimum of two gangways that have the following:

- Adequate walking surface width and strength and be safely secured.
- A railing, with a mid-rail, on each side of the gangway, and a turn table if necessary.
- Substantial steps properly secured and equipped with at least one handrail, when the upper end of the gangway rests on or is flush with the top of the bulwark of the dock.
- Nets or other suitable protection on both sides, when there is a danger of personnel falling between the ship and the dock. Nets and other suitable protection must extend beyond the projected area of the access and egress points so as to catch personnel that may be falling outward: i.e., the nets must be wider than the gangway.
- Proper trimming at all times.
- Adequate illumination for their full length.
- Separated by one-fourth the length of the vessel, at a minimum, as to mitigate the possibility that an incident could block both means of escape."

3.7.3 SFLC Standard Specification 8635. Replace and add paragraphs as follows,

"3.3.10.4.1 Contractor-furnished supporting equipment. Provide all hoses and fittings needed to supply water to the system. Provide pressure gauges at the connection(s) to the ship and the furthest firehose station to allow personnel to clearly read the gage-face to demonstrate or record the required water pressure is available at all energized portions of the system."

"3.2.3 Shipboard access/egress and routing of temporary services. Maintain a primary and secondary means of access/egress for each vessel, where practicable. Pre-plan for the installation of temporary services to minimize the total number of service leads penetrating the hull by maximizing the use of backbones and/or manifolds for industrial services. Pre-planning for the installation of temporary services shall include removal (first in, last out, when no longer required). Pay

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special attention to transitional spaces (cross passages, top and bottom of stairwells) where services could potentially fall and restrict emergency personnel egress and/or casualty responder access."

"3.2.3.2 Materials used for suspending temporary services. Temporary services shall be suspended at regular intervals, to prevent impeding personnel access/egress and emergency response, using a high temperature line that meets the noncombustibility test requirements contained in reference (e). When using steel wire rope, or other potentially abrasive material, an anti-chafing material shall be used to prevent damage of the temporary service line. When available, temporary service lines may be run through the ship's structural elements (i.e., cable ways, light stanchions, etc.). When the routing of temporary services overhead is not practicable, temporary services, rigging of hoses, welding leads, and temporary lights shall be clear of the decks on temporary "trees" or brackets and be arranged to minimize tripping and other hazards."

"3.2.3.5 Quick Disconnect Fittings. QDFs shall be located within 10 feet of designated vertical and horizontal fire zone boundaries. When practicable, QDFs shall be installed within 10 feet of hull penetrations used for personnel access, to facilitate the deployment of smoke control curtains. QDFs must be capable of being disconnected safely on pressurized or energized systems unless approved for use as described in paragraph 3.2.3.7. Pressurized and disconnected QDFs must prevent wetting of energized equipment. For hull openings used for services only, QDFs are not required, provided the opening is fitted with an air and smoke control "sock" that remains in place around the services. Air and smoke control curtains are not intended to provide an airtight seal of the hull opening. Rather, the curtains or socks, are to ensure that emergency responders can control the flow of air and smoke through the opening to allow for de-smoking of compartments and minimize "chimney" effects. Curtains shall be made of fire-resistant fabric meeting the requirements of NFPA 701."

"3.2.3.7 Service lines crossing fire zone boundaries. When service lines transit a fire zone boundary which cannot be safely disconnected locally (e.g., high voltage cables), the COR shall approve, in advance, the method to safely secure and remove the service."

3.7.4 SFLC Standard Specification 6310.

3.7.4.1 On page 2, replace REFERENCE "MIL-PRF-24667C, May 2008, Coating System, Non-Skid, for Roll, Spray, or Self-Adhering Application" with "MIL-PRF-24667D, FEB 2021, Coating System, Non-Skid, for Roll, Spray, or Self-Adhering Application"

3.7.4.2 On page 9, replace the NOTE under paragraph 3.1.8.5 as follows:

NOTE

De-ionized water may be used in cases where available fresh water has excessive chloride/chlorine content. Submit a CFR prior to using de-ionized water.

4. NOTES

4.1 QA inspection forms. QA inspection forms (QA-1 thru QA-5), required in SFLC Std Spec 6310 to be completed and submitted during preservation of “critical-coated surfaces”, are provided at the end of this document.

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QA-1 - QUALITY ASSURANCE INSPECTION FORM
(PRESERVATION CHECKLIST)

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE
LOCATION OF WORK (INCL. FRAME #'S)		AREA (SQFT)	

CHECKPOINT 1 – COATING SYSTEM COMPLIANCE			
	Ensure all coatings are in compliance with SFLC Std Spec 6310, Appendix C.		
CHECKPOINT 2 - PAINT STORAGE			
	Ensure all coatings are kept at a temperature of 65 to 85°F at all times, unless otherwise specified by the coating mfg.		
CHECKPOINT 3 - AMBIENT CONDITIONS			
	Ensure surface and surrounding temperatures are each between 50 and 90°F for water-containing coatings, and 35 and 95°F for other coatings, unless otherwise specified by the coating manufacturer(s).		
	Ensure maximum relative humidity (RH) is as follows, from surface preparations through final curing of topcoat: 50% for tanks, voids, and vent plenum; and 85% for all other areas, unless otherwise specified by manufacturer(s).		
	Ensure surface temperature is at least 5°F above the dew point, unless otherwise specified by the coating mfg.		
CHECKPOINT 4 - PRE-SURFACE PREPARATION			
	Remove surface contaminants (soluble salts, loose rust, mud, and marine growth) with low pressure fresh water wash down (maximum 5,000 psi). If oil and grease are present, perform solvent cleaning, as per SSPC SP-1.		
	Verify equipment setup, blast media, and surface preparation methods match designated test coupon.		
CHECKPOINT 5 - SURFACE PREPARATION			
	Verify environmental conditions (see CHECKPOINT 3).		
	Ensure cleanliness of prepared surface is as per specification (i.e.: SSPC SP-11, SP-10, SP WJ-2...).		
	Verify surface anchor profile using ASTM D4417-Methods B or C against SFLC Std Spec 6310. Conduct profile readings at a minimum of 5 locations for the first 1000-sqft area, and 2 locations for each succeeding 1000-sqft area.		
	Measure soluble salt conductivity in accordance with SSPC-Guide 15. Conduct 5 measurements per each 1000-sqft area (max. threshold: 70 microsiemens/cm for non-submerged surfaces, 30 microsiemens/cm for submerged surfaces).		
CHECKPOINT 6 - PRIMER COAT APPLICATION			
	Verify environmental conditions (see CHECKPOINT 3).		
	Verify proper mixing and stand-in (induction) times.		
	Ensure no paint is applied when the temperature is expected to drop to freezing before the paint has dried.		
	Ensure surfaces are completely dry, unless otherwise allowed by the coating manufacturer(s).		
	Verify wet film thickness (WFT) at random, to prevent under or over application. Verify final DFT.		
	Brush out all runs, sags, drips, and puddles.		
	Perform visual inspection for holidays and other defects.		
CHECKPOINT 7 – STRIPE COAT APPLICATION			
	Verify environmental conditions (see CHECKPOINT 3).		
	Ensure overcoating window is as per manufacturer’s instructions.		
	After primer coat (mist coat after inorganic zinc), brush-apply un-thinned coat of same primer paint over edges, weld seams, cut-outs, and areas of complex geometries @ 3-4 mils wet film thickness (WFT).		
CHECKPOINT 8 – TOP COAT APPLICATION			
	Verify environmental conditions (see CHECKPOINT 3).		
	Ensure overcoating window is as per manufacturer’s instructions.		
	Verify proper mixing and stand-in (induction) times, as applicable.		
	Verify wet film thickness at random, to prevent under or over application.		
	Brush out all runs, sags, drips, and puddles.		
CHECKPOINT 9 – FINAL INSPECTION			
	Verify final system dry film thickness. Conduct 5 sets of 3 readings for each of the first 3 100-sqft areas, followed by 5 sets of 3 readings for each succeeding 1000-sqft area.		
	Ensure that system cure is in accordance with manufacturer's recommendation for intended service.		
	Ensure potable water tank exhaust ventilation is maintained continuously from and during coating application through final system cure, to exhaust all solvent to the atmosphere and to prevent solvent entrapment.		
	For immersion coatings (including tank U/W body), record date and time of the following events: Final coat application: / ; Return to service or removal from environment controls: /		
CHECKPOINT 10 – RECORD KEEPING			
	Complete, sign, and submit all provided QA Inspection Forms.		
NAME OF QP-1/NACE INSPECTOR	SIGNATURE	CERT. #	DATE / TIME
NAME OF CG REPRESENTATIVE	SIGNATURE	UNIT	DATE/TIME

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QA-3a - QUALITY ASSURANCE INSPECTION FORM
(SURFACE PROFILE LOG FOR PROFILE MEASUREMENTS IAW ASTM D4417-METHOD-C)

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE
LOCATION OF WORK (FRAME REFERENCES)			AREA (SQFT)

SURFACE PREPARATION METHOD	PROFILE ACHIEVED (MILS)		
	MIN	MAX	MEAN
SSPC-SP-10/NACE No. 2	<input type="checkbox"/>		
SSPC-SP WJ-2/NACE WJ-2	<input type="checkbox"/>		
SSPC-SP-3	<input type="checkbox"/>		
SSPC-SP-11	<input type="checkbox"/>		
SSPC-SP-11 (inaccessible area)	<input type="checkbox"/>		
Brush-blasting (non-metallic substrate)	<input type="checkbox"/>		
ABRASIVE MANUFACTURER:		ABRASIVE SIEVE SIZE:	

PLACE SURFACE PROFILE REPLICA TAPES IN THE SPACES PROVIDED BELOW, TO SERVE AS PERMANENT QA RECORD. MAINTAIN A SEPARATE LOG FOR EACH LOCATION. WHEN AN AREA IS DIVIDED INTO SEPARATE SECTIONS, MAINTAIN A SEPARATE LOG FOR EACH SECTION.					
Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here	
Reading (mils):		Reading (mils):		Reading (mils):	
Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here	
Reading (mils):		Reading (mils):		Reading (mils):	
Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here	
Reading (mils):		Reading (mils):		Reading (mils):	
Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here	
Reading (mils):		Reading (mils):		Reading (mils):	
Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here		Place Surface Profile Replica Tape Here	
Reading (mils):		Reading (mils):		Reading (mils):	
MEAN MIL READING (IAW ASTM D4417-METHOD C) FOR ABOVE 15 READINGS:					

NAME OF QP-1/NACE INSPECTOR	SIGNATURE	CERT. #	DATE / TIME
NAME OF CG REPRESENTATIVE	SIGNATURE	UNIT	DATE/TIME

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QA-3b - QUALITY ASSURANCE INSPECTION FORM
(SURFACE PROFILE LOG FOR PROFILE MEASUREMENTS IAW ASTM D4417-METHOD-B)

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE
LOCATION OF WORK (INCL. FRAME #'S)			AREA (SQFT)

SURFACE PREPARATION METHOD	PROFILE ACHIEVED (MILS)		
	MIN	MAX	MEAN
SSPC-SP-10/NACE No. 2	<input type="checkbox"/>		
SSPC-SP WJ-2/NACE WJ-2	<input type="checkbox"/>		
SSPC-SP-3	<input type="checkbox"/>		
SSPC-SP-11	<input type="checkbox"/>		
SSPC-SP-11 (inaccessible area)	<input type="checkbox"/>		
Brush-blasting (non-metallic substrate)	<input type="checkbox"/>		
ABRASIVE MANUFACTURER:			ABRASIVE SIEVE SIZE:

RECORD MEASUREMENTS TAKEN IN THE SPACES PROVIDED BELOW, TO SERVE AS PERMANENT QA RECORD. MAINTAIN SEPARATE LOG FOR EACH LOCATION. WHEN AN AREA IS DIVIDED INTO SEPARATE SECTIONS, MAINTAIN A SEPARATE LOG FOR EACH SECTION.

Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Mean Mils Reading (IAW ASTM D4417-Method B for above 10 readings (by column):					
Mean Reading (mils)					

NAME OF QP-1/NACE INSPECTOR	SIGNATURE	CERT. #	DATE / TIME
NAME OF CG REPRESENTATIVE	SIGNATURE	UNIT	DATE/TIME

USCGC MIDGETT (WMSL-418) DOCKSIDE AVAILABILITY FY2024
 QA-5 - QUALITY ASSURANCE DATA FORM
 (COATING THICKNESS)

(Use one sheet for each sequence)

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE

COATING MFG	PRODUCT NAME	BATCH #	INDUCTION TIME	COATING SYSTEM SEQUENCE (PRIMER/TOUCHUP/3RD COAT, ETC.)

DRY FILM THICKNESS (DFT) MEASUREMENTS IAW SSPC-PA 2.						
SPOT	1	2	3	4	5	AVERAGE VALUE
*BASE METAL READING (BMR)						
*Required, If Magnetic Pull-Off (Type I/Banana) Gauge Is Used.						

LOCATION (FRAME REFERENCE):								
SPOT	1	2	3	4	5	OVERALL AVG. DFT	ADJUSTMENTS	
1							AVG. BMR	DEVIATION
2								
3							BEFORE ADJUSTMENTS	AFTER ADJUSTMENTS
AVG.								

LOCATION (FRAME REFERENCE):								
SPOT	1	2	3	4	5	OVERALL AVG. DFT	ADJUSTMENTS	
1							AVG. BMR	DEVIATION
2								
3							BEFORE ADJUSTMENTS	AFTER ADJUSTMENTS
AVG.								

LOCATION (FRAME REFERENCE):								
SPOT	1	2	3	4	5	OVERALL AVG. DFT	ADJUSTMENTS	
1							AVG. BMR	DEVIATION
2								
3							BEFORE ADJUSTMENTS	AFTER ADJUSTMENTS
AVG.								

APPLICATION METHOD (AIRLESS, CONVENTIONAL SPRAY, ROLLED)	AVERAGE DFT

NAME OF QP-1/NACE INSPECTOR	SIGNATURE	CERT. #	DATE / TIME
NAME OF CG REPRESENTATIVE	SIGNATURE	UNIT	DATE/TIME

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4.2 Tank and Void Assessment form.

SFLC-ESD-25		TANK AND VOID ASSESSMENT FORM			
<input type="button" value="PRINT"/> <input type="button" value="RESET"/>					
GENERAL DATA Note: Use SFLC-ESD-29 for Compartments other than Tanks & Voids.					
Inspector's Name:		Organization:		Contact Info:	
Cutter Name:		Cutter Class:		Hull:	
Tank:		Service:		Tank Area:	Gallons:
Solid Balast:	Access Compt:		Date:	Assessment Reason:	
ACCESS DATA					
Manhole and cover condition:			Tank Penetration Condition:		
VENT OVERFLOW DATA					
Present: <input type="radio"/> Yes <input type="radio"/> No		Check Valve Installed: <input type="radio"/> Yes <input type="radio"/> No		Check Valve Operates Properly: <input type="radio"/> Yes <input type="radio"/> No	
LADDER DATA					
NR of Ladder(s) Present: <input type="radio"/> Yes <input type="radio"/> No		Ladder Damaged: <input type="radio"/> Yes <input type="radio"/> No		Ladder Material:	
TANK LEVEL INDICATOR (TLI) DATA					
TLI Present in Tank: <input type="radio"/> Yes <input type="radio"/> No		TLI Damaged: <input type="radio"/> Yes <input type="radio"/> No		TLI Type:	
SOUNDING TUBE DATA					
Sounding Tube Present in Tank: <input type="radio"/> Yes <input type="radio"/> No		Sounding Tube Damaged: <input type="radio"/> Yes <input type="radio"/> No			
Striker Plate Damaged (>50%): <input type="radio"/> Yes <input type="radio"/> No					
CATHODIC PROTECTION DATA					
Cathodic Protection in Tank: <input type="radio"/> Yes <input type="radio"/> No		Total Zincs:		Number of Zincs > 50% Depleted:	
1-6 Cleanliness & Housekeeping					
Clean to light layer or residue		1-2 (G)	Comments:		
Loose accumulation scale		3-4 (Y)			
Impending residue and sediments		5-6 (R)			
% 1-6 Coating Systems					
All Painted Surfaces		1-2 (G)	Comments:		
		3-4 (Y)			
		5-6 (R)			
% 1-6 Structural					
Corrosion		1-2 (G)	Comments:		
		3-4 (Y)			
		5-6 (R)			
Pitting & Grooving		1-2 (G)	Comments:		
		3-4 (Y)			
		5-6 (R)			
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SFLC-ESD-25	TANK AND VOID ASSESSMENT SHEET
<div style="border: 1px solid black; padding: 2px; display: inline-block;">PRINT</div>	

Structural Integrity Data			
Estimated Total Linear Feet of Structure Requiring Repair:		Estimated Total Square Feet of Plating Requiring Repair:	
Cracks/ Fractures Present:	<input type="radio"/> Yes <input type="radio"/> No	Buckling/Deflections/ Distortions Present:	<input type="radio"/> Yes <input type="radio"/> No
Holes Present:	<input type="radio"/> Yes <input type="radio"/> No	Material Wastage Present:	<input type="radio"/> Yes <input type="radio"/> No
All Welds Intact:	<input type="radio"/> Yes <input type="radio"/> No	Structural Evaluation Recommended:	<input type="radio"/> Yes <input type="radio"/> No

PHOTOGRAPHS
Pictures Taken (enter quantity):
Note: To add pictures to this form, Work Station must have Adobe Acrobat (not Reader) installed. Add all photos and photo comments to a word document and save file. Open this form and click "Combine Files". Add the document with photos you've just saved and save as a new combined .pdf files.

Additional Comments:

WORK ITEM 1: Tanks (Ballast), Clean and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the following tank(s):

TABLE 1 – LIST OF TANKS

TYPE OF STRUCTURE	LOCATION	CAPACITY - 95% (GALLONS)	TANK CONTENT DISPOSAL (GALLONS)
Ballast Tank	5-16-2-W	14,459	2,169
Ballast Tank	5-22-0-W	12,123	1,818
Ballast Tank	5-72-0-W	5,587	838
Ballast Tank	5-82-0-W	21,190	3,179

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 750-WMSL_100_13, Rev L, Unit 1210 Structure – Inner Bottom to 1st Platform – Fr 10 to Fr 22 (ASC100121)

Coast Guard Drawing 750-WMSL_100_17, Rev L, Unit 1310 Structure – Inner Bottom to 1st Platform – Fr 22 to Fr 35 (ASC100131)

Coast Guard Drawing 750-WMSL-100-36, Rev N, Unit 3110 Structure 1st Platform and Below Frs 65-77 (ASC100311)

Coast Guard Drawing 750-WMSL_100_40, Rev L, Unit 3210 Structure – Inner Bot to 1st Platform – Fr 76 to Fr 88 (ASC100321)

Coast Guard Drawing 750-WMSL-167-001, Rev J, Manhole List Installation and Fabrication Details Ship Wide (ASC167001)

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes

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Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022,
Requirements for Preservation of Ship Structures

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor must submit a CIR for the inspections listed in the following paragraph(s):

- 3.7 Inspection

3.1.2 Tech Rep.

None.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- TLIs
- Piping
- Residual tank contents/fluids

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.2.1 Perform an initial operational test of each tank TLIs to demonstrate that each radar head/sensor is functional (i.e., Digital readout is displayed).

3.2.2 Ensure that there is interface/communication between the TLI sensor and the Machinery Control and Monitoring System (i.e. Digital readout at the TLI is identical to that displayed).

3.3 Tank opening. The Contractor must remove the tank manhole cover(s) and ventilate the confined spaces in accordance with SFLC Std Spec 0000, Paragraphs 3.3.1.1 and 3.3.1.2. The Contractor must provide fall protection to cover tank manhole cover when opened for ventilation/work.

3.4 Tank content and waste disposal. The Contractor must dispose of residual tank contents listed in Table 1 and any cleaning fluids in compliance with all applicable Federal, state, and local laws, ordinances and regulations. Notify the COR (in writing) at least 48 hours prior to removal of wastes and fluids. Document a complete chain of custody record of the removed tank contents and generated wastes,

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from the vessel to the point of final destination or delivery. Submit chain of custody record to the COR upon completion of work.

3.5 Temporary plugs. The Contractor must plug all inlet and outlet piping in the tank to prevent contaminants from entering the tank or piping system. Use plugs with an attached lanyard, ring or other system that will ensure plugs are not lost in the pipe openings.

3.5.1 Plug log. The Contractor must keep a written record of all installed plugs. Keep a separate list for each tank. Maintain a plug accountability log posted immediately outside the tank to prevent any of the installed temporary plugs from being lost inside the tank or left behind inside at tank closure. Submit this log to the COR after completion of work item

3.5.2 The Contractor must ensure that all plugs are removed from each tank upon completion of work in the tank.

3.6 Tank cleaning. The Contractor must clean all designated tank interior surfaces free of all foreign materials, such as residual water, sediment, sludge, rust, or biological growth, taking care not to damage the coating system (if applicable).

3.6.1 The Contractor must accomplish all requirements of SFLC Std Spec 6310, 3.1.6.4 (Surface contaminant removal) to achieve the cleanliness requirements of SSPC-SP 1, including a low-pressure (maximum 5,000 psi) fresh water wash down of the surfaces.

3.6.2 Remove cleaning media and residues continuously from the tank during the washing process. Remove any residual wash media and wipe up residual moisture with clean lint-free cloths. Wipe the interior tank structure dry and free of all cleaning agents.

3.7 Inspection. The Contractor must visually inspect all tank interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Submit a CIR including the following, as applicable:

- Tank structural condition.
- Condition of tank coating, including dimensions, percentage, location, and type of coating failure.
- Tank level indicator (TLI) and/or float switch condition.
- Sounding/vent tube and striker plate condition.
- Suction and discharge piping condition.
- Fastener material and condition.
- Zinc anode condition (remaining percentage)
- Pit measurements
- Ultrasonic thickness (UT) measurements

3.8 Pit measurement. The Contractor must measure 100 pits within each tank/location listed in Table 1, in accordance with SFLC Std Spec 0740, Paragraph 3.13 (Evaluation of pitting corrosion). The results of these measurements must be included in the inspection report, showing where pit measurements were taken and the depth of the pit.

3.9 Ultrasonic thickness (UT) measurement. The Contractor must take UT measurements in the surrounding area of any pit measuring greater than 25% of plate thickness. UT measurements must be taken in the four quadrants at an equal-distant radius from the pit center until full plate thickness is measured. For bidding purposes, assume 200 UT measurements per tank listed in Table 1. UT measurements must be conducted in accordance with SFLC Std Spec 0740, Appendix C, using Coast Guard Drawings 750-WMSL_100_13, 750-WMSL_100_17, 750-WMSL-100-36, and 750-WMSL_100_40 as guidance. The results of these measurements (original thickness, measured thickness, and any observed cracks) and the locations where they were taken must be included in the inspection report.

3.10 Substrate fairing and repair by filling Epoxy for shallow pits and small corrosions (i.e. pits < 25% or corrosions < 25%). The Contractor must repair small pin holes, shallow pitted substrates (with remaining plate thicknesses over 75% of required plate thicknesses), and fair corroded substrates (with remaining cross sections over 75% of required cross section areas), after removing coating, in accordance with SFLC Std Spec 6310 and manufacturers' instructions.

- Procure 6 kits of Epoxy Fairing Compounds (e.g. Belzona 1111, 0.5 Gallon/5 Kg Kit or equivalent) to conduct repairs.
- Turn over all unused kits to the COR.

NOTE

“Substrate fairing and repair by filling Epoxy for shallow pits and corrosions (i.e. pits < 25% or corrosions < 25%)” is a supplement barrier intending to help delay penetration.

3.11 Tank closing. The Contractor must ensure that the tank(s) remain open for approximately 24 hours after completion of any authorized repair and preservation procedures. Notify the COR at least 48 hours prior to closing the tank(s). After satisfactory inspection by the Coast Guard Inspector and completion of all authorized repairs, remove all installed temporary plugs and close tank manhole cover(s) using new gasket material in accordance with Coast Guard Drawing 750-WMSL-167-001, in the presence of the Coast Guard Inspector. Chase threads on studs to ensure even installation of the access covers. Renew all nuts, washers, and grommets (including those that are missing) in accordance with Coast Guard Drawing 750-WMSL-167-001. Submit a CFR with the completed plug log.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.12 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

3.12.1 Perform a post-work operational test of each tank TLIs to demonstrate that each radar head/sensor is functional (i.e., Digital readout is displayed).

3.12.2 Ensure that there is interface/communication between the TLI sensor and the Machinery Control and Monitoring System (i.e. Digital readout at the TLI is identical to that displayed).

3.13 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces, and all manhole cover external surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs). Do not paint any manhole cover fasteners.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 2: Tanks (Ballast), Preserve (Partial)

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to prepare and coat 33% of the surfaces of the tanks listed in Table 1.

TABLE 1 – LIST OF TANKS

LOCATION	COMPO	SYSTEM/APPENDIX (SFLC STD 6310)	TOPCOAT COLOR	PRESERVE LEVEL
Ballast Tank 5-16-2-W	Inner Bottom, Ovhd&Bhd Structures	Tanks and Voids (Ballast Tanks) Option I or II	Match Existing	Partial
Ballast Tank 5-22-0-W	Inner Bottom, Ovhd&Bhd Structures	Tanks and Voids (Ballast Tanks) Option I or II	Match Existing	Partial
Ballast Tank 5-72-0-W	Inner Bottom, Ovhd&Bhd Structures	Tanks and Voids (Ballast Tanks) Option I or II	Match Existing	Partial
Ballast Tank 5-82-0-W	Inner Bottom, Ovhd&Bhd Structures	Tanks and Voids (Ballast Tanks) Option I or II	Match Existing	Partial

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 750-WMSL_100_13, Rev L, Unit 1210 Structure – Inner Bottom to 1st Platform – Fr 10 to Fr 22 (ASC100121)

Coast Guard Drawing 750-WMSL_100_17, Rev L, Unit 1310 Structure – Inner Bottom to 1st Platform – Fr 22 to Fr 35 (ASC100131)

Coast Guard Drawing 750-WMSL-100-36, Rev N, Unit 3110 Structure 1st Platform and Below Frs 65-77 (ASC100311)

Coast Guard Drawing 750-WMSL_100_40, Rev L, Unit 3210 Structure – Inner Bot to 1st Platform – Fr 76 to Fr 88 (ASC100321)

Coast Guard Drawing 750-WMSL-167-001, Rev J, Manhole List Installation and Fabrication Details Ship Wide (ASC167001)

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2022, Temporary Hull Accesses

OTHER REFERENCES

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.11 (SSPC-SP 11), 2016, Bare Metal Power Tool Cleaning

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep. The Contractor must provide the services of a Qualified Technical Representative to accomplish the following on site:

- Serve as an Independent Coating Tech Rep. Provide the services of a Certified Coating Inspector, having successfully completed the NACE-International Coating Inspector Program (CIP), Level 3 - Peer Review with Marine Specialty.
- Accomplish applicable requirements in SFLC Std Spec 0000, Paragraph 3.2.4.2.2 (Coating Tech Rep).
- Oversee the Preservation Plan requirements in SFLC Std Spec 6310, Paragraph 3.2 (Preservation Plan).
- Review and sign daily reports summarizing work. See forms QA-1 thru QA-5 provided in the General Requirements.

3.1.2.1 Qualifications/certifications. Submit the Coating Tech Rep's qualifications/certifications in accordance with SFLC Std Spec 0000, 3.2.4.2.2.3 and 3.2.4.2.4, include name, certificate number and documented completion of NACE Marine Coating Technology Course and Exam.

3.1.2.2 Submit the name and résumé of the Tech Rep to the COR at the Arrival Conference. Include the dates of services the Qualified Tech Rep will be on site as per their subcontract documentation.

NOTE

This work item requires the use of an NACE-Certified Tech Rep. The use of a QP-1 certified company/contractor alone is not sufficient.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

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3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- TLIs
- Piping, supports, brackets

3.1.5 Temporary access openings. Due to limited access to work areas, the Contractor may, with express permission of the KO (via submission of a CFR), cut access holes to facilitate accomplishment of the work specified herein. Perform all work required to open and close the access openings in accordance with SFLC Std Spec 8636.

3.1.6 Work plan. The Contractor must provide a work plan (preservation plan including protection plan) for the Tank Preservation listed in Table 1 in accordance with SFLC Std 6310, paragraph 3.2 (Preservation Plan) to COR before or on Arrival Conference.

3.1.6.1 Pre-work preservation conference. Prior to the start of any preservation work, the Contractor must facilitate a conference meeting with the KO, COR, Coast Guard Inspector(s), Contractor and Contractor's representative able to speak to technical preservation details and requirements.

- QC/QA Program. The requirements of SFLC Std Spec 0000 3.2.4.2.2.3, Contractor's QC/QA Program (as outlined in SFLC Std Spec 0000, 3.2.4 QC/QA Program),
- Material Receipt Conformance (as outlined in SFLC Std Spec 6310, 3.1.1.2 Material Receipt Conformance),
- Preservation plan (as outlined in SFLC Std Spec 6310, 3.2 Preservation plan), SFLC Std Spec 6310 3.1.1.3.1 and 3.1.9 must be formally reviewed and approved by the KO,
- PDS and SDS. Only submit Manufacturer's Product Data Sheets (PDS) and Safety Data Sheets (SDS) if NAVSEA approved ASTM F718 sheets are not available.

3.2 In-process quality control measures. The Contractor must abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for "critical-coated surfaces"). Surfaces being preserved are considered "critical-coated surfaces". QA Forms and NACE III Reports must be submitted to the COR for review no later than 24 hours after completion of work.

3.2.1 Daily reports. At the conclusion of each work day coating has been applied, the Contractor must provide Daily Reports generated and signed by the Coating Tech Rep. Daily reports must summarize work accomplished that current day, work to be accomplished the following day, any and all materials used during work that day, any and all readings taken and/or data collected (i.e. environmental readings, DFT, WFT, etc...) identifications of work locations, time and type of any inspections conducted with the results of such inspection(s) and must also include descriptions any events of non-conformance in relation to the specification, applicable references, standards, and technical data sheets (i.e ASTM F718s).

3.2.2 Environmental readings. Environmental readings must be accomplished within the agreed upon hours according to the interval outlined in SFLC Std Spec 6310, Appendix D3.1.

3.3 Ventilation requirements. The Contractor must accomplish all requirements of SFLC Standard Spec 6310, 3.1.16 (Ventilation requirements for confined spaces) and SFLC Standard Specification 0000, 3.3.1.1 (Temporary ventilation) throughout the entirety of this work item.

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3.4 Surface preservation. The Contractor must prepare and coat 33% of all tank interior surfaces (including internal surfaces of manhole cover(s), manhole cover hull ring(s) extending outward to the weld line that ties the hull ring into the tank plating on the tank exterior).

3.4.1 Power tool clean all affected surfaces to “bare metal” in accordance with SSPC-SP 11, in lieu of using abrasive blasting; and feather edges of existing intact coating to the prepared areas, in order to provide a smooth transition with the new paint.

3.4.2 Inspection. The Contractor must inspect all cleaned surfaces and exposed substrates of areas in tanks listed in Table 1 (after removing/cleaning surface covering/coatings and prior to priming substrates) in accordance with SFLC Std Spec 6310 3.1.8.1 Surface cleanliness evaluation – visual standards. Submit a CFR.

3.4.3 The Contractor must coat the prepared surfaces using the system specified for "Tanks and Voids (Ballast Tanks)" in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). Select finish/top coat color to match existing adjacent surfaces.

3.5 Waste and debris removal. The Contractor must remove all waste and debris generated by the tank preservation process (surface preparation, substrate cleaning, priming, and coating). Waste and debris must be disposed of in accordance with SFLC Std Spec 6310, paragraph 3.1.8.2 (Debris removal and disposal), SFLC Std Spec 0000, and all applicable Federal, state, and local laws, ordinances and regulations.

3.6 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs).

4. NOTES

This section is not applicable to this work item

WORK ITEM 3: Tanks (MP Fuel Storage and Overflow), Clean and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the following tank(s):

TABLE 1 – LIST OF TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	TANK CONTENT DISPOSAL (GALLONS)	PAINTED
Fuel Oil Overflow	5-32-1-F	3,165	475	Y
Fuel Oil Overflow	5-32-2-F	3,165	475	Y
Fuel Oil Storage	5-76-1-F	4,902	735	N

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 750-WMSL_100_17, Rev L, Unit 1310 Structure – Inner Bottom to 1st Platform – Fr 22 to Fr 35 (ASC100131)

Coast Guard Drawing 750-WMSL_100_40, Rev L, Unit 3210 Structure – Inner Bot To 1st Platform – Fr 76 To Fr 88 (ASC100321)

Coast Guard Drawing 750-WMSL-167-001, Rev J, Manhole List Installation and Fabrication Details Ship Wide (ASC167001)

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor must submit a CIR for the inspections listed in the following paragraph(s):

- 3.7 Inspection

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- TLIs
- Piping
- Residual tank contents/fluids

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

Coast Guard personnel will pump down affected tanks to low suction.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.2.1 Perform an initial operational test of each tank TLIs to demonstrate that each radar head/sensor is functional (i.e., Digital readout is displayed).

3.2.2 Ensure that there is interface/communication between the TLI sensor and the Machinery Control and Monitoring System (i.e. Digital readout at the TLI is identical to that displayed).

3.3 Tank opening. The Contractor must remove the tank manhole cover(s) and ventilate the confined spaces in accordance with SFLC Std Spec 0000, Paragraphs 3.3.1.1 and 3.3.1.2. The Contractor must provide fall protection to cover tank manhole cover when opened for ventilation/work.

WARNING

Do not use the Fuel Service or Transfer systems to drain any water from the tank. Excessive fuel contamination will result.

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3.4 Tank content and waste disposal. The Contractor must dispose of residual tank contents listed in Table 1 and any cleaning fluids in compliance with all applicable Federal, state, and local laws, ordinances and regulations. Notify the COR (in writing) at least 48 hours prior to removal of wastes and fluids. Document a complete chain of custody record of the removed tank contents and generated wastes, from the vessel to the point of final destination or delivery. Submit chain of custody record to the COR upon completion of work.

3.5 Temporary plugs. The Contractor must plug all inlet and outlet piping in the tank to prevent contaminants from entering the tank or piping system. Use plugs with an attached lanyard, ring or other system that will ensure plugs are not lost in the pipe openings.

3.5.1 Plug log. The Contractor must keep a written record of all installed plugs. Keep a separate list for each tank. Maintain a plug accountability log posted immediately outside the tank to prevent any of the installed temporary plugs from being lost inside the tank or left behind inside at tank closure. Submit this log to the COR after completion of work item

3.5.2 The Contractor must ensure that all plugs are removed from each tank upon completion of work in the tank.

3.6 Tank cleaning. The Contractor must clean all designated tank interior surfaces free of all foreign materials, such as residual fuel or water, sediment, sludge, rust, or biological growth, taking care not to damage the coating system (if applicable).

3.6.1 The Contractor must accomplish all requirements of SFLC Std Spec 6310, 3.1.6.4 (Surface contaminant removal) to achieve the cleanliness requirements of SSPC-SP 1, including a low-pressure (maximum 5,000 psi) fresh water wash down of the surfaces.

3.6.2 Remove cleaning media and residues continuously from the tank during the washing process. Remove any residual wash media and wipe up residual moisture with clean lint-free cloths. Wipe the interior tank structure dry and free of all cleaning agents.

3.7 Inspection. The Contractor, in the presence of the Coast Guard Inspector, must visually inspect all tank interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Submit a CIR including the following, as applicable:

- Tank structural condition.
- Manhole and cover condition.
- Ladder condition (if applicable).
- Condition of tank coating (if applicable), including dimensions, percentage, location, and type of coating failure.
- Tank level indicator (TLI) and/or float switch condition.
- Sounding/vent tube and striker plate condition.
- Suction and discharge piping condition.
- Fastener material and condition.
- Pit measurements
- Ultrasonic thickness (UT) measurements

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3.8 Pit measurement. The Contractor must measure 50 pits within each tank/location listed in Table 1, in accordance with SFLC Std Spec 0740, Paragraph 3.13 (Evaluation of pitting corrosion). The results of these measurements must be included in the inspection report, showing where pit measurements were taken and the depth of the pit.

3.9 Ultrasonic thickness (UT) measurement. The Contractor must take UT measurements in the surrounding area of any pit measuring greater than 25% of plate thickness. UT measurements must be taken in the four quadrants at an equal-distant radius from the pit center until full plate thickness is measured. For bidding purposes, assume 200 UT measurements per tank listed in Table 1. UT measurements must be conducted in accordance with SFLC Std Spec 0740, Appendix C, using Coast Guard Drawings 750-WMSL_100_17 and 750-WMSL_100_40 as guidance. The results of these measurements (original thickness, measured thickness, and any observed cracks) and the locations where they were taken must be included in the inspection report.

3.10 Substrate fairing and repair by filling Epoxy for shallow pits and small corrosions (i.e. pits < 25% or corrosions < 25%). The Contractor must repair small pin holes, shallow pitted substrates (with remaining plate thicknesses over 75% of required plate thicknesses), and fair corroded substrates (with remaining cross sections over 75% of required cross section areas), after removing coating (if applicable), in accordance with SFLC Std Spec 6310 and manufacturers' instructions.

- Procure 3 kits of Epoxy Fairing Compounds (e.g. Belzona 1111, 0.5 Gallon/5 Kg Kit or equivalent) to conduct repairs.
- Turn over all unused kits to the COR.

NOTE

“Substrate fairing and repair by filling Epoxy for shallow pits and corrosions (i.e. pits < 25% or corrosions < 25%)” is a supplement barrier intending to help delay penetration.

3.11 Surface coating. For all non-painted tanks, the Contractor must apply a coat of system fluid to all tank interior surfaces, following final tank inspection and just prior to tank closing.

3.12 Tank closing. The Contractor must ensure that the tank(s) remain open for approximately 24 hours after completion of any authorized repair and preservation procedures. Notify the COR at least 48 hours prior to closing the tank(s). After satisfactory inspection by the Coast Guard Inspector and completion of all authorized repairs, remove all installed temporary plugs and close tank manhole cover(s) using new gasket material in accordance with Coast Guard Drawing 750-WMSL-167-001, in the presence of the Coast Guard Inspector. Chase threads on studs to ensure even installation of the access covers. Renew all nuts, washers, and grommets (including those that are missing) in accordance with Coast Guard Drawing 750-WMSL-167-001. Submit a CFR with the completed plug log.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.13 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

3.13.1 Perform a post-work operational test of each tank TLIs to demonstrate that each radar head/sensor is functional (i.e., Digital readout is displayed).

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3.13.2 Ensure that there is interface/communication between the TLI sensor and the Machinery Control and Monitoring System (i.e. Digital readout at the TLI is identical to that displayed).

3.14 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces, and all manhole cover external surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs). Do not paint any manhole cover fasteners.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 4: Tanks (MP Fuel Overflow), Preserve (Partial)

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to prepare and coat 33% of the surfaces of the following tank(s):

TABLE 1 – LIST OF TANKS

LOCATION	COMPO	SYSTEM/APPENDIX (SFLC STD 6310)	TOPCOAT COLOR	PRESERVE LEVEL
Fuel Oil Overflow 5-32-1-F	Inner Bottom, Ovhd&Bhd Structures	Tanks and Voids (Fuel/JP-5 Tanks, Service, Storage, Overflow, Drain) Option I or II	Match Existing	Partial
Fuel Oil Overflow 5-32-2-F	Inner Bottom, Ovhd&Bhd Structures	Tanks and Voids (Fuel/JP-5 Tanks, Service, Storage, Overflow, Drain) Option I or II	Match Existing	Partial

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 750-WMSL_100_17, Rev L, Unit 1310 Structure – Inner Bottom to 1st Platform – Fr 22 to Fr 35 (ASC100131)

Coast Guard Drawing 750-WMSL-167-001, Rev J, Manhole List Installation and Fabrication Details Ship Wide (ASC167001)

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2022, Temporary Hull Accesses

OTHER REFERENCES

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.11 (SSPC-SP 11), 2016, Bare Metal Power Tool Cleaning

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep. The Contractor must provide the services of a Qualified Technical Representative to accomplish the following on site:

- Serve as an Independent Coating Tech Rep. Provide the services of a Certified Coating Inspector, having successfully completed the NACE-International Coating Inspector Program (CIP), Level 3 - Peer Review with Marine Specialty.
- Accomplish applicable requirements in SFLC Std Spec 0000, Paragraph 3.2.4.2.2 (Coating Tech Rep).
- Oversee the Preservation Plan requirements in SFLC Std Spec 6310, Paragraph 3.2 (Preservation Plan).
- Review and sign daily reports summarizing work. See forms QA-1 thru QA-5 provided in the General Requirements.

3.1.2.1 Qualifications/certifications. Submit the Coating Tech Rep's qualifications/certifications in accordance with SFLC Std Spec 0000, 3.2.4.2.2.3 and 3.2.4.2.4, include name, certificate number and documented completion of NACE Marine Coating Technology Course and Exam.

3.1.2.2 Submit the name and résumé of the Tech Rep to the COR at the Arrival Conference. Include the dates of services the Qualified Tech Rep will be on site as per their subcontract documentation.

NOTE

This work item requires the use of an NACE-Certified Tech Rep. The use of a QP-1 certified company/contractor alone is not sufficient.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- TLIs
- Piping, supports, brackets

3.1.5 Temporary access openings. Due to limited access to work areas, the Contractor may, with express permission of the KO (via submission of a CFR), cut access holes to facilitate accomplishment of the

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work specified herein. Perform all work required to open and close the access openings in accordance with SFLC Std Spec 8636.

3.1.6 Work plan. The Contractor must provide a work plan (preservation plan including protection plan) for the Tank Preservation listed in Table 1 in accordance with SFLC Std 6310, paragraph 3.2 (Preservation Plan) to COR before or on Arrival Conference.

3.1.6.1 Pre-work preservation conference. Prior to the start of any preservation work, the Contractor must facilitate a conference meeting with the KO, COR, Coast Guard Inspector(s), Contractor and Contractor's representative able to speak to technical preservation details and requirements.

- QC/QA Program. The requirements of SFLC Std Spec 0000 3.2.4.2.2.3, Contractor's QC/QA Program (as outlined in SFLC Std Spec 0000, 3.2.4 QC/QA Program),
- Material Receipt Conformance (as outlined in SFLC Std Spec 6310, 3.1.1.2 Material Receipt Conformance),
- Preservation plan (as outlined in SFLC Std Spec 6310, 3.2 Preservation plan), SFLC Std Spec 6310 3.1.1.3.1 and 3.1.9 must be formally reviewed and approved by the KO,
- PDS and SDS. Only submit Manufacturer's Product Data Sheets (PDS) and Safety Data Sheets (SDS) if NAVSEA approved ASTM F718 sheets are not available.

3.2 In-process quality control measures. The Contractor must abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for "critical-coated surfaces"). Surfaces being preserved are considered "critical-coated surfaces". QA Forms and NACE III Reports must be submitted to the COR for review no later than 24 hours after completion of work.

3.2.1 Daily reports. At the conclusion of each work day coating has been applied, the Contractor must provide Daily Reports generated and signed by the Coating Tech Rep. Daily reports must summarize work accomplished that current day, work to be accomplished the following day, any and all materials used during work that day, any and all readings taken and/or data collected (i.e. environmental readings, DFT, WFT, etc...) identifications of work locations, time and type of any inspections conducted with the results of such inspection(s) and must also include descriptions any events of non-conformance in relation to the specification, applicable references, standards, and technical data sheets (i.e ASTM F718s).

3.2.2 Environmental readings. Environmental readings must be accomplished within the agreed upon hours according to the interval outlined in SFLC Std Spec 6310, Appendix D3.1.

3.3 Ventilation requirements. The Contractor must accomplish all requirements of SFLC Standard Spec 6310, 3.1.16 (Ventilation requirements for confined spaces) and SFLC Standard Specification 0000, 3.3.1.1 (Temporary ventilation) throughout the entirety of this work item.

3.4 Surface preservation. The Contractor must prepare and coat 33% of all tank interior surfaces (including internal surfaces of manhole cover(s), manhole cover hull ring(s) extending outward to the weld line that ties the hull ring into the tank plating on the tank exterior).

3.4.1 Power tool clean all affected surfaces to "bare metal" in accordance with SSPC-SP 11, in lieu of using abrasive blasting; and feather edges of existing intact coating to the prepared areas, in order to provide a smooth transition with the new paint.

NOTE

This inspection is to assess suitability for painting. The inspections covered in the “Open and Inspect” may also occur at this stage of surface preservation, but they are a different set of inspections.

3.4.2 Inspection. The Contractor must inspect all cleaned surfaces and exposed substrates of areas in tanks listed in Table 1 (after removing/cleaning surface covering/coatings and prior to priming substrates) in accordance with SFLC Std Spec 6310 3.1.8.1 Surface cleanliness evaluation – visual standards. Submit a CFR.

3.4.3 The Contractor must coat the prepared surfaces using the system specified for "Tanks and Voids (Fuel/JP-5 Tanks, Service, Storage, Overflow, Drain, Option I or Option II)" in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). Select finish/top coat color to match existing adjacent surfaces.

3.5 Waste and debris removal. The Contractor must remove all waste and debris generated by the tank preservation process (surface preparation, substrate cleaning, priming, and coating). Waste and debris must be disposed of in accordance with SFLC Std Spec 6310, paragraph 3.1.8.2 (Debris removal and disposal), SFLC Std Spec 0000, and all applicable Federal, state, and local laws, ordinances and regulations.

3.6 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs).

4. NOTES

This section is not applicable to this work item

WORK ITEM 5: Circuit Breakers (Draw Out), Inspect and Test

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and test draw out circuit breakers listed in the Table 1.

TABLE 1 – LIST OF CIRCUIT BREAKERS

FUNCTION	MANUFACTURER / MODEL NO	DESCRIPTION	LOCATION
No. 1 Ship Service Diesel Generator	SQUARE D / Masterpact NW 32 H2	Electrically Operated, Draw-Out Circuit Breaker, 2400 Amp Trip, 3-Pole, 450 Volt, 60 Hz with Micro Logic Trip Unit 5.	Ship Service Switchboard No.1S Auxiliary Machinery Room (5-36-01-E)
No. 2 Ship Service Diesel Generator	SQUARE D / Masterpact NW 32 H2	Electrically Operated, Draw-Out Circuit Breaker, 2400 Trip Amp, 3-Pole, 450 Volt, 60 Hz with Micro Logic Trip Unit 5	Ship Service Switchboard No.2S Forward Main Machinery Room (5-44-01-E)
No. 3 Ship Service Diesel Generator	SQUARE D / Masterpact NW 32 H2	Electrically Operated, Draw-Out Circuit Breaker, 2400 Trip Amp, 3-Pole, 450 Volt, 60 Hz with Micro Logic Trip Unit 5	Ship Service Switchboard No.3S Ship Service Diesel Generator Room (2-75-5-Q)
Bus Tie Breaker 1S/2S	SQUARE D / Masterpact NW 32 H2	Electrically Operated, Draw-Out Circuit Breaker, 2400 Trip Amp, 3-Pole, 450 Volt, 60 Hz with Micro Logic Trip Unit 5	Ship Service Switchboard No.1S Auxiliary Machinery Room (5-36-01-E)
Bus Tie Breaker 1S/3S	SQUARE D / Masterpact NW 32 H2	Electrically Operated, Draw-Out Circuit Breaker, 2850 Trip Amp, 3-Pole, 450 Volt, 60 Hz with Micro Logic Trip Unit 5	Ship Service Switchboard No.1S Auxiliary Machinery Room (5-36-01-E)
Bus Tie Breaker 2S/1S	SQUARE D / Masterpact NW 32 H2	Electrically Operated, Draw-Out Circuit Breaker, 2400 Trip Amp, 3-Pole, 450 Volt, 60 Hz with Micro Logic Trip Unit 5	Ship Service Switchboard No.2S Forward Main Machinery Room (5-44-01-E)
Bus Tie Breaker 2S/3S	SQUARE D / Masterpact NW 32 H2	Electrically Operated, Draw-Out Circuit Breaker, 2400 Trip Amp, 3-Pole, 450 Volt, 60 Hz with Micro Logic Trip Unit 5	Ship Service Switchboard No.2S Forward Main Machinery Room (5-44-01-E)
Bus Tie Breaker 3S/1S	SQUARE D / Masterpact NW 32 H2	Electrically Operated, Draw-Out Circuit Breaker, 2850 Trip Amp, 3-Pole, 450 Volt, 60 Hz with Micro Logic Trip Unit 5	Ship Service Switchboard No.3S Ship Service Diesel Generator Room (2-75-5-Q)
Bus Tie Breaker 3S/2S	SQUARE D / Masterpact NW 32 H2	Electrically Operated, Draw-Out Circuit Breaker, 2400 Trip Amp, 3-Pole, 450 Volt, 60 Hz with Micro Logic Trip Unit 5	Ship Service Switchboard No.3S Ship Service Diesel Generator Room (2-75-5-Q)

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FUNCTION	MANUFACTURER / MODEL NO	DESCRIPTION	LOCATION
Shore Power Breaker	SQUARE D / Masterpact NW 32 H2	Electrically Operated, Draw-Out Circuit Breaker, 2850 Amp Trip, 3-Pole, 450 Volt, 60 Hz with Micro Logic Trip Unit 5.	Ship Service Switchboard No.3S Ship Service Diesel Generator Room (2-75-5-Q)
Bow Thruster	SQUARE D / Masterpact NW 32 H2	Electrically Operated, Draw-Out Circuit Breaker, 800 Trip Amp, 3-Pole, 450 Volt, 60 Hz with Micro Logic Trip Unit 5	Ship Service Switchboard No.1S Auxiliary Machinery Room (5-36-01-E)

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

- Coast Guard Drawing 418A-WMSL-100-001, Rev B, General Arrangements
- Coast Guard Drawing 418A-WMSL-801-004, Rev A, Booklet of General Plans
- Coast Guard Drawing 750-WMSL-303-002, Rev D, Coordination of Protective Devices (ASC303004)
- Coast Guard Drawing 750-WMSL-320-038, Rev B, Electrical One Line Diagram (ASC320001)

COAST GUARD PUBLICATIONS

- Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements
- Coast Guard Technical Publication (TP) 7165, 7-Feb 2019, Ship Service Switchboards 1S, 2S, 3S and 1SP Shore Power Volume 1
- Coast Guard Technical Publication (TP) 7166, 7-Feb 2019, Ship Service Switchboards 1S, 2S, 3S and 1SP Shore Power Volume 2
- Coast Guard Technical Publication (TP) 7167, 7-Feb 2019, Ship Service Switchboards 1S, 2S, 3S and 1SP Shore Power Volume 3

OTHER REFERENCES

- Schneider Electric Maintenance and Field Testing Guide for Masterpact NT and NW Circuit Breaker Instruction Bulletin No.06131b1202 Oct 2014
- NFPA 70E: 2015 Edition Standard for Electrical Safety in the Work Place

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following paragraph(s):

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- 3.3. Inspection.

3.1.2 Tech Rep. The Contractor shall provide the services of Qualified Technical Representative who is familiar with the Schneider Electric Masterpact NW Circuit Breakers to accomplish the following tasks – on site:

- Provide manufacturer's proprietary information, software, and tools pertinent to the equipment/system.
- Assist with proper repair methods, and ensure compliance with manufacturer's procedures and standards during disassembly, inspection, repair, modification, calibration, test and reassembly of the equipment/system.

3.1.2.1 Ensure the Tech Rep has experience with the system/equipment stated above and demonstrated on their résumé.

3.1.2.2 Submit the Tech Rep's name and résumé to the COR at the Arrival Conference.

3.1.2.3 Point of Contact

- Linda Freeman-Rusch
- SSE Order Manager
- Mobile: 707-799-2629
- Linda.rusch@se.com
- Reginald Weatherton
- Reginald.weatherton@se.com
- Mobile: 940-765-8868
- Power Services Manager-NorCal-Hawaii-Guam-Schneider Electric North America Operations

3.1.3 Protective measures - general. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.1.5 Reference documents. The Contractor shall refer to the drawings referenced in Section 2 for guidance in accomplishing this work item. Time current curves for circuit breaker are shown on Coast Guard Drawing 750-WMSL-303-002. Electrical single line diagram is shown in the Figure 3 for reference.

3.1.6 Advance notice. Notify the Coast Guard Inspector 48 hours prior to starting work on this item.

3.1.7 The Contractor shall follow safe electrical work practice in accordance with the NFPA 70E.

3.1.8 The Tech Rep shall inspect and test circuit breakers listed in the Table 1 in accordance with Figure 2.

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3.1.9 The Contractor shall provide rigging services to remove/re-install circuit breakers from the switchboards to suitable test facility.

3.1.10 Outages. Coordinate the disconnection and removal of the circuit breakers listed in Table 1 with the Coast Guard Inspector to ensure orderly shutdown of equipment.

3.1.11 Essential circuits. Unless actively being serviced by other work items, minimize the interruption of power to the following circuits:

3.1.11.1 Ship service lighting (unless temporary lighting is installed).

3.1.11.2 Fire (Circuits F and SM), flooding (Circuit FD), and general (Circuit G) alarms.

3.1.11.3 Main announcing (Circuit IMC) and dial telephone (Circuit J) systems.

3.1.11.4 Galley, scullery, potable water heater, HVAC, and sewage systems (unless cutter crew is not living on board).

3.1.11.5 Electric fire pump (unless temporary fire fighting water supply is connected).

3.1.11.6 Surveillance cameras and IT network

3.1.12 Test plan. At the Arrival Conference, the Contractor shall provide the Test Plan to test the circuit breakers listed in the Table 1 to the Coast Guard Inspector for approval.

3.1.13 Ship Force will remove and re-install circuit breakers listed Table 1 from the Switchboards for inspection and testing by the Contractor. The Contractor shall test circuit breakers at suitable shop and after completion of the satisfactory testing; the Contractor shall turn over circuit breakers to Ship Force for installation to the Switchboards.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.1.14 Operational test - initial. Prior to commencement of work, the Contractor shall witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.2 Removal. Prior to the removal of each circuit breaker listed in Table 1 above, record location (Position or Circuit Identifier), wiring information, and if adjustable, as found pickup and time delay settings. Record all setting of Micrologic 5.0 trip unit (i.e. Figure 1). Retain all mounting and connecting hardware for later reuse. Submit a CFR with all recorded data to the Coast Guard Inspector.

3.2.1 Ship Force will remove the circuit breakers listed in Table 1 for testing by the Contractor/Tech Rep. Temporarily cover or insulate switchboard or panel board openings created by the removal of circuit breakers to prevent personnel contact with energized conductors and the entry of debris from other ongoing industrial activities.

3.3 Inspection. Perform the visual external inspections of circuit breakers listed in Table 1.

- Inspect circuit breaker cradle
- Check for cracks in the circuit breaker case

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- Inspect the enclosure cleanness and dryness
- Verify all covers and trim pieces should in place
- Check for overheating while equipment is energized
- Perform visual inspection of the contacts (Micrologic 5.0 Trip unit displays the contact wear under Maintenance Manu)
- Verify settings on Micrologic trip unit in accordance with Coast Guard Drawing 750-WMSL-303-002
- Replace battery of each Micrologic 5.0 unit

3.3.1 Record any deficiencies found, including those corrected on the spot and Submit a CIR.

3.3.4 Testing. After satisfactory visual inspection, perform 5 year preventative maintenance on each breaker listed in the Table 1 in accordance to Table 5, 6 and 7 of Schneider Electric Circuit Breaker Instruction Bulletin No.06131b1202. The Contractor/Tech Rep shall provide electrical power required for OEM Full Function Test Stand (i.e. Figure 4: Universal Circuit Breaker Test) at the Coast Guard Pier.

3.3.4.1 Figure 2 shows Table 5, 6 and 7 of circuit breaker Instruction Bulletin No.06131b1202 for reference.

3.3.4.2 Record the following test data for each circuit breaker that was tested:

- Circuit breaker Model and Serial Number
- Circuit identifier or position
- Test data and results
- Test technician name and date of test
- Name and address of testing laboratory

3.3.4.3 Provide Coast Guard Inspector with Circuit Breaker test certification as outlined in 3.3.4.2.

3.4 Reinstallation. After completion of testing, the Contractor and Tech Rep shall return the circuit breakers to Ship Force to install in the switchboard to its original operating condition.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.5 Operational test – post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR

3.5.1 Perform an energized operational test of all affected circuit breakers in the presence of the Coast Guard Inspector. Verify that all accessory devices are functioning. Submit a CFR.

4. NOTES

Micrologic 5.0A Trip Unit

The Micrologic 5.0A trip unit provides selective (LSI) protection and a built-in ammeter.

- A. Trip unit name
- B. Alphanumeric display
- C. Three-phase bar graph
- D. Scroll button
- E. Menu button
- F. Long-time pickup (Ir) switch
- G. Long-time delay (tr) switch
- H. Short-time pickup (I_{sd}) switch
- I. Short-time delay (tsd) switch
- J. Instantaneous pickup (I_i) switch
- K. Test plug receptacle
- L. Overload indicator light
- M. Reset button for battery status check and trip indicator LED
- N. Self-protection indicator light
- O. Short-time or instantaneous trip indicator light
- P. Long-time trip indicator light

Figure 4: 5.0A Trip Unit

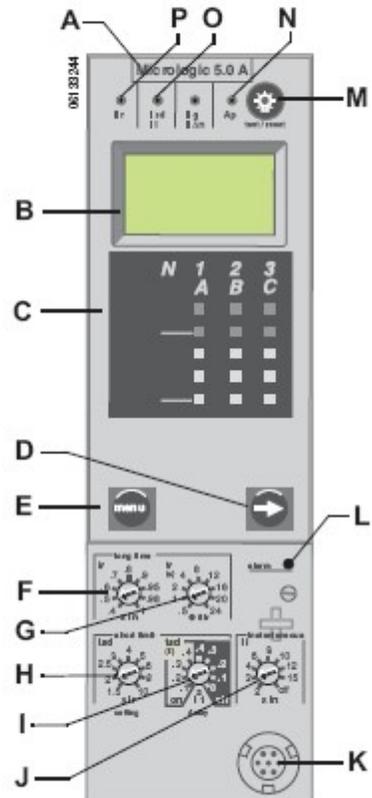


FIGURE 1: MICROLOGIC TRIP UNIT.

Table 1: Preventive Maintenance

Maintenance Type	Done By	Operating Conditions	Frequency
Type II	Certified customer employee	Normal	Every year
		Favorable	Every two years
		Severe	Twice a year
Type III	Certified customer employee	Normal	Every two years
		Favorable	Every four years
		Severe	Every year
Type IV	Schneider Electric Service	All	<ul style="list-style-type: none"> • Every five years • After tripping due to a short-time or instantaneous short-circuit • After five trips due to overloads.
Storage Check	Certified customer employee	All	After prolonged storage



Table 5: Level II Preventive Maintenance

Check	Year					Tool
	1	2	3	4	5 ¹	
Device						
Check the general condition of the device (accessory cover, trip unit, case, cradle, connections)	X	X	X	X	X	None
Mechanism						
Open/close device manually and electrically	X	X	X	X	X	None
Charge device electrically	X	X	X	X	X	None
Check complete closing of device's poles	X	X	X	X	X	None
Check number of device operating cycles	X	X	X	X	X	Operation counter
Breaking Unit (Arc Chutes + Contacts)						
Check the filters cleanliness and the attachment of the arc-chute	X	X	X	X	X	Racking crank
Control Accessories						
Check auxiliary wiring and insulation	X	X	X	X	X	None
Trip Unit						
Trip trip unit using test tool and check operation of contacts SDE and SDE2	X	X	X	X	X	HHTK or FFTK
Check ground fault protection function (Micrologic 6.0)	X	X	X	X	X	None
Device Locking						
Open and close keylocks installed on device	X	X	X	X	X	None
Open and close padlock system installed on device	X	X	X	X	X	None
Cradle (For Drawout Circuit Breakers)						
Remove device from cradle and put it back	X	X	X	X	X	None
Check operation of position contacts (CE, CT, CD, EF)	X	X	X	X	X	None
Check operation of safety shutters	X	X	X	X	X	None
Cradle Locking						
Open and close keylocks installed on cradle	X	X	X	X	X	None
Operate padlocking system	X	X	X	X	X	None

¹ These checks and tests will be carried out by Schneider Electric Services in case of diagnostic the fifth year (see page 11).

FIGURE 2A: TABLE 1 AND 5 OF CIRCUIT BREAKER INSTRUCTION BULLETIN NO.06131B1202

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Table 6: Level III Preventive Maintenance

Check	Year					Tool
	1	2	3	4	5 ¹	
Mechanism						
Check spring charging motor charging time at 0.85 of rated voltage		X		X	X	Stopwatch + external power supply
Check general condition of mechanism		X		X	X	Screwdriver
Breaking Unit (Arc Chutes + Contacts)						
Check condition of breaking unit		X		X	X	Screwdriver
Control Accessories						
Check operation of indication contacts (OF / PF / MCH)		X		X	X	External power supply
Check closing operation of control auxiliary XF		X		X	X	Ohmmeter
Check opening operation of control auxiliary MX at 0.70 of rated voltage		X		X	X	External power supply
Check operation of control auxiliary MN/MNR between 0.35 and 0.7 of rated voltage		X		X	X	External power supply
Check delay of MNR devices at 0.35 and 0.7 of rated voltage		X		X	X	External power supply
Check MX tripping time		X		X	X	Tester
Trip Unit						
Check tripping curves using test tool, signaling LED (tripped, overload). Save results on PC		X		X	X	FFTK FFTK report generator
Cradle (For Drawout Circuit Breakers)						
Remove dirt and any foreign material, then regrease cradle		X		X	X	Mobilith® SHC00
Regrease disconnecting contact clusters (specific case of corrosive atmosphere)		X		X	X	Mobilith SHC00
Power Connections						
Check and tighten loose connections	Only after a visual inspection showing overheating marks					Racking crank

¹ These checks and tests will be carried out by Schneider Electric Services in case of diagnostic the fifth year (see page 11).

Table 7: Level IV Preventive Maintenance

Check	Year					Tool
	5	10	15	20	25	
Case						
Measure insulation resistance	X	X	X	X	X	Ohmmeter
Mechanism						
Check tripping forces (crescent shaped part)	X	X	X	X	X	Tester
Breaking Unit (Arc Chutes + Contacts)						
Measure resistance of input/output contact	X	X	X	X	X	Ohmmeter + injection unit
Control Accessories						
Check the service life of the accessories XF, MX, MN	X	X	X	X	X	"service life" software
Preventative replacement of control accessories	—	—	X	—	—	None
Micrologic Trip Unit						
Check continuity of the tripping chain by primary injection for each phase	X	X	X	X	X	Injection unit
Cradle (For Drawout Circuit Breakers)						
Check connection/disconnection torque	X	X	X	X	X	Racking crank
Clean and regrease racking screw	X	X	X	X	X	Grease

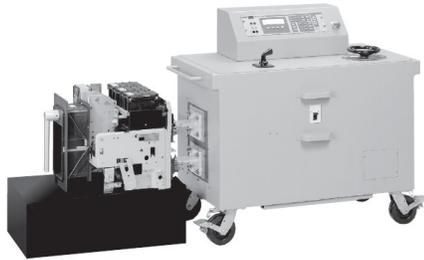
FIGURE 2B: TABLE 6 AND 7 OF CIRCUIT BREAKER INSTRUCTION BULLETIN NO.06131B1202

FIGURE 3: ELECTRICAL SINGLE LINE DIAGRAM

Megger.

DDA-3000 and DDA-6000
Universal Circuit Breaker Test Sets

DDA-3000 and DDA-6000 Universal Circuit Breaker Test Sets



- Model DDA-1 Digital Data Acquisition Instrumentation and Control System
- High-current output: 60,000 A for Model DDA-6000; 35,000 A for Model DDA-3000
- Digital signal processing (DSP) technology
- Variable pulse time and firing angle output current control
- Compliant with NEMA AB-4 test guidelines

SPECIFICATIONS

Input

Model No.	Input Voltage (single-phase)	Input Frequency	Input Current
DDA-3000	460 V \pm 5%	60 Hz	200 A
DDA-3001	380 V \pm 5%	50 Hz	200 A
DDA-3002	415 V \pm 5%	50 Hz	200 A
DDA-6000	460 V \pm 5%	60 Hz	350 A
DDA-3001	380 V \pm 5%	50 Hz	350 A
DDA-6002	415 V \pm 5%	50 Hz	350 A
DDA-6004	575 V \pm 5%	60 Hz	350 A

Model No.	WEIGHT		DIMENSIONS	
	lb	kg	H X W X D (in.)	H X W X D (cm)
DDA-3000 Series	1000	454	46 X 46 X 28 in.	117 X 117 X 71 cm
DDA-6000 Series	1200	545	46 X 55 X 28 in.	117 X 140 X 71 cm

FIGURE 4: SQUARE D CIRCUIT BREAKER TEST SET

WORK ITEM 6: Fire Detection System, Inspect and Test

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and test Fire Detection System.

TABLE 1 – FIRE ALARM SYSTEM

MODEL NO./ MANUFACTURER	DESCRIPTION	COAST GUARD DRAWING / TECH PUB
F400-101-101103A / Consilium Marine US	Fire Alarm System complete with Main Control and Display Panel, Control/Repeater Panel, Dual Optical Heat and Smoke Detectors, Optical Smoke Detectors, Analog Heat Detectors, Manual Call Points, Pull Stations, Bells, Field Server Profibus DP Gateway Complete in enclosure.	*750-WMSL-436-011 / 9576 / 9556 & 9701

*Applicable sheet are referenced as NF6-AF ONLY.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

- Coast Guard Drawing 418A-WMSL-100-001, Rev B, General Arrangements
- Coast Guard Drawing 418A-WMSL-801-001, Rev A, Booklet of General Plans
- Coast Guard Drawing 750-WMSL-436-011, Rev E, Fire Detection Sys Deck Plan (ASC436009)
- Coast Guard Drawing 750-WMSL-436-013, Rev C, Fire Detection Sys Cable Running Sheets (ASC436010)
- Coast Guard Drawing 750-WMSL-436-014, Rev -, Fire Detection and Control System Schematic (ASC436028)

COAST GUARD PUBLICATIONS

- Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements
- Surface Forces Logistics Center Standard Specification 3041 (SFLC Std Spec 3041), 2020, Shipboard Electrical Cable Test
- Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2020, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation

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Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

Coast Guard Technical Publication (TP) 9556, SWBS 436, Feb 2022, Fire Detection System (For Hull 755)

Coast Guard Technical Publication (TP) 9701, SWBS 436, Sept 2020, Fire Detection System (For Hull 756)

Coast Guard Technical Publication (TP) 9847, SWBS 436, July 2022, Fire Detection System (For Hull 758)

OTHER REFERENCES

National Fire Protection Association (NFPA) 72, 2019 Edition, National Fire Alarm and Signaling Code

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor must submit a CIR for the inspections listed in the following paragraph(s):

- 3.3 System inspect and test.

3.1.2 Tech Rep. The Contractor must provide the services of a Qualified Technical Representative, who is familiar with the Consilium Marine Fire Detection System (Herbert S. Hiller, a division of The Hiller Companies) to accomplish the following tasks – on site:

- Provide manufacturer's proprietary information, software, and tools pertinent to the equipment/system.
- Assist with proper repair methods, and ensure compliance with manufacturer's procedures and standards during disassembly, inspection, repair, modification, calibration, and reassembly of the equipment/system.

3.1.2.1 Ensure that the Tech Rep is a Qualified Technical Representative of Consilium-Marine Fire Detection System (Herbert S. Hiller, a division of The Hiller Companies).

3.1.2.2 Submit the Tech Rep's name and résumé to the COR at the Arrival Conference.

3.1.2.3 Point of Contact:

- Mr. Magnus Edelius
- Service Manager
- Mobile: +1 954 257 1358
- Consilium Marine US
- e-Mail: Magnus.Edelius@consiliumsafety.com

OR

- Herbert S. Hiller
- A division of The Hiller Companies, Inc.
- 401 Commerce Point

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- Harahan, LA 70123
- (504) 736-0008

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Sheathing
- Bulkhead insulation
- Piping
- Electrical Cables

3.1.5 Electrical work. The Contractor must accomplish all electrical work in accordance with SFLC Std Spec 3042, and test cables in accordance with SFLC Std Spec 3041. Utilize the existing wire ways for new cable runs as much as possible.

NOTE
Coast Guard personnel will operate all shipboard machinery and equipment.

3.1.6 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.2 Fire detection system. The Fire Detection System components and zone loop wiring is shown on the Coast Drawing 750-WMSL-436-011. The Coast Drawings and Tech Pub referenced in the Para 2 provides information of the Fire Detection System on the Cutter.

3.2.1 Password protection. Fire alarm panel is password protected for software. Prior to start work on this item (i.e. Maximum 5 days prior to Tech Rep arrival) Tech Rep must request Password through Herbert S. Hiller a division of The Hiller Companies and Coast Guard Inspector.

3.3 Fire detection system inspect and test. The Contractor must perform inspection and test of the Fire Alarm System in accordance with NFPA-72 (i.e. National Fire Alarm and Signaling Code) and TP referenced in the Para 2. Annual Fire Alarm Testing requirement is listed in Table 1. Submit CIR.

TABLE 1 – NFPA-72 ANNUAL FIRE ALARM TEST

DESCRIPTION
Test and Visual Inspection of Panel Functionality
Test Panel Battery Charger
Battery Discharge Test
Test and Visual Inspection Horns, Strobes, Chimes and Bells
Test and Visual Inspection of Smoke Detectors
Test and Visual Inspection of Heat Detectors
Test and Visual Inspection of Duct Heaters
Replace Sealed Lead Acid Battery every Five Years (Verify Expiration Date on the Battery and Submit a CFR)

DESCRIPTION
Smoke and Heat Detectors : Replacement is recommended every 10 Years

3.3.1 The Contractor must supply and install seal lead acid battery (i.e. Battery 12 Volt, 2.3 Ah, Quantity 2, Consilium Part Number 005157) mounted inside Fire Alarm Control Panel in accordance with TP 9556. Submit a CFR.

NOTE

The Contractor must perform only applicable test on the Fire Alarm System. Some of the test identified on the attached Data Sheet may not be required on installed Fire Alarm System on the Cutter.

3.3.2 The Contractor must perform applicable test on Fire Alarm System with assistance from Tech Rep. Submit a CFR.

3.3.2.1 Perform applicable test as identified in Figure 1A-through Figure 1H (i.e. Annual Fire Alarm System Test and Inspection Records).

3.3.2.2 Verify signals from Fire Alarm Control Panel to Machinery Control and Monitoring System (i.e. MCMS) display console.

3.3.2.3 Certify that Fire Alarm System on the Cutter is operating properly (i.e. Figure 1H).

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.4 Operational test – post repairs. After completion of work, the Contractor must witness an operational test (by Coast Guard personnel) of all items or shipboard devices that have been disturbed, used, repaired, altered, or installed, to prove that they are in satisfactory operating condition. Submit a CFR.

3.5 Touch-up preservation. The Contractor must prepare and coat all new and disturbed exterior and interior surfaces to match existing adjacent surfaces, in accordance with SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems) and Appendix B (Cutter and Boat Interior Painting Systems), respectively, and as applicable. Abide by all touch-up requirements outlined in SFLC Std Spec 0000, Appendix A (Requirements for Preservation of Ship Structures).

4. NOTES

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YES = Tested correctly

NO = Did not test correctly (REFER TO REMARKS, E2.12)

N/A = Not applicable (Function or Feature not provided on this Fire Alarm System)

E2.1 CONTROL UNIT OR TRANSPONDER TEST

<i>Control unit or transponder location:</i>				
<i>Control unit or transponder identification:</i>				
A	Power 'ON' visual indicator operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
B	Common visual trouble signal operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
C	Common audible trouble signal operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
D	Trouble signal silence switch operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
E	Main power supply failure trouble signal operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
F	Ground fault tested on positive and negative initiates trouble signal	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
G	Alert signal operates (If feature is not provided on this system - N/A).	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
H	Alarm signal operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
I	Automatic transfer from alert signal to alarm signal operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
J	Manual transfer from alert signal to alarm signal operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
K	Automatic transfer from alert signal to alarm signal cancel (acknowledge) feature operates on a two-stage system.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
L	Alarm signal silence inhibit function operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
M	Alarm signal manual silence operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
N	Alarm signal silence visual indication operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
O	Alarm signal, when silenced, automatically reinitiates upon subsequent alarm.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
P	Alarm signal silence automatic cut-out timer.	Time: _____		<input type="checkbox"/> N/A
Q	Audible and visual alert signals and alarm signals programmed and operate per design and specification, or documentation as detailed in Appendix C, Description of Fire Alarm System for Inspection and Test Procedures.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
R	Input circuit, alarm and supervisory operation, including audible and visual indication operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
S	Input circuit supervision fault causes a trouble indication.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
T	Output circuit alarm indicators operate.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
U	Output circuit supervision fault causes a trouble indication.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
V	Visual indicator test (lamp test).	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
W	Coded signal sequences operate not less than the required number of times and the correct alarm signal operates thereafter.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
X	Coded signal sequences are not interrupted by subsequent alarms.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Y	Ancillary device by-pass will result in a trouble signal.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Z	Input circuit to output circuit operation, including ancillary device circuits, for correct program operation, as per design and specification, or documentation as detailed in Appendix C, Description of Fire Alarm System for Inspection and Test Procedures.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
AA	Fire alarm system reset operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
BB	Main power supply to emergency power supply transfer operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
CC	Status change confirmation (smoke detectors only) verified. [Refer Subsection 5.7.4.3, Status Change Confirmation (Alarm Verification Feature)].	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
DD	Receipt of the alarm transmission to the fire signal receiving centre.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
EE	Receipt of the supervisory transmission to the fire signal receiving centre.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
FF	Receipt of the trouble transmission to the fire signal receiving centre.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
GG	Record the name and telephone number of the fire signal receiving centre. Name: _____	Telephone: _____		<input type="checkbox"/> N/A
HH	Operation of the fire signal receiving centre disconnect means results in a specific trouble indication at the control unit or transponder and transmits a trouble signal to the fire signal receiving centre.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

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FIGURE 1A: ANNUAL FIRE ALARM SYSTEM TEST AND INSPECTION RECORDS

E2.2 VOICE COMMUNICATION TEST

A	Power "ON" indicator operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
B	Common visual trouble signal operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
C	Common audible trouble signal operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
D	Trouble signal silence switch operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
E	All-call voice paging, including visual indicator, operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
F	Output circuits for selective voice paging, including visual indication, operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
G	Output circuits for selective voice paging trouble operation, including visual indication, operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
H	Microphone, including press to talk switch, operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
I	Operation of voice paging does not interfere with initial inhibit time of alert signal or alarm signal.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
J	All-call voice paging operates (on emergency power supply).	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
K	Upon failure of one amplifier, system automatically transfers to back up amplifier(s).	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
L	Circuits for emergency telephone call-in operation, including audible and visual indication, operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
M	Circuits for emergency telephones for operation, including two-way voice communication, operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
O	Emergency telephone verbal communication operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
P	Emergency telephone operable or in-use tone at handset operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

FIGURE 1B: ANNUAL FIRE ALARM SYSTEM TEST AND INSPECTION RECORDS

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E2.3 CONTROL UNIT OR TRANSPONDER INSPECTION

Control unit or transponder location:			
Control unit or transponder identification:			
A	Input circuit designations correctly identified in relation to connected field devices.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
B	Output circuit designations correctly identified in relation to connected field devices.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
C	Correct designations for common control functions and indicators.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
D	Plug-in components and modules securely in place.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
E	Plug-in cables securely in place.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
F	Record the date, revision and version of firmware and software program.	Date: _____ Rev: _____ Ver: _____	
G	Clean and free of dust and dirt.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
H	Fuses in accordance with manufacturer's specification.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
I	Control unit or transponder lock functional.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
J	Termination points from wiring to field devices secure.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A

E2.4 POWER SUPPLY INSPECTION

Control unit or transponder location:			
Control unit or transponder identification:			
A	Fused in accordance with the manufacturer's marked rating of the system	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
B	Adequate to meet the requirements of the system	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A

E2.5 EMERGENCY POWER SUPPLY TEST AND INSPECTION

Control unit or transponder location:			
Control unit or transponder identification:			
A	Correct battery type as recommended by manufacturer.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
B	Correct battery rating as determined by battery calculations based on full system load	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
C	Battery voltage with main power supply "ON"	Voltage: _____ V dc	
D	Battery voltage and current with main power supply "OFF" and fire alarm system in supervisory condition.	Voltage: _____ V dc Current: _____ A	
E	Battery voltage and current with main power supply "OFF" and fire alarm system in full load alarm condition	Voltage: _____ V dc Current: _____ A	
F	Charging current.	Current: _____ A	
G	Physical damage.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
H	Terminals cleaned and lubricated.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
I	Terminals clamped tightly.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
J	Correct electrolyte level.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
K	Specific gravity of electrolyte is within manufacturer's specifications.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
L	Electrolyte leakage.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
M	Adequate ventilation.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
N	Battery manufacturer's date code or in-service date.	Date: _____	
O	Disconnection causes trouble signal	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
P	Indicate type of battery tests performed: (i) Required supervisory load for 24 hr followed by the required full load operation; or (ii) A silent test by using the load resistor method may be used for the full duration test (Refer to Appendix F1, Silent Test); or (iii) Silent accelerated test. (Refer to Appendix F2, Silent Accelerated Test); or (iv) A battery capacity meter test. (Refer to Appendix F3, Battery Capacity Meter Test); or (v) In lieu of the above battery tests, replace the battery with a new set having a current date code, amp-hour capacity and type as recommended by the manufacturer.	<input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No
Q	Record calculated battery capacity (Refer to CAN/ULC-S536-04 Appendix F4. 1-C)	_____ Ah	
R	Record battery terminal voltage after completion of tests.	_____ V dc	
S	Battery voltage not less than 85% of its rating after the tests	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
T	Generator provides power to the AC circuit serving the fire alarm system	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
U	Trouble condition at the emergency generator shall result in an audible common trouble signal and a visual indication at the required annunciator.	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A

FIGURE 1C: ANNUAL FIRE ALARM SYSTEM TEST AND INSPECTION RECORDS

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E2.6 ANNUNCIATOR AND REMOTE TROUBLE SIGNAL UNIT TEST AND INSPECTION

For clarification on difference between E2.6 & E2.7 refer to CAN/ULC-S536-04, Clauses 5.4.1 & 5.4.2

<i>Annunciator or remote trouble signal unit location:</i>				
<i>Annunciator or remote trouble signal unit identification:</i>				
A	Power "on" indicator operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
B	Individual alarm, and supervisory input zones are clearly indicated and separately designated.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
C	Individual alarm and supervisory zone designation labels are properly identified.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
D	Common trouble signal operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
E	Visual indicator test (lamp test) operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
F	Input wiring from control unit or transponder is supervised.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
G	Alarm signal silence visual indicator operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
H	Switches for ancillary functions operate as per design and specification, or documentation as detailed in Appendix C, Description of Fire Alarm System for Inspection and Test Procedures.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
I	Other ancillary function visual indicators operate	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
J	Manual activation of alarm signal and indication operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
K	Displays are visible in installed location operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
L	Operates on emergency power	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

E2.7 ANNUNCIATORS OR SEQUENTIAL DISPLAYS

For clarification on difference between E2.6 & E2.7 refer to CAN/ULC-S536-04, Clauses 5.4.1 & 5.4.2

<i>Annunciator or sequential display location:</i>				
<i>Annunciator or sequential display identification:</i>				
A	Power "on" indicator operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Individual alarm and supervisory zone indication operates. (See exception)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Exception: Operation of each individual alarm and supervisory zone indication gives the identical indication, or lights the identical indicators at the other annunciator(s) and sequential display(s).			
B	Specify Method of confirmation: _____ _____	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Minimum of one alarm zone and one supervisory zone tested per annunciator or sequential display to confirm operation.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
C	Individual alarm and supervisory zone designation labels are properly identified.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
D	Common trouble signal operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
E	Visual indicator test (lamp test) operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
F	Input wiring from control unit or transponder is supervised.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
G	Alarm signal silence visual indicator operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
H	Switches for ancillary functions operate as per design and specification, or documentation as detailed in Appendix C, Description of Fire Alarm System for Inspection and Test Procedures.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
I	Other ancillary functions visual indicators operate	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
J	Manual activation of alarm signal and indication operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
K	Displays are visible in installed location	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

E2.8 REMOTE TROUBLE SIGNAL UNIT TEST AND INSPECTION

Remote trouble signal unit location:

Remote trouble signal unit identification:

A	Input wiring from control unit or transponder is supervised.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
B	Visual trouble signal operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
C	Audible trouble signal operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
D	Audible trouble signal silence operates.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

E2.9 PRINTER TEST

Printer Location:

Printer identification:

A	Operates as per design and specification, or documentation as detailed in Appendix C, Description of Fire Alarm System for Inspection and Test Procedures.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
B	Zone of each alarm initiating device is correctly printed.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
C	Rated voltage is present.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

FIGURE 1D: ANNUAL FIRE ALARM SYSTEM TEST AND INSPECTION RECORDS

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E2.10 DATA COMMUNICATION LINK TEST

Produce E2.10 for each DCL tested.

<i>Control unit or transponder location:</i>				
<i>Control unit or transponder identification:</i>				
<i>Data communication link identification:</i>				
A	Confirm that a trouble signal is received at the control unit or transponder under an open loop fault for each data communication link (DCL).	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
B	Where fault isolation modules are installed in data communication links serving field devices, wiring shall be shorted on the isolated side, annunciation of the fault confirmed, and then a field device on the source side shall be operated, and activation confirmed at the control unit or transponder.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
C	Where fault isolation in data communication links is provided between control units or transponders and between transponders, introduce a short circuit fault and confirm annunciation of the fault and operation outside the shorted section between each pair of: (I) Control unit to control unit (ii) Control unit to transponder (iii) Transponder to transponder	<input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No	<input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A

E2.10 DATA COMMUNICATION LINK TEST

Produce E2.10 for each DCL tested.

<i>Control unit or transponder location:</i>				
<i>Control unit or transponder identification:</i>				
<i>Data communication link identification:</i>				
A	Confirm that a trouble signal is received at the control unit or transponder under an open loop fault for each data communication link (DCL).	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
B	Where fault isolation modules are installed in data communication links serving field devices, wiring shall be shorted on the isolated side, annunciation of the fault confirmed, and then a field device on the source side shall be operated, and activation confirmed at the control unit or transponder.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
C	Where fault isolation in data communication links is provided between control units or transponders and between transponders, introduce a short circuit fault and confirm annunciation of the fault and operation outside the shorted section between each pair of: (I) Control unit to control unit (ii) Control unit to transponder (iii) Transponder to transponder	<input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No	<input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A

E2.10 DATA COMMUNICATION LINK TEST

Produce E2.10 for each DCL tested.

<i>Control unit or transponder location:</i>				
<i>Control unit or transponder identification:</i>				
<i>Data communication link identification:</i>				
A	Confirm that a trouble signal is received at the control unit or transponder under an open loop fault for each data communication link (DCL).	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
B	Where fault isolation modules are installed in data communication links serving field devices, wiring shall be shorted on the isolated side, annunciation of the fault confirmed, and then a field device on the source side shall be operated, and activation confirmed at the control unit or transponder.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
C	Where fault isolation in data communication links is provided between control units or transponders and between transponders, introduce a short circuit fault and confirm annunciation of the fault and operation outside the shorted section between each pair of: (I) Control unit to control unit (ii) Control unit to transponder (iii) Transponder to transponder	<input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No	<input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A

FIGURE 1E: ANNUAL FIRE ALARM SYSTEM TEST AND INSPECTION RECORDS

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E3. FIELD DEVICE RECORD

E3.1 FIELD DEVICE TESTING-LEGEND AND NOTES

DEVICE	DESCRIPTION	TYPE	MODEL NO.
M	Manual Pull Station		
RHT	Heat Detector, Restorable		
HT	Heat Detector, Non-restorable		
S	Smoke Detector Sensitivity Test Method or Test Equipment: Model/Method: _____ Manufacturer Sensitivity Range: Sensitivity Range _____	Not applicable	Not applicable
RI	Remote Indicator Unit		
DS	Duct Smoke Detector		
-	Other Type of Detector		
SFD	Supporting Field Device (Monitor)		
FS	Sprinkler Flow Switch		
SS	Sprinkler Supervisory Device		
-	Other Supervisory Devices (Low Pressure, Low Water, Low Temperature, Power Loss, etc.)		
EM	Fault Isolation Module		
B	Bell		
H	Horn		
V	Visible Signal Device		
SP	Cone Type Speaker		
HSP	Horn Type Speaker		
AD	Ancillary Device		
ET	Emergency Telephone		
EOL	End-of-Line Resistor		

The following notes apply to Appendix E3.2, Individual Device Record:

Note 1: Smoke detector sensitivity confirmation or measurement should be recorded in the remarks column.
Note 2: Smoke detector cleaning or replacement date should also be recorded in the remarks column.
Note 3: Status Change, including time delay, should be recorded in the remarks column.
Note 4: Duct smoke detector pressure differential should be confirmed and recorded in the remarks column.
Note 5: Time delay setting of water flow switch should be recorded in the remarks column.
Note 6: Sprinkler supervisory switches cause trouble condition to be annunciated but not an alarm condition
Note 7: Upper and lower pressure setting of supervisory devices should be recorded in the remarks column.
Note 8: Low temperature setting should be recorded in the remarks column.
Note 9: Identify the specific ancillary devices in the remarks column.
Note 10: Identify date field device changed in the remarks column.
Note 11: Identify correct field device operation(i.e. alarm, trouble, supervisory, annunciation indication).
Note 12: Identify zone, circuit number, or address.
Note 13: Identify conventional field device locations.
Note 14: Identify active field device and supporting field device, data communication link (DCL) address and location.
Note 15: Test and confirm conventional field device supervision of wiring.
Note 16: Confirm field device free of damage.
Note 17: Confirm field device free of foreign substance (i.e. paint).
Note 18: Confirm field device mechanically supported independently of the wiring.
Note 19: Confirm field device protective dust shields or covers removed.

FIGURE 1G: ANNUAL FIRE ALARM SYSTEM TEST AND INSPECTION RECORDS

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This is to certify that the information contained in this Fire Alarm System Annual Test and Inspection Report is correct and complete.

_____ Printing Name of Primary or Supervising Technician Conducting the Test Inspection	_____ Company	_____ Telephone
_____ Signature of Primary or Supervising Technician Conducting the Test and Inspection	_____ Identification Number of Primary or Supervising Technician Conducting the Test and Inspection	

_____ Printed Name of Technician Conducting the Test and Inspection	_____ Company	_____ Telephone
_____ Signature of Technician Conducting the Test and Inspection	_____ Identification Number of Technician Conducting the Test and Inspection	

FIGURE 1H: ANNUAL FIRE ALARM SYSTEM TEST AND INSPECTION RECORDS

WORK ITEM 7: Miscellaneous System Relief Valves, 5 Year Certification

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and test the relief valves listed in Table 1 to ensure that they lift at their set points.

TABLE 1 – RELIEF VALVES

VALVE NUMBER	SYSTEM	SERVICE DESCRIPTION	SPACE	SET POINT (PSIG)
AFFF1-V-010	AFFF	AFFF Conc Pump #1 Relief	FWD AFFF Station (2-28-1-Q)	NSC1-3: 180 NSC4AF: 175
AFFF2-V-010	AFFF	AFFF Conc Pump #2 Relief	AFT AFFF Station (2-62-0-Q)	NSC1-3: 180 NSC4AF: 175
AED-V-001	Dry Air	AN/SPQ-9B Dry Air Relief Valve	COMM/MEES (02-38-0-C)	10
ALP-V-013	LOW PRESS AIR	Seachest Blowout Relief Valve	AMR (5-36-01-E)	40
ALP-V-018	LOW PRESS AIR	Seachest Blowout Relief Valve	AMR (5-36-01-E)	40
ALP-V-027	LOW PRESS AIR	Seachest Blowout Relief Valve	FMMR (5-44-01-E)	40
ALP-V-032	LOW PRESS AIR	Seachest Blowout Relief Valve	FMMR (5-44-01-E)	40
ALP-V-060	LOW PRESS AIR	Seachest Blowout Relief Valve	AMMR (5-52-01-E)	40
ALP-V-069	LOW PRESS AIR	Seachest Blowout Relief Valve	AMMR (5-52-01-E)	40
ALP-V-149	LOW PRESS AIR	Shore Hose Blowback Conn Relief Valve	Helo Spares Storeroom (01-52-1-Q)	40
ALP-V-159	LOW PRESS AIR	Shore Hose Blowback Conn Relief Valve	Vuav Spares Storeroom (01-52-2-Q)	40
ALP-V-188	LOW PRESS AIR	Seachest Blowout Relief Valve	#5 Pump Room (5-70-01-E)	40
ALP-V-194	LOW PRESS AIR	Seachest Blowout Relief Valve	Bow Thruster Machinery Room (3-10-0-Q)	40
ALPV-V-031	LOW PRESS AIR	MPDE Control Air Pressure Red. Station	AMMR (5-52-01-E)	105
ALPV-V-197	LOW PRESS AIR	Ship Service Air Pressure Reducing Station Relief Valve	AMR (5-36-01-E)	125

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VALVE NUMBER	SYSTEM	SERVICE DESCRIPTION	SPACE	SET POINT (PSIG)
AMP-V-020	MED PRESS AIR	MP Air Receiver No. 1	AMR Upper Level (5-36-01-E)	500
AMP-V-021	MED PRESS AIR	MP Air Receiver No. 2	AMMR Upper Level (5-52-01-E)	500
AMP-V-052	MED PRESS AIR	SSDG No. 3 Start Air Receiver	SSDG Room (2-76-5-Q)	500
ALP-V-059	LOW PRESS AIR	Boat Recovery Winch Air Supply Pressure Reducing	SSDG Room (2-76-5-Q)	145
AMP-V-039	LOW PRESS AIR	LP Ship Service Air Supply Pressure Reducing	AMR (5-36-01-E)	125
AMP-V-060	MED PRESS AIR	Boat Recover Winch Supply Relief Valve	SSDG Room (2-76-5-Q)	160
ALPV-V-030	LOW PRESS AIR	Valve MPDE Control Air Supply Pressure Reducing	AMMR Upper Level (5-52-01-E)	90
CPW-V-016	POTABLE WATER	Potable Water Main	Pump Room (3-64-0-E)	100
HPW-V-116	HOT P/W	Booster Heater Relief	Scullery (1-52-1-Q)	30
HPW-V-117	HOT P/W	Water Heater No 1 Relief	Pump Room (3-64-0-E)	210 °F
HPW-V-118	HOT P/W	Water Heater No 2 Relief	Pump Room (3-64-0-E)	210 °F
PWP-V-027	HIGH PURITY WATER	Gtrb Water Wash Heater	FMMR (5-44-01-E)	100
CPW-V-046	POTABLE WATER	Bromine Feeder Units Hose Station (Control Valve)	Pump Room (3-64-0-E)	25
CPW-V-259	POTABLE WATER	Decontamination Station (Control Valve)	Passage (01-38-1-L)	45
CWS-RV-197	Chill Water	Fwd Comp Air Supply	AMR (5-36-01-E)	150
CWS-RV-200	Chill Water	Aft Comp Air Supply	AMMR (5-52-01-E)	150
DLO-V-046	LUBE OIL	Transfer Pump Pressure Relief	AMMR (5-52-01-E)	60
DFS-V-014	FUEL OIL	FO Leakoff Tk Pmp	AMMR (5-52-01-E)	27.5
FS-V-011	FUEL OIL	Rtn Byp Fuel Tk 5-36-3-F	AMR (5-36-01-E)	20
FS-V-015	FUEL OIL	Rtn Byp Fuel Tk 5-36-2-F	AMR (5-36-01-E)	20
FS-V-018	FUEL OIL	Rtn Byp Fuel Tk 4-64-2-F	AMMR (5-52-01-E)	20
FS-V-022	FUEL OIL	Rtn Byp Fuel Tk 4-64-1-F	AMMR (5-52-01-E)	20
FS-V-025	FUEL OIL	Aux Svce Pmp	AMR (5-36-01-E)	55

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VALVE NUMBER	SYSTEM	SERVICE DESCRIPTION	SPACE	SET POINT (PSIG)
FS-V-028	FUEL OIL	Aux Svce FO Unloading Vlv Pressure Reducing	FMMR (5-44-01-E)	50
FT1-V-046	FUEL OIL	FO Xfr Pmp #1	FMMR (5-44-01-E)	165
FT2-V-046	FUEL OIL	FO Xfr Pmp #2	FMMR (5-44-01-E)	165
GFS-V-006	FUEL OIL	Rtn Byp SSDG #1	AMR (5-36-01-E)	20
GTFS-V-018	FUEL OIL	GTRB FO Drain Tank Pmp	FMMR (5-44-01-E)	27.5
FT-V-063	FUEL OIL	Aft FAS Stn FO unloading valve Pressure Regulating	FMMR (5-44-01-E)	150
HRV-002	FUEL OIL	FOP Heater Inlet Relief Valve	FMMR (5-44-01-E)	87
JPS-V-022	JP-5	Service Pump Pressure Relief	JP-5 Pump Room (3-64-2-E)	90
GSW3-V-031	SEA WATER	SSDG #3 Emerg S/W Clg Relief	SSDG Room (2-76-5-Q)	30
SW-V-079	SEA WATER	S/W Press Rdcn Station Relief	AMR Upper Level (5-36-01-E)	60
SW-V-076	SEA WATER	Firemain Press Reducing to S/W Cooling Sys	AMR Upper Level (5-36-01-E)	40

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

- Coast Guard Drawing 418A-WMSL-530-001, Rev C, Potable Water System Diagram
- Coast Guard Drawing 418A-WMSL-540-001, Rev B, Fuel Oil Diagram
- Coast Guard Drawing 418A-WMSL-540-002, Rev A, Diesel Engine and Gas Turbine LO fill, Trans, & Service System
- Coast Guard Drawing 418A-WMSL-542-001, Rev A, JP-5 System Diagram
- Coast Guard Drawing 418A-WMSL-551-001, Rev A, Compressed Air Diagram
- Coast Guard Drawing 418A-WMSL-555-001, Rev A, AFFF System Diagram
- Coast Guard Drawing 750-WMSL-505-001, Rev C, List of Relief Valves (ASC505001)
- Coast Guard Drawing 750-WMSL-508-001, Rev C, Piping And Machinery Insulation And L/M (ASC508001)
- Coast Guard Drawing 750-WMSL-516-002, Rev J, Chilled Water System Diagram (ASC516002)

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Coast Guard Drawing 750-WMSL_520_1, Rev H, Seawater Cooling System Diagram
(ASC520001)

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 7087, Jan 2022, Pressure Relief Valve
Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022,
General Requirements
Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022,
Requirements for Preservation of Ship Structures

OTHER REFERENCES

Naval Sea Systems Command (NAVSEA) Technical Manual (TM) S6435-TL-MMI-010, Rev 9,
Angle Relief Valve – Type D50
Naval Sea System Command (NAVSEA) Technical Manual (TM) S6435-TP-MMI-010, Rev 5,
Angle Relief Valves BCS Series for Air/Gas Service
Naval Sea Systems Command (NAVSEA) Technical Manual (TM) S6435-UU-MMO-010, Rev
5, Angle Relief Valve – Model D50FF
The Society for Protective Coatings (SSPC) Surface Preparation Specification No.3 (SSPC-SP 3),
2018, Power Tool Cleaning

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Piping systems
- Insulation
- Spray shields
- Electrical cables
- Chill water

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3.2 Valve removal and tagging. Prior to removal, the Contractor must identify and tag all valves listed in Table 1 with location, service, and relief pressure. The Coast Guard Inspector will assist in locating the relief valves.

3.2.1 The Contractor must verify the relief valves that should be prioritized with the Coast Guard Inspector to minimize critical system down time.

3.2.2 Disconnect any interferences and necessary piping, and remove the valves. Install blank flanges (1/4" thick minimum) with gaskets over the pipe openings, securing with at least four bolts, 90 degrees apart, where applicable. Pipe plugs or other closures may be used to prevent contamination of the system, depending on the valve removed. Maintain a log of all installed blank flanges and other closures to ensure they are removed upon reinstallation of valves.

NOTE

Plastic bags, rubber gloves, and rags of any kind are prohibited from being used to maintain system cleanliness.

3.3 Valve inspection. The Contractor must inspect and test all designated relief valves using Coast Guard Drawings and Technical Publications listed in Section 2 as guidance.

3.3.1 Clean and visually inspect all parts for defects, deterioration, dirt, scale, rust, grease, and marine growth. Inspect all valve openings for obstructions and damage to the valve seat, disc, and body. Submit a CFR with inspection results.

NOTE

Any of the listed valves may be renewed versus disassembled/inspected. The choice between inspections versus renewal is solely with the Contractor and should be based on cost estimate for each option.

3.3.2 Using the appropriate test fluid, shop test each relief valve to the correct lifting pressure. Ensure that each valve seats correctly after pressure relief, without simmering, and with no allowable leakage. Adjust the valve relief pressure as necessary to obtain the required lifting pressure. After adjustment, perform a final test to confirm each relief valve's lifting pressure with the Coast Guard Inspector present. Submit a CFR.

3.4 Valve identification. The Contractor must provide a CFR to the Coast Guard Inspector documenting the test pressure and relief pressure (lifting pressure) for each valve. Affix a metal tag, using lock wire, to each valve showing the following information:

- Ship name and hull number
- Valve number or identification
- Valve lifting pressure
- Date valve tested and set
- Name and location of repair facility (Contractor)

3.5 Valve reinstallation. Upon completion of shop work, the Contractor must remove blank flanges, pipe plugs, etc. and clean, dress, and true gasket mating surfaces. Install the relief valves along with any removed piping or interferences in the presence of the Coast Guard Inspector. Renew gaskets and seals in

kind. Verify that all installed blank flanges and closures were removed and provide completed log to the Coast Guard Inspector for validation.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.6 Leak test. After completing all authorized mechanical (i.e. threaded, bolted, etc.) joint repairs, the Contractor must test the affected system's operation using the system fluid at normal operating pressure. Ensure zero visible leakage from or deformation of mechanical parts by repairing all leaks and discrepancies. Submit a CFR.

3.7 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs).

3.8 Piping insulation renewal. The Contractor must renew disturbed piping insulation for the designated system piping using Coast Guard Drawing(s) 750-WMSL-508-001 as guidance.

3.8.1 Coat the newly installed insulation system in accordance with SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems).

4. NOTES

This section is not applicable to this work item.

WORK ITEM 8: Reverse Osmosis, System Groom

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and groom ship’s Reverse Osmosis Water Purifiers listed in the Table 1.

TABLE 1: LIST OF EQUIPMENT

FUNCTIONAL SERVICE	MANUFACTURER	MODEL NUMBER	LOCATION
No. 1 Reverse Osmosis Water Purifier	Lifestream	SW6994463CNG	PUMP ROOM (3-64-0-E)
No. 2 Reverse Osmosis Water Purifier			

1.2 Government-furnished property.

None

2. REFERENCES

COAST GUARD DRAWINGS

- Coast Guard Drawing 750-WMSL-100-083, Rev A, General Arrangements NSC 5 & Follow
- Coast Guard Drawing 418A-WMSL-801-001, Rev -, Booklet of General Plans
- Coast Guard Drawing 750-WMSL-530-001, Rev G, Potable Water Systems Diagram
- Coast Guard Drawing 750-WMSL-530-019, Rev D, Potable Water Unit 3120

COAST GUARD PUBLICATIONS

- Coast Guard Technical Publication (TP) 7107, SWBS 531, Jun 2007, Reverse Osmosis Water Purifier-SW6994463CNG
- Surface Force Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements
- Surface Forces Logistics Center Standard Specification 3041 (SFLC Std Spec 3041), 2022, Shipboard Electrical Cable Test
- Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2022, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation
- Surface Forces Logistics Center Standard Specification 3100 (SFLC Std Spec 3100), 2022, Inspect, Test and Recondition AC Synchronous Machines In-Place

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Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022,
Requirements for Preservation of Ship Structures

OTHER REFERENCES

ANSI/EASA Standard AR100-2015: Recommended Practice for the Repair of Rotating
Electrical Apparatus

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor must submit a CIR for the inspections listed in the following paragraph(s):

- 3.3.1 Visual Inspection

3.1.2 Tech Rep. The Contractor must provide the services of a certified Tech Rep, who is familiar with the Reverse Osmosis Water Purifier Model-SW6994463CNG to accomplish the following tasks – on site:

- Provide manufacturer's proprietary information, software, and tools pertinent to the equipment/system.
- Assist with proper repair methods, and ensure compliance with manufacturer's procedures and standards during disassembly, inspection, repair, modification, calibration, and reassembly of the equipment/system.
- Tech Rep must be present in all aspects of this work item.
- Ride the ship during sea trials (72 hours)

3.1.2.1 Ensure that the Tech Rep is a Certified Representative of Lifestream Watersystem, Inc., P.O Box 634 Huntington Beach, CA 92647, Phone (714) 375-6586.

3.1.3 Protective measures. The Contractor must furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor must remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Piping and Hangers
- Brackets

3.1.5 Electrical work. The Contractor must accomplish all electrical work in accordance with SFLC Std Spec 3042, and test cables in accordance with SFLC Std Spec 3041. Utilize the existing wire ways for new cable runs as much as possible.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.3 Reverse osmosis inspection and groom. The Contractor with Tech Rep support must perform the system inspection and groom of the Reverse Osmosis Water Purifiers listed in the Table 1 in accordance with TP 7107.

3.3.1 Visual inspection. In the presence of the Coast Guard inspector, the Contractor must visually inspect all the components of the reverse osmosis unit, including but not limited to pumps and motors, pressure vessels, filter cartridges, pipe flanges and connections, valves, hoses, gauges and switches for leaks and corrosion. Submit a CIR noting any unusual conditions with the repair recommendations.

3.3.2 Equipment maintenance. The Contractor with the Tech Rep support must perform the following maintenance items.

3.3.2.1 Replace high pressure pump drive belt and set to proper tension of ½” deflection. Adjust belt tension as necessary using belt adjusting screw as shown in Figure 1.

3.3.2.2 Change the oil in high pressure pump. The Contractor must provide new oil (Part Number POB 0320). Pump capacity is 84 oz.

3.3.2.3 Flush hydrocyclone, Figure 2 shows typical hydrocyclone location.

3.3.2.4 Flush media filter, once flushing is completed, open media tank (Part Number MI060401) and inspect the media tank for contaminants, and submit a CFR. Upon completion of media inspection, renew the media in the filter. Check the anodes and replace as necessary.

3.3.2.5 Replace 20 micron filter element (Part Number M1020220) and 5 micron filter element (Part Number M1020205). Replace the O-ring seal (Part Number M1020167) on filter housing and replace as necessary. Figure 3 shows 5 and 20 micron filter housings.

3.3.2.6 Clean, inspect, and calibrate salinity probes.

3.3.2.7 Check pulsation dampener (accumulator) for proper pressure charge and recharge if necessary. Charge pressure should be 400-450 psig. Figure 4 shows recommended filling and gauging assembly to be used. The Contractor must provide nitrogen and charging rig.

3.3.2.8 Check suction stabilizer (Part number PV09011) for proper pressure charge and recharge if necessary. Charge pressure should be maintained at 30 psig. The Contractor must provide nitrogen and charging rig.

3.3.2.9 Replace potable water and polished water carbon filters (Part number M1020050, Quantity 2 and M1020046) and O-Rings (Part Numbers M1020036, Quantity 3). Figure 5 shows location of three canisters.

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3.3.2.10 Replace brominator filter cartridge (Part Number MI160102). Brominator filter cartridge is considered hazardous waste and must be disposed of properly in accordance with all Federal, state and local regulations.

3.3.2.11 Perform an in-place cleaning and preservation of the desalination plant membranes following the procedures outlined in par. 4-3.2.2 thru par. 4-3.2.4 of CG Tech Pub 7107, and using chemicals listed in the same document for removing silt and organic, mineral deposits, carbonates and iron fouling.

WARNING

Cleaning chemicals can cause injury. Wear eye protection, apron and gloves when handling cleaning chemicals.

3.3.2.12 Open and inspect feed water pre-heater for proper operation.

3.3.2.13 Preserve the frame and foundation of the Reverse Osmosis Water Purifiers units in accordance with SFLC Std Spec 6310.

NOTE

The frame and foundation have had widespread paint failure, and rust will need to be removed from the frame and foundation as part of the preservation process.

3.3.2.14 Clean exterior of the electric motor casing, inspect electric motor shaft for burrs, scoring and deformation. Inspect electric cables and electric terminals. Perform insulation resistance test in accordance with SFLC Standard Spec 3100. Submit a CFR.

3.3.2.15 Victaulic couplings. The Contractor must renew up to 30 Victaulic couplings as designated by the COR ranging in size from 1” to 2”.

3.3.2.16 Operational capabilities. The Contractor must note any unusual conditions found that will inhibit the reassembly process and prevent the unit to be placed back in proper working order while performing the above mentioned maintenance items. Submit via CFR including repair recommendations to the COR.

3.4 Operational test – post repairs. Upon completion of work, the Contractor must witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.4.1 The Contractor must ride on board the ship for sea trials for the operational test.

3.4.2. The Contractor must adjust the system until it can pass safe drinking water requirements.

3.5 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs).

4. NOTES



FIGURE 1. DRIVE BELT ADJUSTING SCREWS

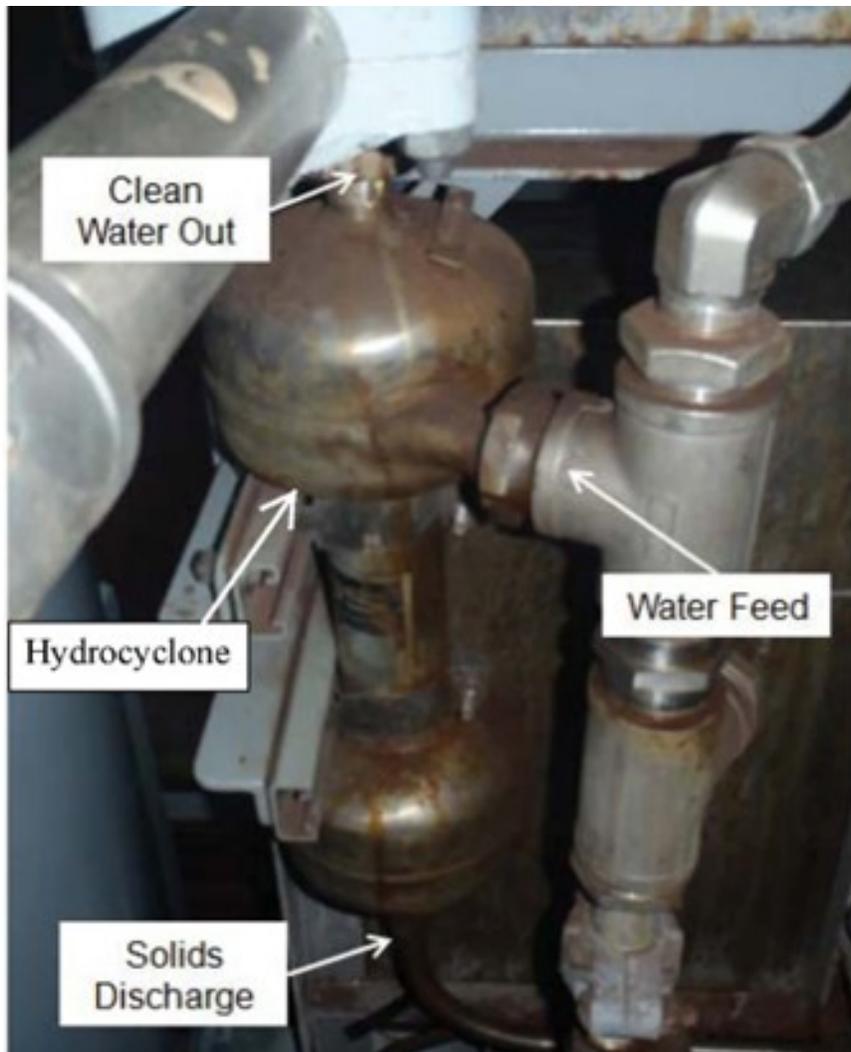


FIGURE 2. HYDROCYCLONE



FIGURE 3. 5 MICRON AND 20 MICRON FILTER HOUSINGS

FILLING and GAUGING ASSEMBLY

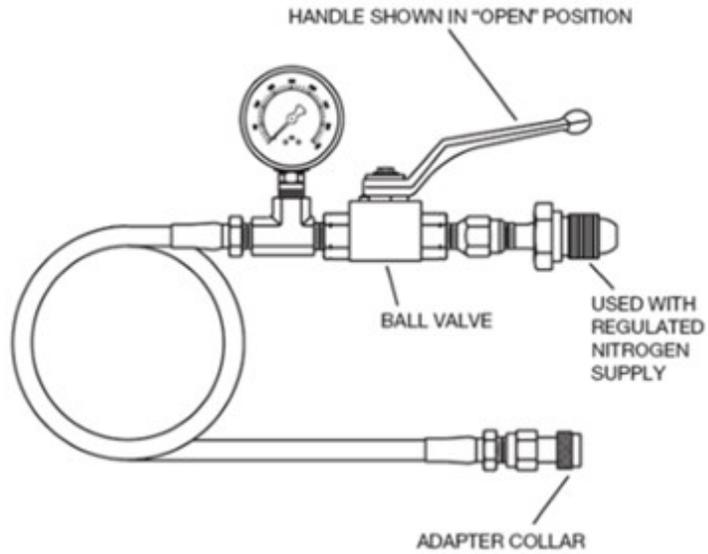


FIGURE 4. FILLING AND GAUGING ASSEMBLY

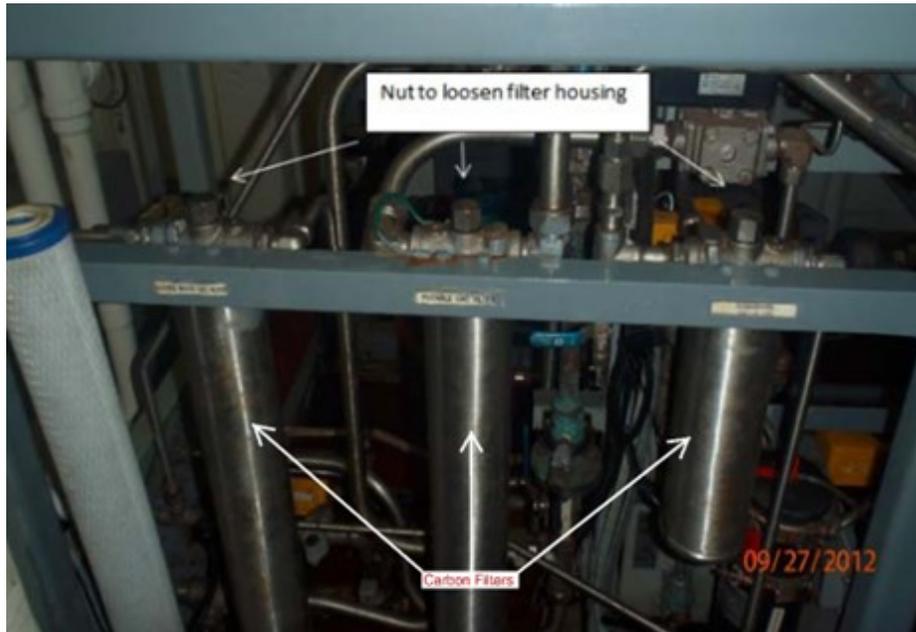


FIGURE 5. CARBON FILTERS

WORK ITEM 9: High Purity Water Tank, Clean And Inspect - CANCELLED

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the High Purity Water Tank located in the Pump Room (Compartment 3-64-0-E).

TABLE 1 – LIST OF TANK

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
High Purity Water	3-64-0-W	533	25

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 750-WMSL-501-004, Rev D, Misc Independent Tanks Design and Details and L/M (ASC501004)

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

Other References None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Water
- Ladder
- Piping

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.3 Tank opening. The Contractor must remove the tank manhole cover(s) and ventilate the confined spaces in accordance with SFLC Std Spec 0000, Paragraphs 3.3.1.1 and 3.3.1.2.

3.4 Tank content and waste disposal. The Contractor must dispose of residual tank contents and any cleaning fluids in compliance with all applicable Federal, state, and local laws, ordinances and regulations. Notify the COR (in writing) at least 48 hours prior to removal of wastes and fluids. Document a complete chain of custody record of the removed tank contents and generated wastes, from the vessel to the point of final destination or delivery. Submit chain of custody record to the COR upon completion of work.

3.5 Temporary plugs. The Contractor must plug all inlet and outlet piping in the tank to prevent contaminants from entering the tank or piping system. Use plugs with an attached lanyard, ring or other system that will ensure plugs are not lost in the pipe openings.

3.5.1 Plug log. The Contractor must keep a written record of all plugs put in any tanks vents. Keep a separate list for each tank. Maintain a plug accountability log posted immediately outside the tank to prevent any of the installed temporary plugs from being lost inside the tank or left behind inside at tank closure. Submit this log to the COR after completion of work item via a CFR.

3.5.2 The Contractor must ensure that all plugs are removed from each tank upon completion of work in the tank.

3.6 Cleaning requirements. The Contractor must clean all tank structure's interior surfaces free of all foreign materials, sediment, and sludge. Remove cleaning media and residues continuously from the tank during the washing process. Remove any residual wash media and wipe down surfaces with rags soaked in deionized water. Wipe up residual moisture using lint-free rags. Collect, contain, and dispose of all wash media, residues, and cleaning materials in accordance with all Federal, state, and local regulations. Clean all tank vent lines.

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3.7 Inspection. The Contractor must visually inspect all interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Submit a CFR with a detailed description of each the following, as applicable:

- Tank structural condition.
- Inaccessible areas, if any
- Sight glass and float/limit switch condition.
- Suction and discharge piping, drains and vent line condition.
- Fastener material and condition.

3.8 Control panel assembly. The Contractor must open and clean the control panel assembly. Inspect the control panel assembly for any indications of overheating or loose wiring or connections. Submit a CFR.

3.9 Tank closing. The Contractor must notify the COR at least 24 hours prior to closing the tank. After satisfactory inspection by the Coast Guard Inspector, and completion of all authorized repairs, remove all plugs where used and close the manhole cover with renewed gasket material. Renew all nuts, washers, and cotton grommets in accordance with Coast Guard Drawing 750-WMSL-501-004 and coat the mounting studs' threads with anti-seize compound. Tighten the access cover hardware evenly.

3.10 Tank filling. The Contractor must fill the High Purity Water Tank with distilled water upon completion of tank closure.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.11 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

3.12 Touch-up preservation, general. The Contractor must prepare and coat all new and disturbed exterior and interior surfaces, as applicable, to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs.).

4. NOTES

This section is not applicable to this work item.

WORK ITEM 10: Cargo Handling Elevator, Annual Inspection and Test, Perform

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and perform annual preventive maintenance on the cargo handling elevator.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 750-WMSL-572-002, Rev D, Elevator Arr & Instl (ASC572002)

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 7108A, SWBS 573, Jan 2022, Stores Elevator - Model 20833

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2022, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, And Installation

Surface Forces Logistics Center Standard Specification 3100 (SFLC Std Spec 3100), 2022, Inspect, Test and Recondition AC Synchronous Machines In-Place

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2022, Auxiliary Machine Systems

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

OTHER REFERENCES

American Society of Mechanical Engineers (ASME) A17.2, Guide for the Inspection of Elevators, Escalators and Moving Walks.

3. REQUIREMENTS

3.1 General.

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3.1.1 CIR.

None.

3.1.2 Tech Rep. The Contractor must provide the services of a qualified Tech Rep, who is familiar with the Jered Industries Cargo Elevator (i.e. Model 20833) to accomplish the following, on site:

- Advise on manufacturer's proprietary information pertinent to the system.
- Assist with repair and renewing the Cargo Elevator parts.
- Ensure compliance with manufacturer's procedures and standards during disassembly, inspection, and reassembly of the system.

3.1.2.1 Ensure the Tech Rep has experience with the system/equipment stated above and demonstrated on their résumé.

3.1.2.2 Submit the name and résumé of the Tech Rep to the COR at the Arrival Conference.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Electrical wiring

CAUTION

See Coast Guard Technical Publication 7108A Safety summary for specific warnings and caution notes to ensure safety of personnel and equipment.

WARNING

The work and inspections specified require that the elevator doors be opened and that the inspector examine items located within the trunk. Failure to observe/implement safety precautions could result in personnel injury/death.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of the Jered Industries (i.e. Model 20833) cargo handling elevator to demonstrate existing operational condition. Submit a CFR.

3.3 Cargo handling elevator inspection. The Contractor must inspect the elevator mechanical and electrical components for proper condition. See Coast Guard Drawing 750-WMSL-572-002 and Coast Guard TP 7108A for elevator details, and follow the guidance in the applicable sections of ASME A17.2, Guide for the Inspection of Elevators, Escalators and Moving Walks. If components are damaged or exhibit abnormal wear, document condition and submit a CFR.

- Hoist machinery assemblies
- Doors and interlocks
- Platform assembly, rails, guides, and rollers
- Sheave Assembly

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- Limit switches
- Level and Master control stations
- Overspeed governor and wire rope assembly
- Slack Rope assemblies
- Brake
- 90-Degree gear Reducer

3.4 Elevator wire rope inspection. The Contractor must inspect and measure the elevator wire ropes, in accordance with Coast Guard TP 7108A, paragraph 4.4.1. Ensure there is equal tension between each of the elevator wire ropes. Submit a CFR.

3.5 Overspeed governor wire rope inspection. The Contractor must inspect and measure the overspeed governor wire rope, in accordance with Coast Guard TP 7108A, paragraph 4.4.1. Adjust the tension arm as close to horizontal as possible in accordance with Coast Guard TP 7108A, Appendix C and ensure there is equal tension throughout the rope. Submit a CFR.

3.6 Gear box oil and component lubrication. The Contractor must perform the Semi-Annual Maintenance Requirements for the tension sheaves, hoist wire ropes, motor couplings, guide rails, slack rope assembly, and door fittings in accordance with Coast Guard TP 7108A, paragraph 4.2.2.

3.7 Electric motor inspection. The Contractor must take insulation resistance readings on the motor in accordance with SFLC Std Spec 3100. Disconnect and reinstall cables in accordance with SFLC Std Spec 3042. Readings must be taken with power removed from the motors. Readings must be above 2 Megaohms for continued operation. Submit a CFR.

3.8 Brake inspection. The Contractor must inspect the friction brake discs and verify proper settings of the electric brake in accordance with Appendix B of Coast Guard Tech Pub 7108A. Submit a CFR with inspection results and any recommendations for required repairs.

3.9 Hoist controller inspection. The Contractor must open the motor controller and inspect for loose wires, loose components, charred or burned components, dirt or other abnormal conditions. Submit a CFR if abnormal conditions requiring repair are observed, otherwise return motor controller to original condition.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.10 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Thoroughly test and prove all functions and safety features of the cargo handling elevator to be in a satisfactory operating condition. Submit a CFR.

3.10.1 No-load test. The Contractor must witness Coast Guard personnel operate the elevator in normal mode, and verify safety devices, emergency stop, and interlocks are properly installed and operational. As the car travels, observe the equipment to detect any unusual noise or vibration. The motor should start immediately when the power is applied and the drum should stop within 0.5 seconds after power is removed. Carefully observe the hoist motor, bearing, and brake for any signs of overheating.

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3.11 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs).

4. NOTES

This section is not applicable to this work item.

WORK ITEM 11: Anchor Windlass Flexible Hoses, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew the flexible hose assemblies for the port and starboard anchor windlass.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 750-WMSL-505-006, Rev D, List of Hoses (ASC505006)

Coast Guard Drawing 750-WMSL-556-008, Rev D, Anchor Windlass Hydraulic Diagram (ASC556005)

Coast Guard Drawing 750-WMSL-556-019, Rev D, Misc. Hydraulic Piping Unit 1240 (ASC556124-HY)

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2022, Auxiliary Machine Systems

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor must submit a CIR for the inspections listed in the following paragraph(s):

- 3.3.1 Hose inspection and verification

3.1.2 Tech Rep.

Not applicable.

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3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Deck plates
- Piping
- Electrical wiring & cables
- Machinery

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.3 Hose renewal. The Contractor must renew the flexible hose assemblies for the port and starboard anchor windlass in accordance with SFLC Std Spec 5000, Appendix C, Paragraph C2.2 (Hose assemblies). See Coast Guard Drawings 750-WMSL-505-006, 750-WMSL-556-008, and 750-WMSL-556-019 for hose locations and details.

3.3.1 Hose inspection and verification. The attached tables show an approximation of hose lengths, sizes, part numbers, and fittings to be renewed that are listed for bidding purposes only. The Contractor must validate the hoses and fittings requiring renewal, noting any deviations from the tables. To prevent potential delays, submit a CIR providing proof of procurement of materials for the new hoses.

3.3.2 Prior to each hose disconnection, the Contractor must record equipment, supply, and return line information for use in later reconnection. Temporarily tag/label the hoses and transfer tags/labels to the new hoses to aid in reinstallation.

3.3.3 System fluid disposal. The Contractor must drain all existing fluids from the designated hoses; dispose of removed fluids in accordance with all applicable Federal, state, and local regulations. In the process of removal of hoses, the Contractor must not dispose any fluid in tanks or bilges. Submit a CFR documenting the amount of fluids removed.

NOTE

Some systems may require complete draining to remove hoses. Additional fluid required to be removed (outside of the designated hoses) will be subject to a change request.

3.3.4 Immediately after disconnecting or removing hoses, the Contractor must completely seal all openings to the rest of the system using metal threaded caps, metal threaded plugs, or bolt-on blanks made of durable plastic or sheet-metal that is no less than 1/16-inch thick.

NOTE

Plastic bags, rubber gloves, and rags of any kind are prohibited from being used to prevent leaking from hoses and for system protection.

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3.3.5 The Contractor must template new hose length from each removed hose. New hose type and size must be determined from hose removed. Select hoses may require in-place measurement and remain in place until replacement hose is ready for installation to minimize system down time. If hose has excess length, verify with CG inspector if excess length is required. Renew hose end fittings. Renew all o-rings, seals, two part clamps, and mounting bolts. Dispose of removed hoses in accordance with all applicable Federal, state, and local regulations. Submit a CFR for any additional hose connections that require replacement not on the renewed hose.

3.3.6 Hydrostatic test. The Contractor must hydrostatically test all new hose assemblies with their attached fittings. Test pressure must be 150% of the rated working pressure of the hose. Ensure no leakage from or permanent deformation of pressure-containing parts by repairing all leaks and discrepancies. Submit a CFR documenting all certifications of pressure test results.

3.3.7 Flush the hoses following hydrostatic testing and cap the ends to prevent contamination. Flush hydraulic system hoses in accordance with SFLC Std Spec 5000.

3.3.8 The Contractor must wrap all hose end fittings exposed to weather with a suitable commercially available protective tape, completely covering all exposed metal. The tape must be a petrolatum base compound on a fabric carrier.

3.3.9 Fluid renewal. The Contractor must renew all removed system fluids. Hydraulic fluid must be renewed, sampled, and tested in accordance with SFLC Std Spec 5000, Appendix C, Paragraphs C2.1 (Fluids), C2.1.1, and C2.1.3. The fluid must meet the acceptance criteria as stated in SFLC Std Spec 5000, Appendix C, Paragraph C2.1.4. Verify the replacement fluid type and quantity with the Coast Guard Inspector prior to reintroduction into the system.

3.3.10 Hose tags. The Contractor must provide new stamped or engraved metal hose tags with the following bulleted information, in accordance with SFLC Std Spec 5000, Figure C-1. Tag installation must be done in a manner that does not interfere with the normal hose flexing motion. Attach hose tags to their respective hose using metal strapping. Verify the tag can be slightly moved by hand, allowing the hose to expand and contract as designed while minimizing chaffing.

- Hose Log Item Number (Serial Number)
- Hydrostatic Test Pressure (psi)
- Hydrostatic Test Date (DD/MM/YY)
- Service Life (Replacement Date, 12 years from installation date) Date (QTR "Q"/FY)

3.4 Hose Fitting Documentation. For each renewed hose assembly, the Contractor must submit the information listed below in Microsoft Excel format. A template for the information will be provided by the COR. Submit a CFR.

- Hose Number
- System
- Description (i.e. #1 A/C Inlet)
- Location (Compartment Number)
- Length (in.)
- Part No.
- Material

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- Size (in.)
- Fitting #1
- Fitting #2
- Design Pressure (psi)
- Hydrostatic Pressure (psi)

NOTE
Coast Guard personnel will operate all shipboard machinery and equipment.

3.5 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

4. NOTES

TABLE 1 – ANCHOR WINDLASS (COMPARTMENT: 1-9-0-Q)

HOSE SERIAL #	LENGTH (IN.)	SIZE	PART NUMBER	FITTING #1	FITTING #2	DESIGN PRESS (PSI)
AW-HYD-001	31	-16	PC35-16	C621-1616J	C621-2016J	5000
AW-HYD-002	32	-16	PC35-16	C621-1616J	C621-2016J	5000
AW-HYD-003	16	-8	2651-8	CPV -1	CPV -1	2000
AW-HYD-004	17.5	-12	2651-12	CPV -3	CPV -3	1500
AW-HYD-005	17.5	-12	2651-12	CPV -3	CPV -3	1500
AW-HYD-006	16	-8	2651-8	CPV -1	CPV -1	2000
AW-HYD-007	31	-16	PC35-16	C621-1616J	C621-2016J	5000
AW-HYD-008	32	-16	PC35-16	C621-1616J	C621-2016J	5000
AW-HYD-009	52	-6	PE239-06	JF1-0606K	JF4-0606K	5000
AW-HYD-010	52	-6	PE239-06	JF1-0606K	JF4-0606K	5000
AW-HYD-011	35	-6	PE239-06	JF1-0606K	JF1-0606K	5000

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HOSE SERIAL #	LENGTH (IN.)	SIZE	PART NUMBER	FITTING #1	FITTING #2	DESIGN PRESS (PSI)
AW-HYD-012	35	-6	PE239-06	JF1-0606K	JF1-0606K	5000

WORK ITEM 12: Anchor Windlass Level 2, Inspect and Repair

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform Level 2 inspections and repair on anchor windlass listed in Table 1.

TABLE 1 – LIST OF ANCHOR WINDLASSES

EQUIPMENT	LOCATION	MANUFACTURER / MODEL	COAST GUARD TECH PUB
Port Anchor Windlass	Line Handling Space and Windlass Machinery Space (1-9-0-Q)	C.S.Controls Inc. / Model No. 2344A000	7183B
STBD Anchor Windlass	Line Handling Space and Windlass Machinery Space (1-9-0-Q)	C.S.Controls Inc. / Model No. 2344A000	7183B

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

- Coast Guard Drawing 418A-WMSL-100-001, Rev B, General Arrangements
- Coast Guard Drawing 418A-WMSL-801-001, Rev A, Booklet of General Plans
- Coast Guard Drawing 750 WMSL-556-009, Rev -, Anchor Windlass Hydraulic System Description (ASC556005-02)
- Coast Guard Drawing 750 WMSL-581-001, Rev D, Anchor Handling (ASC581001)
- Coast Guard Drawing 750 WMSL-581-002, Rev -, Anchor Pocket (ASC581002)

COAST GUARD PUBLICATIONS

- Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), Jan 2022 General Requirements
- Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), Jan 2022, Inspect, Repair, And Test Auxiliary Machine Systems
- Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures
- Coast Guard Technical Publication (TP) 7183B 21 Feb-19, Anchor Windlass - Model 2344A000

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor must submit a CIR for the inspections listed in the following paragraph(s):

- 3.2 (Inspection and repair particulars) - Task #1.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Sheathing
- Bulkhead insulation
- Piping
- Anchor Chain
- Electrical Cables

3.1.5 Reference documents. The Contractor must perform the work described herein in accordance with SFLC Std Spec 5000, Coast Guard Drawing 750-WMSL-581-001 and Coast Guard Tech Pub 7183B.

3.1.6 Set screws. All disturbed or renewed set screws must be coated with a commercially available locking compound at reinstallation.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.1.7 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.2 Inspection and repair requirements. For each anchor windlass listed in Table 1, the Contractor must accomplish the following task listed in Table 2.

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TABLE 2 - INSPECTION AND REPAIR TASK

				ADDITION REQUIREMENTS	
#	TASK TYPE	QTY *	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000 AND TP 7183B	OTHER
1	Operate and Inspect	1	Anchor Windlass Assembly	3.2.1 (Operate and Inspect)	Submit (CIR)
2	Sample And Test	1	Hydraulic fluid	C2.1.3	Submit CFR.
3	Service and Inspect	1	Wildcat shaft assembly	3.2.2 (Service and Inspect)	Submit CFR.
4	Service and Inspect	1	Main Reduction Gear assembly	3.2.2 (Service and Inspect)	Submit CFR.
5	Service and Inspect	1	Main Shaft Coupling Assembly	3.2.2 (Service and Inspect)	Submit CFR.
6	Disassemble and Inspect	1	Band Brake Assembly	3.2.3 (Disassemble and Inspect) D2.3(Brakes and clutches)	Submit CFR.
7	Disassemble and Inspect	1	Band Brake Hand Wheel and Linkage Assembly	3.2.3 (Disassemble and Inspect) D2.3(Brakes and Clutches)	Submit CFR.
8	Service and Inspect	1	Control Stand	3.2.2 (Service and Inspect)	Submit CFR.
9	NDE	1	Anchor Windlass Assembly Foundation	3.2.5 (NDE)	Weld joints to NDE: All joints attaching capstan foundations to deck.
10	Preserve **	1	Anchor Windlass Assembly Foundation	3.2.4 (Preservation)	Preservation to include: Windlass assembly housing and foundation and the motor casing, and gear reducer, and all other previously painted associated components surfaces. Select the following top coat colors: Spar (10371) for equipment surfaces. Black (17038) for foundation surfaces Yellow (13538) for Anchor Windlass (Figure 1)
11	Groom and Lubricate	1	Anchor Windlass Assembly	3.2.6 (Groom and Lubrication)	Lubrication Chart of TP 7183B
12	Op Test	1	Anchor Windlass Assembly	B2.5 (Windlass)	Submit CFR.
13	Label Plates	1	Anchor Windlass Assembly	B2.9	Figure B-1

*Quantity is per each anchor windlass.

3.3 Special requirements for various components. The Contractor must perform additional work on the components listed in Table 3.

TABLE 3 - SPECIAL REQUIREMENTS

COMPONENT	REFERENCE DOCUMENT
Electric Motors: Clean & Inspect AC Motor. Measure winding Insulation Resistance with a megger.	Section 3 CG Tech Pub 7183 Submit CFR.
Renew Return and Servo filter elements.	See Table 1 CG Tech Pub 7183

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.4 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

3.5 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs).

4. NOTES



FIGURE 1: ANCHOR WINDLASS

WORK ITEM 13: Forward and Aft Capstans, Level 2 Overhaul

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform Level 2 overhaul of the capstans listed in Table 1.

TABLE 1 – FORWARD AND AFT CAPSTANS

CAPSTAN	LOCATION	MOTOR CONTROLLER LOCATION
Midship Port Capstan	01 Level - Frame 50	1-44-2-L (Officer Wardroom/Lounge)
Midship Starboard Capstan	01 Level - Frame 47	1-44-1-Q (Trash Stow and Staging Room)
Port Stern (Towing) Capstan	Main Deck - Frame 87	2-88-0-L (Passage, Port Side)
Starboard Stern Capstan	Main Deck - Frame 87	2-88-0-L (Passage, Starboard Side)

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

- Coast Guard Drawing 418A-WMSL-100-001, Rev A, General Arrangement
- Coast Guard Drawing 750-WMSL-320-010, Rev G, Power Sys Deck Plan – Second Dk, Aft of Fr 52 (ASC3200016)
- Coast Guard Drawing 750-WMSL-320-012, Rev G, Power Sys Deck Plan – Main Deck Fwd of Fr 52 (ASC320007)
- Coast Guard Drawing 750-WMSL-320-016, Rev F, Power Sys Deck Plan – 01 Level (ASC320009)
- Coast Guard Drawing 750-WMSL-582-001, Rev D, Anchoring, Mooring, and Towing Arrangement (ASC582001)
- Coast Guard Drawing 750-WMSL-582-002, Rev H, Mooring and Towing Arrangement (ASC582002) (Unsigned)

COAST GUARD PUBLICATIONS

- Coast Guard Technical Publication (TP) 9557, SWBS 582, Jun 2021, Forward & Aft Capstan – Model 4A0100
- Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020 General Requirements

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Surface Forces Logistics Center Standard Specification 3041 (SFLC Std Spec 3041), 2020, Shipboard Electrical Cable Test

Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2020, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2020, Auxiliary Machine Systems

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep. The Contractor must provide the services of an OEM authorized/ licensed Tech Rep for the capstans (i.e. Federal equipment Co. Model 4A0100) to accomplish the following on site:

- Provide manufacturer's proprietary system / equipment information, software, and tools.
- Assist with and ensure compliance with manufacturer's procedures and standards during disassembly, inspection, repair, modification, calibration, testing and reassembly of the equipment/system.

3.1.2.1 Ensure the Tech Rep is an OEM Certified Representative for the system/equipment stated above and demonstrated on their résumé.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.3.1 The Contractor must maintain existing system cleanliness; take all necessary precautions to prevent the introduction of contaminants into the piping system. Whenever disconnecting or removing components from the piping system, completely seal all openings to the rest of the system, immediately, using either caps (for externally threaded connection points), bolt-on blanks, or taped-on discs/covers (durable plastic or sheet-metal no less than 1½ Inch thick).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Wiring
- Bunk Beds
- Deck Plating
- Piping

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- Electrical cables
- Machinery

3.1.5 Fluid disposal. The Contractor must dispose of removed fluids in accordance with all applicable Federal, state, and local regulations.

3.1.6 Electrical work. The Contractor must accomplish all electrical work in accordance with SFLC Std Spec 3042, and test cables in accordance with SFLC Std Spec 3041.

3.1.7 Drawing correction. Substitute Item 21 (Hex Fitted Bolt 1-8UNJC-2A X 7½ Inch Long) of Coast Guard Drawing 750-WMSL-582-002 with following materials:

- Non-fitted standard bolt 1”-8 UNC 2A X 7” Long, (Monel K-500 Bolts)
- Torque 770 ft-lb (Dry) / 570 ft-lb (Lubricated) and submit a CFR.

NOTE
Coast Guard personnel will operate all shipboard machinery and equipment.

3.1.8 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR

3.2 Capstan inspections and maintenance. For each capstan listed in Table 1, the Contractor with Tech Rep must perform tasks listed in Table 2 in accordance with SFLC Std Spec 5000 and Tech Pub 9557. Refer to documents referenced on section 2 for technical guidance.

TABLE 2 – TASK LIST

				ADDITIONAL REQUIREMENTS	
#	TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
1	Operate and Inspect	1	Capstan	3.2.1 (Operate and Inspect)	Submit a CFR with a description of any discrepancies
2	Disassemble and Inspect	1	Capstan Assembly	3.2.3 (Disassemble and Inspect)	Install protective barriers to cover hole on deck. Renew mounting hardware.
3	Service and Inspect	1	Motor	3.2.2 (Service and Inspect)	Check insulation resistance of the motor before removal and after reinstallation in accordance with Para 8.3 of Tech Pub 9557. Open the controller and inspect for loose wires, missing/broken insulation, and failing components. Submit a CFR.

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				ADDITIONAL REQUIREMENTS	
#	TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
4	Disassemble and Inspect	1	Control Console Assembly and Control Valves	3.2.3 (Disassemble and Inspect)	Inspect Motor Controller and Pushbutton Station Tech Pub 9557 (Para 6.4.2, Table 7-8) and Submit a CFR.
5	Disassemble and Inspect	1	Brake Assembly	3.2.3 (Disassemble and Inspect)	Disassemble and Inspect Brake Assembly in accordance Table 7-6 of Tech Pub 9557 and Appendix B
6	Disassemble and Inspect	1	Gear Box	3.2.3 (Disassemble and Inspect)	Renew oil and grease in accordance with Para 4.4 of Tech Pub 9557
7	Partially Preserve	1	Capstan Foundation and Deck	3.2.4 (Preservation)	Preserve Capstan foundation in accordance with SFLC Std Spec 6310
8	Partially Preserve	1	Capstan Assembly	3.2.4 (Preservation)	Preserve Capstan external surfaces in accordance with SFLC Std Spec 6310
9	Groom and Lubricate	1	Capstan Assembly	3.2.6 Groom and Lubricate	Lubricate all components per Table 4-1 of Tech Pub 9557
10	Operational and Weight Testing	1	Capstan Assembly	3.2.8 Operational and Weight Testing	See Paragraph 3.3 below.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.3 Operational test, post repairs. After completion of work, the Contractor must witness Coast Guard personnel perform an operational test of all items or shipboard devices that were disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

3.3.1 Functional / No-load test. The Contractor must perform a no load functional test on each capstan listed in Table 1. Run each capstan without load at each rated speed for ten minutes in each direction to determine that no abnormal heat, wear or noise develops. Submit a CFR.

3.3.2 Brake inspection. After completion of no load functional test, the Contractor with Tech Rep must inspect the brake assembly for proper installation and submit a CFR.

3.3.3 Rated load test. The Contractor with Tech Rep support must perform this test by pulling against a dynamometer and bitt. Tail the line until the dynamometer registers the required pull without stalling the capstan. Rated load is 15000 lbs. Submit a CFR. (Note: This test verifies that the capstan is capable of developing the specified line pull in both directions of rotation).

3.4 Touch-up preservation. The Contractor shall prepare and coat all new and disturbed exterior and interior surfaces to match existing adjacent surfaces, in accordance with the SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems) and Appendix B (Cutter and Boat Interior

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Painting Systems), respectively, and as applicable. Abide by all touch-up requirements outlined in SFLC Std Spec 0000, Appendix A (Requirements for Preservation of Ship Structures).

3.5 Special requirements for various components. If a Change Request has been authorized for additional work on any of the components listed in Table 3 below, the Contractor must refer to the corresponding Appendix or paragraph of SFLC Std Spec 5000, as applicable:

TABLE 3 – SPECIAL REQUIREMENTS

COMPONENT	APPENDIX & PARAGRAPH IN SFLC STD SPEC 5000
Fluids	C2.1
Fastener assemblies	D2.1
Wire rope assemblies	D2.2
Brakes and Clutches	D2.3
Open gearing and gear reducers	D2.4

4. NOTES

This section is not applicable to this work item.

WORK ITEM 14: Stern Boat Launch and Recovery, Level II**1. SCOPE**

1.1 Intent. This work item describes the requirements for the Contractor to perform routine maintenance and preservation on Stern Boat Launch and Recovery System.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST (\$/UNIT)
N	Spring, Sheave	NSN: 5360-01-672-8829 PN: P2-965-0024	8 ea.	185.00
N	Pins, Spring	NSN: 5315-01-672-8220 PN: B2-066-0056	6 ea.	400.00
N	Pins, Cotter	NSN: 5315-01-672-8187 PN: 81-E-0628	6 ea.	1.50
N	Flat Washer, 2 ½” Nominal, TY A 5”OD x 2 5/8” ID x 0.238” THK	NSN: 5310-01-672-8737 PN: 61-E-16	6 ea.	1.50
N	Jacking Bolt, Sheave	NSN: 5306-01-672-9033 PN: B2-033-0026	8 ea.	275.00
N	Lubricating Oil, Gear	PN: MOBILGEAR SHC 220	40 gal.	100.00
N	Carriage Winch Brake Spring	PN: P2-965-0021 Rev A	2 ea.	1,400.00
N	Carriage Winch Brake Band Assembly	PN: C2-423-0007	2 ea.	150.00
N	Centerline Winch Brake Spring	PN: P2-965-0021 Rev A	1 ea.	1,400.00
N	Centerline Winch Brake Band Mounting Spring	PN: P2-965-0022 NSN: 5360-01-598-3504	1 ea.	1,750.00
N	Centerline Winch Brake Band Assembly	PN: C2-423-0005 NSN: 3950-01-598-3240	1 ea.	154.00
N	Centerline Winch Clutch Shoe	PN: A2-084-0004	2 ea.	2,700.00
N	Centerline Winch Torsional Clutch Spring	PN: P2-965-0020	1 ea.	950.00
Y	*CB-OTH Mark IV	N/A	1 ea.	N/A
Y	*Long Range Interceptor II	N/A	1 ea.	N/A

*Government-loaned property, which must be returned to the vessel upon completion of the availability.

**New or refurbished equipment that the Government may provide for installation in place of existing equipment.

***Government-furnished property, which is to be supplied by either the vessel or the C4IT Service Center.

2. REFERENCES

COAST GUARD DRAWINGS

- Coast Guard Drawing 750-WMSL-583-004, Rev K, Stern Launch & Recovery Arrangement & Details (ASC583004)
- Coast Guard Drawing FL-1702-11, Rev -, Inspection Of Sheaves

COAST GUARD PUBLICATIONS

- Coast Guard Technical Publication (TP) 7809, SWBS 583, Apr 2021, Boat Retrieval Equipment – Boat Hoist, Centerline & Carriage Winches
- Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements
- Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes
- Surface Forces Logistics Center Standard Specification 3020 (SFLC Std Spec 3020), 2022, Overhaul AC Electrical Motors
- Surface Forces Logistics Center Standard Specification 3041 (SFLC Std Spec 3041), 2022, Shipboard Electrical Cable Test
- Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2022, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation
- Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2022, Auxiliary Machine Systems
- Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

OTHER REFERENCES

- The Society for Protective Coatings (SSPC) Surface Preparation Specification No. 1 (SSPC-SP 1), 2016, Solvent Cleaning
- The Society for Protective Coatings (SSPC) Surface Preparation Specification No. 11 (SSPC-SP 11), 2016, Bare Metal Power Tool Cleaning

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep. The Contractor must provide the services of Tech Reps in accordance with the following subparagraphs.

3.1.2.1 The Contractor must provide the services of an OEM authorized / licensed Tech Rep for the Centerline and Carriage Winches (Superior–Lidgerwood–Mundy Corp.) to accomplish the following on site:

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- Provide manufacturer's proprietary information, software, and tools pertinent to the equipment/system
- Assist with proper repair methods, and ensure compliance with manufacturer's procedures and standards during disassembly, inspection, repair, modification, calibration, and reassembly of the equipment/system
- Observe initial testing to identify any major mechanical issues
- Adjust and set limits switches associated with the equipment
- Adjust wire rope lengths

3.1.2.2 The Contractor must provide the services of an OEM authorized / licensed Tech Rep for the Centerline and Carriage Winches Control System (Rockwell Automation) to accomplish the following on site:

- Provide manufacturer's proprietary system/ equipment information, software, and tools.
- Assist with and ensure compliance with manufacturer's procedures and standards during initial testing, disassembly, inspection, repair, modification, calibration, reassembly, and final testing of the equipment/system.

3.1.2.3 Ensure the Tech Reps are OEM Certified Representatives for the systems/equipment stated above and demonstrated on their résumés.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Piping
- Electrical Cables
- Brake Guards
- Boat Capture Net

3.2 Electrical requirements. The Contractor must accomplish all electrical work in accordance with SFLC Std Spec 3042, and test cables in accordance with SFLC Std Spec 3041.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.3 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition, in both automatic and manual modes of operation. Submit a CFR.

3.4 Electric motors. The Contractor must perform megger testing for the motors listed in Table 1 in accordance with SFLC Std Spec 3020. Ensure motor leads are disconnected from the control cabinet during megger testing. Submit a CFR detailing results of megger test and recommendations for any parts requiring repair or renewal.

TABLE 1 – LIST OF ELECTRIC MOTORS

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EQUIPMENT	NAMEPLATE DATA
Stbd Carriage Winch	15 HP, 440 Volt, 3 Phase, 60 Hz
Port Carriage Winch	15 HP, 440 Volt, 3 Phase, 60 Hz
Centerline Winch Motor	30 HP, 440 Volt, 3 Phase, 60 Hz
Stbd Carriage Winch Brake Motor	0.75 HP, 440 Volt, 3 Phase, 60 Hz
Port Carriage Winch Brake Motor	0.75 HP, 440 Volt, 3 Phase, 60 Hz
Centerline Winch Brake Actuator Motor	0.75 HP, 440 Volt, 3 Phase, 60 Hz
Centerline Winch Clutch Actuator Motor	0.33 HP, 440 Volt, 3 Phase, 60 Hz

CAUTION

The PLC back-up battery should be disconnected when the PLC panel is disconnected to prevent draining the battery.

3.5 Control station. The Contractor must open, clean, and inspect the interior of each of the control stations. Perform inspections specified in accordance with Section 11 of Coast Guard TP 7809. Additionally, verify that cover gaskets are intact and sealing out water from internals, proper connection of all wires (i.e. not loose, disconnected, damaged, etc.), and all lights and switches are operational. Submit a CFR with a description of any deficiencies identified.

3.6 Centerline boat winch maintenance. The Contractor must perform the following tasks for the centerline boat winch. Submit a CFR with a description of any found discrepancies and recommendations for repairs.

3.6.1 Drain and inspect the gear box lubricating oil for any metal particles or other discrepancies and submit a CFR. Dispose of lubricating oil in accordance with all Federal, state, and local regulations.

3.6.2 Open the gearbox inspection covers and inspect the gearbox internals. Note any indications of damage to gearbox internals. Measure gear lash and play.

3.6.3 Disassemble and inspect the brake and clutch linkages, and service and inspect the brake and clutch actuators in accordance with SFLC Std Spec 5000. Renew material provided as GFP upon reassembly and renew all fasteners.

3.6.4 Refill the gearboxes with new gear oil (i.e. Mobil Gear SHC 220, ISO VG 220, 19.3 gallons). Renew any damaged hardware/fasteners and reinstall inspection cover with new gasket material.

3.6.5 Lubricate all components of the centerline winch in accordance with Section 9 of Coast Guard TP 7809.

3.7 Carriage winches maintenance (Port and Stbd). The Contractor must perform the following tasks for the Port and Stbd carriage winches. Submit a CFR with a description of any found discrepancies and recommendations for repairs.

3.7.1 Drain and inspect the gear box lubricating oil for any metal particles or other discrepancies and submit a CFR. Dispose of lubricating oil in accordance with all Federal, state, and local regulations.

3.7.2 Open the gearbox inspection covers and inspect the gearbox internals. Note any indications of damage to gearbox internals. Measure gear lash and play.

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3.7.3 Disassemble and inspect the brake linkages, and service and inspect the brake actuators in accordance with SFLC Std Spec 5000. Renew material provided as GFP upon reassembly and renew all fasteners.

3.7.4 Refill the gearboxes with new gear oil (i.e. Mobil Gear SHC 220, ISO VG 220, 9.8 gallons per gearbox, 19.6 gallons total). Renew any damaged hardware/fasteners and reinstall inspection cover with new gasket material.

3.7.5 Lubricate all components of the carriage winch assemblies in accordance with Section 10 of Coast Guard TP 7809.

3.8 Rope renewal. The Contractor must renew the wire ropes for the carriage winches and the fabric rope for the centerline winch in accordance with drawing B2-502-0009 in Coast Guard Tech Pub 7809 and in accordance with SFLC Std Spec 5000.

3.9 Sheave maintenance. With ropes removed, the Contractor must inspect each of the two (2) carriage winch sheaves for wear in accordance with Coast Guard Drawing FL-1702-11. Inspect the sheave bearings to ensure smooth operation. Submit a CFR with a description of the condition of the sheaves. Renew all sheave tensioner springs.

3.10 Carriage assembly springs renewal. The Contractor must renew the springs and lock nuts for each carriage assembly.

3.11 Square rail inspection. The Contractor must clean and inspect the Orkot sliding bearing pads on the square rail assemblies. Measure the clearances between the slider bearing pads and the carriage assembly steel pads around all sides of the square rail assemblies. The clearance must be 1/16" nominal for all sides. Ensure that the bearing material is in good condition and not excessively worn or damaged. Submit a CFR.

3.12 Pipe rail inspection. The Contractor must inspect the Orkot inserts for the pipe rail for any indications of uneven wear. Measure the clearance between the slide bearing material and pipe rail to ensure it is in accordance with Coast Guard Drawing 750-WMSL-583-004. Submit a CFR. Clean the pipe rails in accordance with SSPC SP-1 to remove all grit and dirt from the rails.

3.13 Alignment tolerance. The Contractor must measure the distance between each of the pipe rails and the square rails at several locations (measure to the rails, not to the Orkot) to measure the parallelism between the pipe and square rails. Verify that the pipe rail and square rail assemblies are parallel with 1/16 inch of each other as described on Sheet 18A of CG Drawing 750-WMSL-583-004. Submit a CFR with results.

3.14 Partial preservation. The Contractor must prepare and preserve up to 33% of the carriage assemblies, rail supporting structures, and square rail surfaces in accordance with Table 2. Power tool clean all affected surfaces to "bare metal" in accordance with SSPC-SP 11, in lieu of using abrasive blasting; and feather edges of existing intact coating to the prepared areas, in order to provide a smooth transition with the new paint. Conduct an SSPC SP-1 (solvent cleaning) on the structure prior to conducting surface preservation.

TABLE 2 – PRESERVATION REQUIREMENTS

COMPONENT	SYSTEM/APPENDIX (SFLC STD 6310)	TOPCOAT COLOR	PRESERVE LEVEL
Square Rails	Machinery, Deck	Match Existing	Partial
Rail Support Structures	Freeboard/Superstructure/Mast (Freeboard/Superstructure, Steel)	Match Existing	Partial
Carriage Assemblies	Machinery, Deck	Match Existing	Partial
Sheave Assemblies	Machinery, Deck	Match Existing	Partial

NOTE
Coast Guard personnel will operate all shipboard machinery and equipment.

3.15 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition, in both automatic and manual modes of operation. Submit a CFR.

3.15.1 In the presence of the Coast Guard Inspector, operate and test Stern Boat Launch and Recovery System. Demonstrate operation in automatic and manual mode.

3.15.2 Use the GFP small boat (i.e. CB-OTH Mark IV & LRI-II) to demonstrate operation of the carriage winch during testing. The small boat will be launched and recovered during testing.

3.16 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, (Touch-ups and minor coating repairs.)

4. NOTES

This section is not applicable to this work item.

WORK ITEM 15: Folding Boom Cranes, Biennial Maintenance, Perform

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and test folding boom cranes listed in Table 1.

TABLE 1 – LIST OF FOLDING BOOM CRANES

CRANE	LOCATION	MANUFACTURER / MODEL NUMBER	COAST GUARD TECH PUB
Crane No.2 (Port Aft Near)	Main Deck, Port Side, AFT of Frame 90	Appleton Marine Inc. / FB90-28, S/N 20501-2 <i>port aft near)</i>	7903
Crane No.4 (Port Aft Far)	Main Deck, Port Side, AFT of Frame 90	Appleton Marine Inc. / FB90-28, S/N 20501-4 <i>port aft near)</i>	7903
Crane No.3 (Starboard Aft)	Main Deck, STBD Side, AFT of Frame 90	Appleton Marine Inc. / FB90-28, S/N 20501-3 <i>port aft near)</i>	7903

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST (\$/UNIT)
Y	*CB-OTH Mark IV (Coast Guard Drawing 26B-CB-IV-801-001)	N/A	1 ea.	N/A
Y	*Long Range Interceptor II (LRI-II) Cutter Boat	N/A	1 ea.	N/A

*Government-loaned property, which must be returned to the vessel upon completion of the availability.

**New or refurbished equipment that the Government may provide for installation in place of existing equipment.

***Government-furnished property, which is to be supplied by either the vessel or the C4IT Service Center.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 418A-WMSL-801-001 Rev B, Booklet of General Plan

Coast Guard Drawing 418A-WMSL 801-001, Rev A, Booklet of General Plans

Coast Guard Drawing 750-WMSL-100-083 Rev A, General Arrangements NSC5 & Follow (AS5100001)

Coast Guard Drawing 750-WMSL-801-010 Rev A, Booklet of General Plan NSC 5 ONLY (ASC8011001E)

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Coast Guard Drawing 750-WMSL-100-531, Rev D, Structural Mods Iwo New Aft Folding Cranes, Hamilton, James & Munro

Coast Guard Drawing 750-WMSL-320-579, Rev -, Electrical Installations Iwo New Aft Folding Cranes

Coast Guard Drawing 750-WMSL-583-508, Rev -, Installations IWO Aft Folding Cranes

Coast Guard Fleet Drawing FL-1702-11, Rev -, Inspection of Sheaves

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 7903, SWBS 583, Apr 2019, Aft Boat handling system – Model FB90-28

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2020, Auxiliary Machine Systems

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.11 (SSPC-SP 11), 2013, Power Tool Cleaning to Bare Metal

ANSI/EASA Standard AR100-2020, Recommended Practice for the Repair of Rotating Electrical Apparatus.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor must submit a CIR for the inspections listed in the following paragraph(s):

- 3.2 (Inspect and repair task particulars) – Task #1, #2, #3 and #7.

3.1.2 Tech Rep. The Contractor must provide the services of a Qualified Technical Representative who is familiar with the Folding Boom Cranes (i.e. Appleton Marine Inc. Model FB90-28) to accomplish the following on site:

- Advise on manufacturer's proprietary information pertinent to the system.
- Ensure compliance with manufacturer's procedures and standards during inspections, repairs, calibration and testing.

3.1.2.1 Ensure the Tech Rep has experience with the system/equipment stated above and demonstrated on their résumé.

3.1.2.2 Submit the name and résumé of the Tech Rep to the COR at the Arrival Conference.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

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3.1.3.1 Protective measures, hydraulic system(s). Maintain existing hydraulic system cleanliness and take all necessary precautions to prevent the introduction of contaminants into the hydraulic system. Immediately after disconnecting or removing components from the hydraulic system, seal all openings to the rest of the system using caps for externally threaded connection points, bolt-on blanks, or taped-on discs/covers made of durable plastic or sheet-metal that is no less than 1/16-inch thick.

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Piping
- Electrical Cables

NOTE
Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.3 Inspect and repair task particulars. The Contractor with Tech Rep support must perform tasks listed in Table 2 in accordance with SFLC Std Spec 5000 and TP 7903. See applicable drawings and Tech Pub in Section 2 for technical information and installation details.

TABLE 2 – TASK LIST

				ADDITIONAL REQUIREMENTS	
#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER TECH PUB 7903
1	Operate and inspect	3	Folding Boom Crane	3.2.1	Submit a CIR. Document the existing software program/version
2	Operate and inspect	1	Chest Pack (Chest Pack Controls and Junction Boxes)	3.2.1	Submit a CIR. Note: There is one chest pack. It should be rotated between all three cranes.
3	Operate and inspect	1	Control Console	3.2.1	Submit a CIR.
4	Service and inspect	3	Crane Assembly	3.2.2	Perform all preventive maintenance actions as indicated on Table 4-1 of CG TP 7903, regardless of specified interval. Inspect hydraulic hoses for leaks, abrasions, swelling and defects. Inspect entire Folding crane assembly for signs of leakage, cracks, structural damage and deformations. Submit a CFR.

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				ADDITIONAL REQUIREMENTS	
#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER TECH PUB 7903
5	Service and inspect	3	Cranes (Mechanical/Hydraulic)		Inspect Swing Drives, Swing Motor, Swing Manifold, Hydraulic Swivel, Slew Bearing, Slew Bearing Gear, Slew Bearing Bolts, Slew Bearing Wear Inspection, Main Control Manifold, Wire Rope, ELR Manifold, Heel Pins, Jib Pins, Telescope Cylinders, Slide Pads, Jib and Luffing Cylinders, Sheaves, Crane Block Assembly, 10 Ton Hook, Snatch Block, Winch, Constant Tension System, Overhaul Ball. Fasteners, Submit a CFR.
6	Partially Preserve	3	Folding Boom Crane Assembly	3.2.4, 3.2.4.3.2, 3.2.4.4, and 3.2.4.5.1	Perform in accordance with paragraph 3.3 of this work item.
7	Groom and Lubricate	3	Folding Boom Crane Assembly	3.2.6	Perform all of the lubrication requirements specified in Tables 4-3 and 4-4 of CG TP 7903.
8	Hydraulic Lube Oil Analysis	3	Hydraulic System	C2.1.3.1	Submit a CIR.
9	Hydraulic Power Unit (HPU)	1	Hydraulic System	C2.1.3.1	Inspect Prime Mover/Link Motor, HPU Pumps, HPU Reservoir, HPU Tank Heaters, Oil Cooler, HPU Manifold and hoses. HPU Temperature Transmitter, HPU Display, HPU Controls, Joysticks and Control Cabinet in accordance with TP 7903
10	System Relief Valves, Stiches and Indicators	1	Hydraulic System		In accordance with TP 7903, Verify set points, adjustment and calibration on : <ul style="list-style-type: none"> • Pump Compensator Relief Valve • System Relief valve. • Winch Limit adjustment. • Load Monitor Indicators • Crane Position Indicators • Submit a CFR.
11	Disassemble	1	Hydraulic Oil Heat	3.2.3	Disassemble to the minimum

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#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	ADDITIONAL REQUIREMENTS	
				APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER TECH PUB 7903
	and Inspect		Exchanger		extent necessary to clean the heat exchanger.
12	Aft Boat Hydraulics Crane Motor A and B	2	Hydraulic System		Perform Insulation Resistance Test in accordance with ANSI/EASA AR 100-2020.and Section 3 of TP 7903 Submit a CFR.
13	Cranes	3	Electrical		Inspect Load Pin, Boom Angle Transducer, Jib Angle Transducer, Swing Angle Encoder, Length Transducer, Turret Enclosure, Flood lights and Electrical Cables
14	Operational and Weight Test	3	Folding Boom Crane Assembly		Perform in accordance with paragraph 3.5 of this work item.
15	Fabricate and Install	3	Label plate	B2.9	Name Plate must also include additional information of Dynamic Load Test, Brake Test and WLL Weights.

3.3.1 Materials. The Contractor must provide all parts (i.e. all greases, lubricating oils, hydraulic fluid, hydraulic oil filters, tank breather elements and other miscellaneous materials) and materials including, but not limited to, the items listed in Table 3 below, to conduct the required maintenance actions listed above.

TABLE 3 – LIST OF PARTS

QUANTITY	PART NUMBER	DESCRIPTION	SOURCE OF SUPPLY
1	YMD-8861-R	HPU Hydraulic Return Filter	Appleton Marine Inc.
1	YMD-10416	HPU Hydraulic Return Filter	
2	YMD-12209-R	Pressure Filters (For Crane No.2 & 4)	
1	YMD-12234-R (0280D005BH4HC)	Pressure Filters (For Crane No.3)	
1	YMD-12234-R (0060D005BH4HC)	Pressure Filters (For Crane No.3)	

3.3.2 Hose inspection. The Contractor must visually inspect the condition of all flexible hoses and submit a CFR with the following:

- Hose physical condition
- Service life dates (date for required hose renewal; if not specified, add eight years to installation date)

3.3.2.1 If not present, the Contractor must provide new hose tags, in accordance with SFLC Std Spec 5000, Paragraph C2.2.1.4. Ensure tag color coding of black on natural or black on white. Ensure that

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tags must be attached using materials that will not damage hose assembly in any way, or interfere with the normal flexing motion of the hose.

3.3.2.2 The Contractor must stamp, engrave, or etch the following information on each tag. Hand written information on each Tag is NOT acceptable. Utilize the Cutter's hose log for information as necessary.

- Hose Log Item Number (Serial Number)
- Hydrostatic Test Pressure (psi)
- Hydrostatic Test Date (DD/MM/YY)
- Service Life (Replacement Date) Date (QTR "Q"/FY)

3.4 Preservation Requirements. The Contractor must perform the following work to accomplish the first bulleted requirement of SFLC Std Spec 5000 (Para 3.2.4.3.2).

3.4.1 All other requirements as specified from SFLC Std Spec 5000 regarding "Partially Preserve" remain applicable.

3.4.2 In addition to partial preservation, abrade entire crane surface and provide aesthetic top coat.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.5 Operational and weight testing. The Contractor must perform the Appleton Marine Inc. "Start-up and Overhaul Test Procedure", Appendix A of CG TP 7903 (i.e. Items 1-10). Static test (Item 2.1) is not required. Perform all testing with cutter at or near 0-degree trim and 0-degrees list. Record and provide all testing data of Appendix A, CG TP 7903 via a CFR. Utilize test weights that will ensure the boom can be extended horizontal in the notch.

NOTE

Certain water weight bags may be too large to fit within the notch. Ensure test weights are able to fit within the notch to accomplish all testing.

3.5.1 The Contractor must supply weights and a certified dynamometer to conduct load testing. Perform all testing in the presence of the Coast Guard Inspector and the Tech Rep.

CAUTION

Do not exceed the Working Load Limit (WLL) of the cranes for any of the tests listed in Appendix A, CG TP 7903. Exceeding the WLL could result in equipment damage and/or personnel injury.

3.5.2 Upon successful completion of the load testing, operational testing must be performed using the various GFP small boats in accordance with the test procedure detailed in Appendix A, CG TP 7903.

3.5.3 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

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3.6 Touch-up preservation. The Contractor must prepare and coat all new and disturbed exterior and interior surfaces to match existing adjacent surfaces, in accordance with SFLC Std Spec 6310. Abide by all touch-up requirements outlined in SFLC Std Spec 6310.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 16: Helo Hangar Door, Inspect and Test

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and test Port and Starboard Helo Hanger Doors on the Cutter.

1.2 Government-furnished property.

None

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 418A-WMSL-100-001, Rev B, General Arrangements

Coast Guard Drawing 418A-WMSL-801-001, Rev A, Booklet of General Plans

Coast Guard Drawing 750-WMSL-169-001, Rev E, HELO Hangar Door Installation
(ASC169001)

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 7181A, SWBS 169, Jan 2022, Helo-Hangar Doors -
operation & Maintenance Manual

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022,
General Requirements

Surface Forces Logistics Center Standard Specification 3041 (SFLC Std Spec 3041), 2022,
Shipboard Electrical Cable Test

Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2022,
Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022,
Requirements for Preservation of Ship Structures

OTHER REFERENCES

Air Capable Ship Aviation Bulletin 1L (2009)

American National Standards Institute (ANSI/EASA) AR100-2020, Recommended Practice for
the Repair of Rotating Electrical Apparatus

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor must submit a CIR for the inspections listed in the following paragraph:

- 3.6 Operational test - initial

3.1.2 Tech Rep. The Contractor must provide the services of a certified Tech Rep, who is familiar with the Helo Hangar door system (i.e., Federal Equipment Co. Model HH3000 Series) to accomplish the following tasks – on site:

- Provide manufacturer's proprietary information, software, and tools pertinent to the equipment/system.
- Assist with proper repair methods and ensure compliance with manufacturer's procedures and standards during disassembly, inspection, repair, modification, calibration, test and reassembly of the equipment/system.

3.1.2.1 Ensure that the Tech Rep is a Certified Representative of Federal Equipment Co.

3.1.2.2 Submit the Tech Rep's name and résumé to the COR at the Arrival Conference.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below listed:

- Lighting fixtures.
- Electrical wiring.
- Storage shelves and racks.
- Piping.
- Brackets.

3.2 Notification. The Contractor must give written notification to the COR 48 hours before starting work on this item.

3.3 Drawings. Helo hanger door location and installation are shown on the following drawings:

- Coast Guard Drawing 418A-WMSL-100-001 General Arrangements
- Coast Guard Drawing 418A-WMSL-801-001 Booklet of General Plans
- Coast Guard Drawing 750-WMSL-169-001 HELO Hangar Door Installation

3.4 Control panel key. Ship Force will provide key of the Control Panel to verify operation of exterior electronic controls.

3.5 Electrical requirements. The Contractor must accomplish all electrical work in accordance with SFLC Std Spec 3042, and test cables in accordance with SFLC Std Spec 3041.

NOTE
Coast Guard personnel will operate all shipboard machinery and equipment.

3.6 Operational test - initial. Prior to commencement of work, the Contractor must witness an operational pre-test (by Coast Guard personnel) of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit CIR.

3.7 Helo hangar door inspection and test. The Contractor with Tech Rep support must perform an inspection and test on the Port and Starboard Helo Hangar Doors in accordance with TP 7181 (Section 2) and Table 1. Submit a CFR.

TABLE 1 – HANGER DOOR INSPECTION AND TEST

HANGER DOOR DEVICES	TASK TYPE
Door parts	Inspect all door parts for damage and wear
Curtain drive system.	Inspect and lubricate the curtain drive system
3 Inch Slats and Roller End lock Assembly	Inspect
Door brake	Inspect door brake
Bottom Bar Assembly	Inspect
Electric motor & Motor Operator Assembly	Megger in accordance with ANSI/EASA Standard AR100-2020
Barrel Assembly	Inspect
Charging Wheel Assembly with Chain Tensioner	Inspect
Guide Rail Assembly	Inspect
Hand Crank Assembly	Inspect
Control Enclosure	Inspect
3-Button Station with Key Lockout	Inspect and Test Operation
Door Spring Tension	Balance and Adjust Spring Tension
Limit Switches	Inspect and Test Operation
Weather Seal	Inspect
Safety edge	Inspect and Test
Slats	Inspect
Door Dog Position Switches	Inspect and Test Operation
Door Cable & Cable Reel Assembly	Inspect
Operator Station	Inspect and Test Operation
Control Enclosure	Open and inspect the internal parts/wiring
Exterior Electronics Controls	Inspect and Test Operation

3.7.1 Lubrication. The Contractor must lubricate each hanger door assembly in accordance with Table 2.1 of TP 7181.

NOTE
Coast Guard personnel will operate all shipboard machinery and equipment.

3.8 Operational test – post repairs. After completion of work, the Contractor must, in the presence of the Coast Guard Inspector, thoroughly test and prove all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

3.9 Touch-up preservation. The Contractor must prepare and coat all new and disturbed exterior and interior surfaces to match existing adjacent surfaces, in accordance with SFLC Std Spec 6310, Appendix

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A (Cutter and Boat Exterior Painting Systems) and Appendix B (Cutter and Boat Interior Painting Systems), respectively, Air Capable Ship Aviation Bulletin 1L (2009) and as applicable. Abide by all touch-up requirements outlined in SFLC Std Spec 0000, Appendix A (Requirements for Preservation of Ship Structures).

4. NOTES

This section is not applicable to this work item.

WORK ITEM 17: Sewage Holding Tank(s), Clean and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the following tank(s):

TABLE 1 – LIST OF TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	TANK CONTENT DISPOSAL (GALLONS)
Vacuum Collection Holding Tank	3-37-2-W	3,351	503

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 418A-WMSL-593-002, Rev B, Sewage System Diagram

Coast Guard Drawing 750-WMSL_100_023, Rev J, Unit 2120 Structure – 1st Pltf to 2nd Deck Fr 35 to Fr 44 (ASC100212)

Coast Guard Drawing 750-WMSL-167-001, Rev J, Manhole List Installation and Fabrication Details Ship Wide (ASC167001)

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor must submit a CIR for the inspections listed in the following paragraph(s):

- 3.7 Inspection

3.1.2 Tech Rep.

None.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Piping.
- Pump(s).
- Residual tank contents/fluid.

NOTE

**Coast Guard personnel will operate all shipboard machinery and equipment.
Coast Guard personnel will pump down affected tanks to low suction.**

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.2.1 Perform an initial operational test of each tank TLIs to demonstrate that each radar head/sensor is functional (i.e., Digital readout is displayed).

3.2.2 Ensure that there is interface/communication between the TLI sensor and the Machinery Control and Monitoring System (i.e. Digital readout at the TLI is identical to that displayed).

3.3 Service disruption. When sewage collection service is disrupted due to contractor repairs, the Contractor shall refer to SFLC Standard Spec 0000 par 3.2.11 to provide required temporary facilities.

3.4 Tank opening. The Contractor shall remove the tank manhole cover(s) and ventilate the confined spaces in accordance with SFLC Std Spec 0000, Paragraphs 3.3.1.1 and 3.3.1.2.

3.5 Tank content and waste disposal. The Contractor shall dispose of residual tank contents and any cleaning fluids in compliance with all applicable Federal, state, and local laws, ordinances and regulations. Notify the COR (in writing) at least 48 hours prior to removal of wastes and fluids. Document a complete chain of custody record of the removed tank contents and generated wastes, from the vessel to the point of final destination or delivery. Submit document to the COR upon completion of work.

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3.6 Plugs. The Contractor shall plug all inlet and outlet piping in the tank to prevent cleaning contaminants from entering system piping. Use plugs with an attached lanyard, ring or other system that will ensure plugs are not lost in the pipe openings.

3.6.1 Plug Log. The Contractor must keep a written record of all installed plugs. Keep a separate list for each tank. Maintain a plug accountability log posted immediately outside the tank to prevent any of the installed temporary plugs from being lost inside the tank or left behind inside at tank closure. Submit this log to the COR after completion of work item

3.6.2 The Contractor must ensure that all plugs are removed from each tank upon completion of work in the tank.

3.7 Cleaning requirements. The Contractor shall clean all tank structure's interior surfaces free of all foreign materials, sediment, and sludge. Remove all persistent residues, taking care not to damage the tank coating system. Clean all tank vent lines. Remove and clean the ejectors and level switches inside of the tank(s). Reinstall the ejectors and level switches upon completion of tank cleaning. Use new gaskets and o-rings to install/reinstall all removed/disturbed components.

3.7.1 The Contractor shall accomplish all requirements of SFLC Std Spec 6310, 3.1.6.4 (Surface contaminant removal) to achieve the cleanliness requirements of SSPC-SP 1, including a low-pressure (maximum 5,000 psi) fresh water wash down of the surfaces.

3.7.2 Remove cleaning media and residues continuously from the tank during the washing process. Remove any residual wash media and wipe up residual moisture with clean lint-free cloths.

3.8 Inspection. The Contractor shall visually inspect all interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Submit a CFR with a description of the following:

- Tank structural condition.
- Manhole and cover condition.
- Ladder condition (if applicable).
- Inaccessible areas.
- Condition of tank coating, including measurements, percentage, location, and type of coating failure (not applicable for stainless steel tanks).
- Tank level indicator (TLI), vacuum and/or float switch condition.
- Suction and discharge piping and vent line condition.
- Fastener material (stainless steel) and condition.
- Zinc anode condition (remaining percentage).

3.9 Pit measurement. The Contractor must measure 100 pits within each tank/location listed in Table 1, in accordance with SFLC Std Spec 0740, Paragraph 3.13 (Evaluation of pitting corrosion). The results of these measurements must be included in the inspection report, showing where pit measurements were taken and the depth of the pit.

3.10 Ultrasonic thickness (UT) measurement. The Contractor must take UT measurements in the surrounding area of any pit measuring greater than 25% of plate thickness. UT measurements must be taken in the four quadrants at an equal-distant radius from the pit center until full plate thickness is

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measured. For bidding purposes, assume 100 UT measurements per tank listed in Table 1. UT measurements must be conducted in accordance with SFLC Std Spec 0740, Appendix C, using Coast Guard Drawing 750-WMSL_100_23 as guidance. The results of these measurements (original thickness, measured thickness, and any observed cracks) and the locations where they were taken must be included in the inspection report.

3.11 Substrate fairing and repair by filling Epoxy for shallow pits and small corruptions (i.e. pits < 25% or corruptions < 25%). The Contractor must repair small pin holes, shallow pitted substrates (with remaining plate thicknesses over 75% of required plate thicknesses), and fair corroded substrates (with remaining cross sections over 75% of required cross section areas), after removing coating (if applicable), in accordance with SFLC Std Spec 6310 and manufacturers' instructions.

- Procure 1 kit of Epoxy Fairing Compounds (e.g. Belzona 1111, 0.5 Gallon/5 Kg Kit or equivalent) to conduct repairs.
- Turn over all unused kits to the COR.

NOTE

“Substrate fairing and repair by filling Epoxy for shallow pits and corruptions (i.e. pits < 25% or corruptions < 25%)” is a supplement barrier intending to help delay penetration.

3.12 Control panel assembly. Open and vacuum clean the control panel assembly. Inspect the control panel assembly for any indications of overheating or loose wiring or connections. Submit a CFR

3.13 Tank closing. The Contractor shall ensure that the tank(s) remain open for approximately 24 hours after completion of any authorized repair and preservation procedures. Notify the COR at least 48 hours prior to closing the tank(s). After satisfactory inspection by the Coast Guard Inspector and completion of all authorized repairs, remove all installed temporary plugs and close tank manhole cover(s) with new gasket material in accordance with Coast Guard Drawing 750-WMSL-167-001, in the presence of the Coast Guard Inspector. Chase threads on studs to ensure even installation of the access covers. Renew all nuts, washers, and grommets (including those that are missing) in accordance with Coast Guard Drawing 750-WMSL-167-001. Submit a CFR with the completed plug log.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.14 Operational test, post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

3.14.1 Perform an initial operational test of each tank TLIs to demonstrate that each radar head/sensor is functional (i.e., Digital readout is displayed).

3.14.2 Ensure that there is interface/communication between the TLI sensor and the Machinery Control and Monitoring System (i.e. Digital readout at the TLI is identical to that displayed).

3.15 Touch-up preservation. The Contractor shall prepare and coat all new and disturbed surfaces, and all manhole cover external surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs). Do not paint any manhole cover fasteners.

4. NOTES

This section is not applicable to this work item

WORK ITEM 18: Tanks (Sewage Holding Tank), Preserve (100%)

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to prepare and coat 100% of the surfaces of the tanks listed in Table 1.

TABLE 1 – LIST OF TANKS

LOCATION	COMPO	SYSTEM/APPENDIX (SFLC STD 6310)	TOPCOAT COLOR	PRESERVE LEVEL
Vacuum Collection Holding Tank 3-37-2-W	Inner Bottom, Ovhd&Bhd Structures	Tanks and Voids (Grey Water, Sewage, and CHT Tanks) Option I or II	White	Full

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

- Coast Guard Drawing 418A-WMSL-593-002, Rev B, Sewage System Diagram
- Coast Guard Drawing 750-WMSL_100_023, Rev J, Unit 2120 Structure – 1st Pltf to 2nd Deck Fr 35 to Fr 44 (ASC100212)
- Coast Guard Drawing 750-WMSL-167-001, Rev J, Manhole List Installation and Fabrication Details Ship Wide (ASC167001)

COAST GUARD PUBLICATIONS

- Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements
- Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures
- Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2022, Temporary Hull Accesses

OTHER REFERENCES

- The Society for Protective Coatings (SSPC) Surface Preparation Specification No.11 (SSPC-SP 11), 2016, Bare Metal Power Tool Cleaning

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep. The Contractor must provide the services of a Qualified Technical Representative to accomplish the following on site:

- Serve as an Independent Coating Tech Rep. Provide the services of a Certified Coating Inspector, having successfully completed the NACE-International Coating Inspector Program (CIP), Level 3 - Peer Review with Marine Specialty.
- Accomplish applicable requirements in SFLC Std Spec 0000, Paragraph 3.2.4.2.2 (Coating Tech Rep).
- Oversee the Preservation Plan requirements in SFLC Std Spec 6310, Paragraph 3.2 (Preservation Plan).
- Review and sign daily reports summarizing work. See forms QA-1 thru QA-5 provided in the General Requirements.

3.1.2.1 Qualifications/certifications. Submit the Coating Tech Rep's qualifications/certifications in accordance with SFLC Std Spec 0000, 3.2.4.2.2.3 and 3.2.4.2.4, include name, certificate number and documented completion of NACE Marine Coating Technology Course and Exam.

3.1.2.2 Submit the name and résumé of the Tech Rep to the COR at the Arrival Conference. Include the dates of services the Qualified Tech Rep will be on site as per their subcontract documentation.

NOTE

This work item requires the use of an NACE-Certified Tech Rep. The use of a QP-1 certified company/contractor alone is not sufficient.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- TLIs
- Piping, supports, brackets

3.1.5 Temporary access openings. Due to limited access to work areas, the Contractor may, with express permission of the KO (via submission of a CFR), cut access holes to facilitate accomplishment of the work specified herein. Perform all work required to open and close the access openings in accordance with SFLC Std Spec 8636.

3.1.6 Work plan. The Contractor must provide a work plan (preservation plan including protection plan) for the Tank Preservation listed in Table 1 in accordance with SFLC Std 6310, paragraph 3.2 (Preservation Plan) to COR before or on Arrival Conference.

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3.1.6.1 Pre-work preservation conference. Prior to the start of any preservation work, the Contractor must facilitate a conference meeting with the KO, COR, Coast Guard Inspector(s), Contractor and Contractor's representative able to speak to technical preservation details and requirements.

- QC/QA Program. The requirements of SFLC Std Spec 0000 3.2.4.2.2.3, Contractor's QC/QA Program (as outlined in SFLC Std Spec 0000, 3.2.4 QC/QA Program),
- Material Receipt Conformance (as outlined in SFLC Std Spec 6310, 3.1.1.2 Material Receipt Conformance),
- Preservation plan (as outlined in SFLC Std Spec 6310, 3.2 Preservation plan), SFLC Std Spec 6310 3.1.1.3.1 and 3.1.9 must be formally reviewed and approved by the KO,
- PDS and SDS. Only submit Manufacturer's Product Data Sheets (PDS) and Safety Data Sheets (SDS) if NAVSEA approved ASTM F718 sheets are not available.

3.2 In-process quality control measures. The Contractor must abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for "critical-coated surfaces"). Surfaces being preserved are considered "critical-coated surfaces". QA Forms and NACE III Reports must be submitted to the COR for review no later than 24 hours after completion of work.

3.2.1 Daily reports. At the conclusion of each work day coating has been applied, the Contractor must provide Daily Reports generated and signed by the Coating Tech Rep. Daily reports must summarize work accomplished that current day, work to be accomplished the following day, any and all materials used during work that day, any and all readings taken and/or data collected (i.e. environmental readings, DFT, WFT, etc...) identifications of work locations, time and type of any inspections conducted with the results of such inspection(s) and must also include descriptions any events of non-conformance in relation to the specification, applicable references, standards, and technical data sheets (i.e ASTM F718s).

3.2.2 Environmental readings. Environmental readings must be accomplished within the agreed upon hours according to the interval outlined in SFLC Std Spec 6310, Appendix D3.1.

3.3 Ventilation requirements. The Contractor must accomplish all requirements of SFLC Standard Spec 6310, 3.1.16 (Ventilation requirements for confined spaces) and SFLC Standard Specification 0000, 3.3.1.1 (Temporary ventilation) throughout the entirety of this work item.

3.4 Surface preservation. The Contractor must prepare and coat all tank interior surfaces (including internal surfaces of manhole cover(s), manhole cover hull ring(s) extending outward to the weld line that ties the hull ring into the tank plating on the tank exterior) using the system specified in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems).

3.4.1 Inspection. The Contractor must inspect all cleaned surfaces and exposed substrates of areas in tanks listed in Table 1 (after removing/cleaning surface covering/coatings and prior to priming substrates) in accordance with SFLC Std Spec 6310 3.1.8.1 Surface cleanliness evaluation – visual standards. Submit a CFR.

3.4.2 The Contractor must coat the prepared surfaces using the system specified for "Tanks and Voids (Grey Water, Sewage, and CHT Tanks)" in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems).

3.5 Waste and debris removal. The Contractor must remove all waste and debris generated by the tank preservation process (surface preparation, substrate cleaning, priming, and coating). Waste and debris

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must be disposed of in accordance with SFLC Std Spec 6310, paragraph 3.1.8.2 (Debris removal and disposal), SFLC Std Spec 0000, and all applicable Federal, state, and local laws, ordinances and regulations.

3.6 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs).

4. NOTES

This section is not applicable to this work item

WORK ITEM 19: Grey Water Holding Tank(s), Clean and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the following tank(s):

TABLE 1 – LIST OF TANKS

TYPE OF TANK	TYPE OF TANK	CAPACITY - 95% (GALLONS)	TANK CONTENT DISPOSAL (GALLONS)
Grey Water Holding	3-34-0-W	8446	1267
Grey Water Holding	5-74-0-W	16,370	2456

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

- Coast Guard Drawing 418A-WMSL-528-001, Rev A, Plumbing and Interior Deck Drain Diagram
- Coast Guard Drawing 750-WMSL_100_23, Rev J, Unit 2120 Structure – 1st Platf to 2nd Deck Fr 35 to Fr 44 (ASC100212)
- Coast Guard Drawing 750-WMSL-100-36, Rev N, Unit 3110 Structure 1st Platform and Below Frs 65-77 (ASC100312)
- Coast Guard Drawing 750-WMSL-100-37, Rev H, Unit 3120 Structure – 1st Platf to 2nd Dk- Fr 64 to Fr 76 (ASC100312)
- Coast Guard Drawing 750-WMSL-167-001, Rev J, Manhole List Installation and Fabrication Details Ship Wide (ASC167001)

COAST GUARD PUBLICATIONS

- Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements
- Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes
- Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor must submit a CIR for the inspections listed in the following paragraph(s):

- 3.7 Inspection

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Piping
- Residual tank contents/fluids
- Pumps

3.1.5 Service disruption. When grey water is disrupted due to Contractor repairs, the Contractor must refer to SFLC Standard Spec 0000 par 3.2.11 to provide required temporary facilities.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

Coast Guard personnel will pump down affected tanks to low suction.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.2.1 Perform an initial operational test of each tank TLIs to demonstrate that each radar head/sensor is functional (i.e., Digital readout is displayed).

3.2.2 Ensure that there is interface/communication between the TLI sensor and the Machinery Control and Monitoring System (i.e. Digital readout at the TLI is identical to that displayed).

3.3 Tank opening. The Contractor must remove the tank manhole cover(s) and ventilate the confined spaces in accordance with SFLC Std Spec 0000, Paragraphs 3.3.1.1 and 3.3.1.2.

3.4 Tank content and waste disposal. The Contractor must dispose of residual tank contents and any cleaning fluids in compliance with all applicable Federal, state, and local laws, ordinances and regulations. Notify the COR (in writing) at least 48 hours prior to removal of wastes and fluids.

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Document a complete chain of custody record of the removed tank contents and generated wastes, from the vessel to the point of final destination or delivery. Submit chain of custody record to the COR upon completion of work.

3.5 Temporary plugs. The Contractor must plug all inlet and outlet piping in the tank to prevent contaminants from entering the tank or piping system. Use plugs with an attached lanyard, ring or other system that will ensure plugs are not lost in the pipe openings.

3.5.1 Plug log. The Contractor must keep a written record of all installed plugs. Keep a separate list for each tank. Maintain a plug accountability log posted immediately outside the tank to prevent any of the installed temporary plugs from being lost inside the tank or left behind inside at tank closure. Submit this log to the COR after completion of work item

3.5.2 The Contractor must ensure that all plugs are removed from each tank upon completion of work in the tank.

3.6 Tank cleaning. The Contractor must clean all designated tank interior surfaces free of all foreign materials, such as residual fluid contents, sediment, sludge, rust, or biological growth, taking care not to damage the coating system (if applicable).

3.6.1 The Contractor must accomplish all requirements of SFLC Std Spec 6310, 3.1.6.4 (Surface contaminant removal) to achieve the cleanliness requirements of SSPC-SP 1, including a low-pressure (maximum 5,000 psi) fresh water wash down of the surfaces.

3.6.2 Remove cleaning media and residues continuously from the tank during the washing process. Remove any residual wash media and wipe up residual moisture with clean lint-free cloths. Wipe the interior tank structure dry and free of all cleaning agents.

3.6.3 The Contractor must prevent fan/FCU condensation from entering the tanks for the duration of tank cleaning, inspecting, and preservation (if preservation is required). Refer to Coast Guard Drawing 418A-WMSL-528-001 for condensation drain piping arrangement. If piping is removed to install a drain catchment, renew gaskets and hardware upon reinstallation of piping.

3.7 Inspection. The Contractor must visually inspect all tank interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Submit a CIR including the following, as applicable:

- Tank structural condition.
- Manhole and cover condition.
- Ladder condition (if applicable).
- Condition of tank coating, including dimensions, percentage, location, and type of coating failure.
- Tank level indicator (TLI) and/or float switch condition.
- Suction and discharge piping condition.
- Fastener material and condition.
- Zinc anode condition (remaining percentage)
- Pit measurements
- Ultrasonic thickness (UT) measurements

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3.8 Pit measurement. The Contractor must measure 50 pits within each tank/location listed in Table 1, in accordance with SFLC Std Spec 0740, Paragraph 3.13 (Evaluation of pitting corrosion). The results of these measurements must be included in the inspection report, showing where pit measurements were taken and the depth of the pit.

3.9 Ultrasonic thickness (UT) measurement. The Contractor must take UT measurements in the surrounding area of any pit measuring greater than 25% of plate thickness. UT measurements must be taken in the four quadrants at an equal-distant radius from the pit center until full plate thickness is measured. For bidding purposes, assume 200 UT measurements per tank listed in Table 1. UT measurements must be conducted in accordance with SFLC Std Spec 0740, Appendix C, using Coast Guard Drawings 750-WMSL_100_23, 750-WMSL-100-36, and 750-WMSL-100-37 as guidance. The results of these measurements (original thickness, measured thickness, and any observed cracks) and the locations where they were taken must be included in the inspection report.

3.10 Substrate fairing and repair by filling Epoxy for shallow pits and small corrosions (i.e. pits < 25% or corrosions < 25%). The Contractor must repair small pin holes, shallow pitted substrates (with remaining plate thicknesses over 75% of required plate thicknesses), and fair corroded substrates (with remaining cross sections over 75% of required cross section areas), after removing coating, in accordance with SFLC Std Spec 6310 and manufacturers' instructions.

- Procure 2 kits of Epoxy Fairing Compounds (e.g. Belzona 1111, 0.5 Gallon/5 Kg Kit or equivalent) to conduct repairs.
- Turn over all unused kits to the COR.

NOTE

“Substrate fairing and repair by filling Epoxy for shallow pits and corrosions (i.e. pits < 25% or corrosions < 25%)” is a supplement barrier intending to help delay penetration.

3.11 Tank closing. The Contractor must ensure that the tank(s) remain open for approximately 24 hours after completion of any authorized repair and preservation procedures. Notify the COR at least 48 hours prior to closing the tank(s). After satisfactory inspection by the Coast Guard Inspector and completion of all authorized repairs, remove all installed temporary plugs and close tank manhole cover(s) with new gasket material in accordance with Coast Guard Drawings 750-WMSL-167-001 and 750-WMSL-501-004, in the presence of the Coast Guard Inspector. Chase threads on studs to ensure even installation of the access covers. Renew all nuts, washers, and grommets (including those that are missing) in accordance with Coast Guard Drawings 750-WMSL-167-001 and 750-WMSL-501-004.

3.11.1 Upon completion of tank closing, the Contractor must submit a CFR with the completed plug log.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.12 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

3.12.1 Perform a post-work operational test of each tank TLIs to demonstrate that each radar head/sensor is functional (i.e., Digital readout is displayed).

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3.12.2 Ensure that there is interface/communication between the TLI sensor and the Machinery Control and Monitoring System (i.e. Digital readout at the TLI is identical to that displayed).

3.13 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces, and all manhole cover external surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs). Do not paint any manhole cover fasteners.

4. NOTES

This section is not applicable to this work item

WORK ITEM 20: Tanks (Grey Water Holding), Preserve (100%)

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to prepare and coat 100% of the surfaces of the tanks listed in Table 1.

TABLE 1 – LIST OF TANKS

LOCATION	COMPO	SYSTEM/APPENDIX (SFLC STD 6310)	TOPCOAT COLOR	PRESERVE LEVEL
Grey Water Holding 3-34-0-W	Inner Bottom, Ovhd&Bhd Structures	Tanks and Voids (Grey Water, Sewage, and CHT Tanks) Option I or II	White	Full
Grey Water Holding 5-74-0-W	Inner Bottom, Ovhd&Bhd Structures	Tanks and Voids (Grey Water, Sewage, and CHT Tanks) Option I or II	White	Full

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

- Coast Guard Drawing 418A-WMSL-528-001, Rev A, Plumbing and Interior Deck Drain Diagram
- Coast Guard Drawing 750-WMSL_100_23, Rev J, Unit 2120 Structure – 1st Platf to 2nd Deck Fr 35 to Fr 44 (ASC100212)
- Coast Guard Drawing 750-WMSL-100-36, Rev N, Unit 3110 Structure 1st Platform and Below Frs 65-77 (ASC100311)
- Coast Guard Drawing 750-WMSL-100-37, Rev H, Unit 3120 Structure – 1st Platf to 2nd Dk- Fr 64 to Fr 76 (ASC100312)
- Coast Guard Drawing 750-WMSL-167-001, Rev J, Manhole List Installation and Fabrication Details Ship Wide (ASC167001)

COAST GUARD PUBLICATIONS

- Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

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Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022,
Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2022,
Temporary Hull Accesses

OTHER REFERENCES

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.11 (SSPC-SP 11), 2016, Bare Metal Power Tool Cleaning

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep. The Contractor must provide the services of a Qualified Technical Representative to accomplish the following on site:

- Serve as an Independent Coating Tech Rep. Provide the services of a Certified Coating Inspector, having successfully completed the NACE-International Coating Inspector Program (CIP), Level 3 - Peer Review with Marine Specialty.
- Accomplish applicable requirements in SFLC Std Spec 0000, Paragraph 3.2.4.2.2 (Coating Tech Rep).
- Oversee the Preservation Plan requirements in SFLC Std Spec 6310, Paragraph 3.2 (Preservation Plan).
- Review and sign daily reports summarizing work. See forms QA-1 thru QA-5 provided in the General Requirements.

3.1.2.1 Qualifications/certifications. Submit the Coating Tech Rep's qualifications/certifications in accordance with SFLC Std Spec 0000, 3.2.4.2.2.3 and 3.2.4.2.4, include name, certificate number and documented completion of NACE Marine Coating Technology Course and Exam.

3.1.2.2 Submit the name and résumé of the Tech Rep to the COR at the Arrival Conference. Include the dates of services the Qualified Tech Rep will be on site as per their subcontract documentation.

NOTE

This work item requires the use of an NACE-Certified Tech Rep. The use of a QP-1 certified company/contractor alone is not sufficient.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- TLIs

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- Piping, supports, brackets

3.1.5 Temporary access openings. Due to limited access to work areas, the Contractor may, with express permission of the KO (via submission of a CFR), cut access holes to facilitate accomplishment of the work specified herein. Perform all work required to open and close the access openings in accordance with SFLC Std Spec 8636.

3.1.6 Work plan. The Contractor must provide a work plan (preservation plan including protection plan) for the Tank Preservation listed in Table 1 in accordance with SFLC Std 6310, paragraph 3.2 (Preservation Plan) to COR before or on Arrival Conference.

3.1.6.1 Pre-work preservation conference. Prior to the start of any preservation work, the Contractor must facilitate a conference meeting with the KO, COR, Coast Guard Inspector(s), Contractor and Contractor's representative able to speak to technical preservation details and requirements.

- QC/QA Program. The requirements of SFLC Std Spec 0000 3.2.4.2.2.3, Contractor's QC/QA Program (as outlined in SFLC Std Spec 0000, 3.2.4 QC/QA Program),
- Material Receipt Conformance (as outlined in SFLC Std Spec 6310, 3.1.1.2 Material Receipt Conformance),
- Preservation plan (as outlined in SFLC Std Spec 6310, 3.2 Preservation plan), SFLC Std Spec 6310 3.1.1.3.1 and 3.1.9 must be formally reviewed and approved by the KO,
- PDS and SDS. Only submit Manufacturer's Product Data Sheets (PDS) and Safety Data Sheets (SDS) if NAVSEA approved ASTM F718 sheets are not available.

3.2 In-process quality control measures. The Contractor must abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for "critical-coated surfaces"). Surfaces being preserved are considered "critical-coated surfaces". QA Forms and NACE III Reports must be submitted to the COR for review no later than 24 hours after completion of work.

3.2.1 Daily reports. At the conclusion of each work day coating has been applied, the Contractor must provide Daily Reports generated and signed by the Coating Tech Rep. Daily reports must summarize work accomplished that current day, work to be accomplished the following day, any and all materials used during work that day, any and all readings taken and/or data collected (i.e. environmental readings, DFT, WFT, etc...) identifications of work locations, time and type of any inspections conducted with the results of such inspection(s) and must also include descriptions any events of non-conformance in relation to the specification, applicable references, standards, and technical data sheets (i.e ASTM F718s).

3.2.2 Environmental readings. Environmental readings must be accomplished within the agreed upon hours according to the interval outlined in SFLC Std Spec 6310, Appendix D3.1.

3.3 Ventilation requirements. The Contractor must accomplish all requirements of SFLC Standard Spec 6310, 3.1.16 (Ventilation requirements for confined spaces) and SFLC Standard Specification 0000, 3.3.1.1 (Temporary ventilation) throughout the entirety of this work item.

3.4 Surface preservation. The Contractor must prepare and coat all tank interior surfaces (including internal surfaces of manhole cover(s), manhole cover hull ring(s) extending outward to the weld line that ties the hull ring into the tank plating on the tank exterior) using the system specified in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems).

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3.4.1 Inspection. The Contractor must inspect all cleaned surfaces and exposed substrates of areas in tanks listed in Table 1 (after removing/cleaning surface covering/coatings and prior to priming substrates) in accordance with SFLC Std Spec 6310 3.1.8.1 Surface cleanliness evaluation – visual standards. Submit a CFR.

3.4.2 The Contractor must coat the prepared surfaces using the system specified for "Tanks and Voids (Grey Water, Sewage, and CHT Tanks)" in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems).

3.5 Waste and debris removal. The Contractor must remove all waste and debris generated by the tank preservation process (surface preparation, substrate cleaning, priming, and coating). Waste and debris must be disposed of in accordance with SFLC Std Spec 6310, paragraph 3.1.8.2 (Debris removal and disposal), SFLC Std Spec 0000, and all applicable Federal, state, and local laws, ordinances and regulations.

3.6 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs).

4. NOTES

This section is not applicable to this work item

WORK ITEM 21: Oily Water Separator (OWS) System, Inspect and Groom

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and groom the Oily Water Separator (OWS) located in the Auxiliary Machinery Room (5-36-01-E).

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST (\$/UNIT)
Y	Monitor, Smart Bilge	NSN: 2040-01-600-0112	1 ea.	4,700.00

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 418A-WMSL-593-001, Rev A, Bilge & Oil Pollution Control System Diagram

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 7346A, SWBS 593, May 2019, Bilge Water Separator Ultra-Sep

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 3041 (SFLC Std Spec 3041), 2020, Shipboard Electrical Cable Test

Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2020, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Requirements for Preservation of Ship Structures

OTHER REFERENCES

USEPA Test Method 1664, Feb 1999, N-Hexane Extractable Material and Silica Cell Treated N-Hexane Extractable Material by Extraction and Gravimetry.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor must submit a CIR for the inspections listed in the following paragraph(s):

- 3.4.1 Component Inspection

3.1.2 Tech Rep. The Contractor must provide the services of an OEM authorized/ licensed Tech Rep for the OWS (Model Number: US5000) to accomplish the following on site:

- Provide manufacturer's proprietary system/ equipment information, software, and tools.
- Assist with and ensure compliance with manufacturer's procedures and standards during disassembly, inspection, repair, modification, calibration, and reassembly of the equipment/system.
- The Tech Rep must be present in all aspects of this work item.
- Perform on-site calibration of the oil content monitor assembly.
- Conduct operations familiarization of the equipment to ship's crew after completion of repair work.

3.1.2.1 Ensure the Tech Rep is an OEM Certified Representative for the system/equipment stated above and demonstrated on their résumé.

3.1.2.2 Submit the name and résumé of the Tech Rep to the COR at the Arrival Conference.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but not limited to the following:

- Piping
- Ventilation ducting
- Overhead lighting
- Electrical wiring

3.1.5 Electrical requirements. The Contractor must accomplish all electrical work in accordance with SFLC Std Spec 3042, and test cables in accordance with SFLC Std Spec 3041.

NOTE

Coast Guard personnel will operate all shipboard equipment and machinery at all times.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.2.1 The Contractor must take a 1-liter sample of the effluent and complete a USEPA Test Method 1664 oily water test result after one hour of operation. This will require removing and re-installing a check valve adjacent to the overboard.

CAUTION

The overboard discharge valve must be closed to ensure no liquid from the OWS is pumped overboard during OWS operation.

3.3 Inspection and maintenance. The Contractor must accomplish the following tasks for the OWS in accordance with Section 5 of Coast Guard TP 7346A. The Contractor must also renew parts listed in Table 1 in accordance with CG TP 7346A.

TABLE 1 – LIST OF PARTS

QUANTITY	PART NUMBER	DESCRIPTION
4	MUFO0852	Membrane, UFO WS 8 Inch
1	HCON0098	Heli-Sep OWS 5000 Cover Seal O-Ring
1	ORGN8000	Process Filter (FIL1) Cover Seal O-Ring
8	FBGB0582	Process Filter S12 5 Micron Bag
2 lbs	ASMS0000	SPIR-O-Lator Preservative
5 Gallons	MCLN6732	SPIR-O-LATOR Cleaner Alkaline
5 Gallons	MCLN7147	SPIR-O-LATOR, Cleaner Acid

3.3.1 Component Inspection. Inspect OWS unit components for damage, tightness, and compliance with TP 7346A arrangement/configuration requirements. This inspection must cover following components. Submit a CIR identifying conditions and deficiencies including recommendations for any repairs.

- Membrane Housings (SPIR-O-LATOR Rack)
- Feed Pump Assembly (PU1)
- Process Filter Assembly (FIL1)
- Process Pump Assembly (PU2)
- Heli-Sep Separator (Coalescing Unit)
- Oil Content Detector/Monitor (OCM)
- Product Loop Assembly (piping assembly)
- Recirculation Assembly (piping assembly)
- Motor Controller Assembly
- Control Panel
- Gauge Panel

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- System Relief Valves

3.3.2 Flush the Oily Water Separator System in accordance with paragraph 5.1 of CG TP 7346A. Appendix “C” drawings and schematics provide valve and component designations.

3.3.3 Verify that flushing of the SPIR-O-LATOR system can be triggered by three different methods (i.e., manual, system shut down, and automatic) identified in paragraph 5.1.1 of CG TP 7346A.

3.3.4 Flush the HELI-SEP separator vessel in accordance with paragraph 5.1.2 of CG TP 7346A.

3.3.5 Flush the SMART-CELL/OCM in accordance with paragraph 5.1.3 of CG TP 7346A after renewal per paragraph 3.5.

3.3.6 Clean the process filter canister and renew the filter bag (i.e. Filter bags Part Number: FBGB0582, and Cover Assembly O-rings Part number: ORGN8000) and seal in accordance with paragraph 5.3 of CG TP 7346A. Appendix “C” drawings and schematics provide valve & component designations.

3.3.7 Clean the SPIR-O-LATOR assembly in accordance with paragraph 5.4 of CG TP 7346A. Cleaning will require use of detergent selected to suit the “as found” condition. The Contractor shall assess “as found” condition and provide appropriate cleaning detergent option after considering options provided in CG TP 7346A, paragraph 5.4.4.

3.3.8 Clean the oil sensing probe in accordance with paragraph 5.6 of CG TP 7346A.

3.3.9 Remove solids and sludge from separator vessel in accordance with paragraph 5.8 of CG TP 7346A.

3.3.10 Drain, open the top cover on the HELI-SEP separator unit, and wipe clean the accessible interior surfaces. Visually inspect the interior.

3.3.11 Note any unusual conditions found while performing cleaning and inspections listed above. Submit a CFR including repair recommendations to the CG Representative.

3.4 Oil content detector renewal. The Contractor must renew the Oil Content Monitor with the government furnished property in accordance with TP 7346A.

3.4.1 Provide the Data Sheet of the calibrated Oil Content Meter. Indicate the accuracy of the calibration equipment and OCM. Affix a label to the meter showing Certification Date, Due Date for Next Calibration, and Name of Calibration Laboratory.

3.4.2 The calibration label shall be affixed on OCM so that it is easily visible without interference with meter reading. Transparent tape shall be placed on all paper calibration labels.

3.4.3 The Contractor shall clean the OCM panel and remove loose paint/foreign object.

3.4.4 Complete water connections in the presence of a Coast Guard Inspector.

3.5 Oily Waste Offload. The Contractor must offload 1,020 gallons of oily waste from the oily waste holding tanks. The discharge connections are 2” international flanged shore connections, and the contractor will need to provide hose to offload the fuel oil tanks. The Contractor must dispose of residual fluids in compliance with all applicable Federal, state, and local laws, ordinances, regulations and SFLC

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Standard Specification 0000. Notify the COR (in writing) at least 5 days prior to removal of wastes and fluids. Document a complete chain of custody record of the removed contents and generated wastes, from the vessel to the point of final destination or delivery. Submit document to the COR upon completion of work.

3.6 Acceptance Test. The Contractor must take a 1-liter sample of the effluent and complete a USEPA Test Method 1664 oily water test result after one hour of operation. This will require removing and re-installing a check valve adjacent to the overboard. The Contractor must continue to adjust the system settings until the sample passes this test.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.7 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector, and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

3.8 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs).

4. NOTES

This section is not applicable to this work item

WORK ITEM 22: Incinerator, Inspect and Test

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean, inspect, and test the Ship’s Incinerator listed in Table 1.

TABLE 1 – INCINERATOR

LOCATION	ATLAS MODEL NUMBER / SERIAL NUMBER	COAST GUARD TECHNICAL PUBLICATION
Incinerator Room (1-47-1-Q)	600 S WS / 402541	7946

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 750-WMSL-300-024, Rev C, Unit 2240 - Main Dk Fr 44 to Fr 52 Arr of Elect Eqpt (ASC300224)

Coast Guard Drawing 750-WMSL-593-011, Rev B, Solid Waste System Schematic (ASC593026)

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 7946, SWBS 593, May 2021, Incineration Plant - Installation, Operation, Maintenance & Spare Parts

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 3041 (SFLC Std Spec 3041), 2022, Shipboard Electrical Cable Test

Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2022, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep. The Contractor must provide the services of a Qualified Technical Representative who is familiar with the Incinerator (Atlas Model No. 600 S WS) to accomplish the following on site:

- Advise on manufacturer's proprietary system information.
- Assist with the following installation and repair method(s).
- Ensure compliance with manufacturer's procedures and standards during system disassembly, inspection, and reassembly as applicable.

3.1.2.1 Ensure the Tech Rep has experience with the system/equipment stated above and demonstrated on their résumé.

3.1.2.2 Submit the name and résumé of the Tech Rep to the COR at the Arrival Conference.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Piping
- Electrical wiring
- Exhaust duct

3.2 Electrical work. The Contractor must accomplish all electrical work in accordance with SFLC Std Spec 3042, and test cables in accordance with SFLC Std Spec 3041. See Coast Guard Drawing 750-WMSL-300-024 for arrangement of electrical equipment in the incinerator room.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.3 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.4 Inspection. The Contractor with Tech Rep support must clean and inspect the following components in accordance with the Coast Guard TP listed in Table 1. Submit a CFR. See Coast Guard Drawing 750-WMSL-593-011 for location and schematic of the incinerator.

- Thermal relay and check settings
- Wiring and tightened up terminals
- Electrodes
- Pressure switches

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- Solenoid valves & electrical connections
- Door gasket for possible leaks
- Air strainer & remove deposit
- Flame detector photo cells
- Thermocouples
- Primary & secondary burner
- Refractory lining
- Hoses

3.5 Refractory lining. The Contractor must clean refractory lining in accordance with the Coast Guard TP listed in Table 1. The Contractor must install temporary catchment devices (i.e. bags, tarps, etc.) as needed to contain debris. Take all precautions necessary to prevent the spread of dust and soot. Do not damage the liner during cleaning.

3.5.1 Dispose of waste in accordance with all federal, state and local laws and regulations.

3.5.2 Upon completion of satisfactory cleaning, inspect the refractory lining for cracks/wear as specified in the Coast Guard TP listed in Table 1. Submit a CFR. Refractory repairs or renewal will be subject to a CR.

3.6 Primary and secondary burners. The Contractor with Tech Rep support must renew primary burner oil nozzle and secondary burner oil nozzle in accordance with the Coast Guard TP listed in Table 1, using the parts listed in Table 2.

TABLE 2 – LIST OF PARTS

QUANTITY	PART NUMBER	DESCRIPTION	SUGGESTED SOURCE OF SUPPLY
1	64F4003	Primary Burner Oil Nozzle	Atlas Incinerator, dw@atlasinc.dk www.atlasinc.dk.
1	64F4007	Secondary Burner Oil Nozzle	

3.6.1 Clean fuel filter on the fuel oil pump.

3.6.2 Check electrodes in accordance with the Coast Guard TP listed in Table 1. Observe and record original adjustment settings for electrodes and air quantity into burner. Submit CFR.

3.7 Flame detector. The Contractor must clean photocells with a clean lint free cloth.

3.8 Thermocouple. The Contractor must clean thermocouples with a soft bristle brush and damp cloth. Inspect for cracks. Submit a CFR.

3.9 Air strainer. The Contractor must clean and remove deposits from the air strainer.

NOTE
Coast Guard personnel will operate all shipboard machinery and equipment.

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3.10 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

3.11 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310 (Touch-ups and minor coating repairs.)

4. NOTES

This section is not applicable to this work item.

WORK ITEM 23: Deck Covering (Polymeric), Seal

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to seal deck covering, and renew all slip-resistant treads in compartments listed in Tables 1 and 2.

TABLE 1 DECK COVERING SYSTEMS IN PASSAGE AND AIR LOCK

LOCATION	DECK MTL	AREA (SQFT)*	SYSTEM/APPENDIX (SFLC STD 6341)	SYSTEM COLOR	NON-SKID**	NOTE
Air Lock Type I 01-36-3-L	Steel	23	Polymeric Epoxy Resin, Type I, Class 2/Appx A	Dark Gray SS5002 with White 600 (20%)/ Blue 604 (40%) Chips	Slip Resistant Grit, SRS 2 sets	
Passage 01-38-1-L	Steel HSLA-80	258	Polymeric Epoxy Resin, Type I, Class 2/Appx A	Dark Gray SS5002 with White 600 (20%)/ Blue 604 (40%) Chips	Slip Resistant Grit, SRS 1 sets	

**Slip-resistant treads or non skid mat

TABLE 2 DECK COVERING SYSTEM IN ADJACENT AREAS

LOCATION	DECK MTL	AREA (SQFT)*	SYSTEM/APPENDIX (SFLC STD 6341)	SYSTEM COLOR	NON-SKID**	NOTE
Cleaning Gear Locker 01-43-1-A	Steel	14	Polymeric Epoxy Resin, Type I, Class 2/Appx A	Dark Gray SS5002 with White 600 (20%)/ Blue 604 (40%) Chips	Slip Resistant Grit	

**Slip-resistant treads or non skid mat

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 418A-WMSL-100-001, Rev B, General Arrangements

Coast Guard Drawing 418A-WMSL-801-001, Rev A, Booklet of General Plans

Coast Guard Drawing 750-WMSL-085-025, Rev -, Compartment Areas & Volumes NSC 3 & Follow (AS3085012)

COAST GUARD PUBLICATIONS

- Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements
- Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures
- Surface Forces Logistics Center Standard Specification 6341 (SFLC Std Spec 6341), 2022, Install Interior Deck Covering Systems

OTHER REFERENCES

- MIL-D-16791G, 2020, Detergents, General Purpose (Liquid, Nonionic)
- MIL-PRF-24613A, 2017, Deck Covering Materials, Interior, Cosmetic Polymeric
- MIL-PRF-24667C w/Int. Amendment 1, 2018, Coating System, Non-Skid, for Roll, Spray, or Self-Adhering Application

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep. The Contractor must provide the services of Tech Reps and personnel as follows :

None.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Vent systems (e.g. trunks, ducts, and pipes)
- Slip-resistant covering treads
- Drains, covers, and plugs
- Closures (e.g. doors, hatches, and scuttles)
- Outfits, foundations, and fittings
- Switches, controls, and terminals
- Sensors and supports (e.g. TLIs)
- Piping and supports
- Cables and supports

3.1.5 Work locations. The concerned work areas are listed in Tables 1 and 2. See the applicable drawings in Section 2 References for guidance, locations, and details.

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3.1.6 Materials, tools, and services. The Contractor must provide materials, tools, and services to accomplish the requirements in this work item. New components, parts, materials, and paints with the same color, comparable and matching material properties as the existing components/parts. Use references in Sections 1, 2 and SFLC Std Specs for guidance, required materials, and details.

3.1.7 Work plan. The Contractor must provide a work plan (preservation plan including protection plan) for the Deck Covering (Polymeric) Seal listed in Tables 1 and 2 in accordance with SFLC Std 6310, Paragraph 3.2 (Preservation Plan) to the COR at the Pre-Work Preservation Conference.

3.1.8 Notification. The Contractor must give written notification to the COR 48 hours before starting work on this work item.

3.2 Sealing particulars. The Contractor must seal all surface locations identified in Tables 1 and 2 as follows:

3.2.1 Cleaning. The Contractor must thoroughly clean deck covering surfaces with a suitable cleaning detergent conforming to MIL-D-16791G, and hot water.

3.2.2 Drying. The Contractor must rinse, clean, and dry the deck surfaces until no residue is visible.

3.2.3 Sanding. The Contractor must lightly sand with No. 0 steel wool or No. 60 sandpaper, or mechanically sand the surfaces, to remove the existing sealer coat; avoid damaging the color coating.

3.2.4 Vacuuming. The Contractor must vacuum surfaces thoroughly to remove dust.

3.2.5 Sealing. The Contractor must thoroughly seal the deck covering system with a minimum of two coats of a suitable sealer, in accordance with the deck covering system manufacturer's recommendations. Refer to Paragraph 4.1 "Sealer particulars."

- Omit the deck areas requiring slip-resistant treads.

3.2.6 Slip-resistance. The Contractor must add an aggregate (e.g. white aluminum oxide or glass beads) to the final seal coat per the deck covering system manufacturer's recommendation.

3.2.7 Curing. The Contractor must allow sealer to cure for the manufacturer recommended times.

WARNING

Keep traffic off deck until sealer is cured. The sealing process is complete when the deck has a uniform appearance; i.e., when the surface film is continuous and free of blotchy areas.

3.3 Slip-resistant treads/sheets. The Contractor must renew all removed slip-resistant treads on decks at both sides of watertight doors, and head and foot of ladders in accordance with SFLC Std Spec 6341 and MIL-PRF-24667C, Type XI.

- Install one-piece large pads.
- Seal all periphery of slip-resistant treads/sheets with sealing compound.

3.4 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, Paragraph 3.1.13 (Touch-ups and minor coating repairs).

4. NOTES

4.1 Sealer particulars. Sealer for designated deck covering system(s) may be procured from the deck covering system's manufacturer.

- Authorized suppliers for cosmetic polymeric deck covering systems are listed on the Qualified Product Listing (QPL) 24613 for MIL-PRF-24613

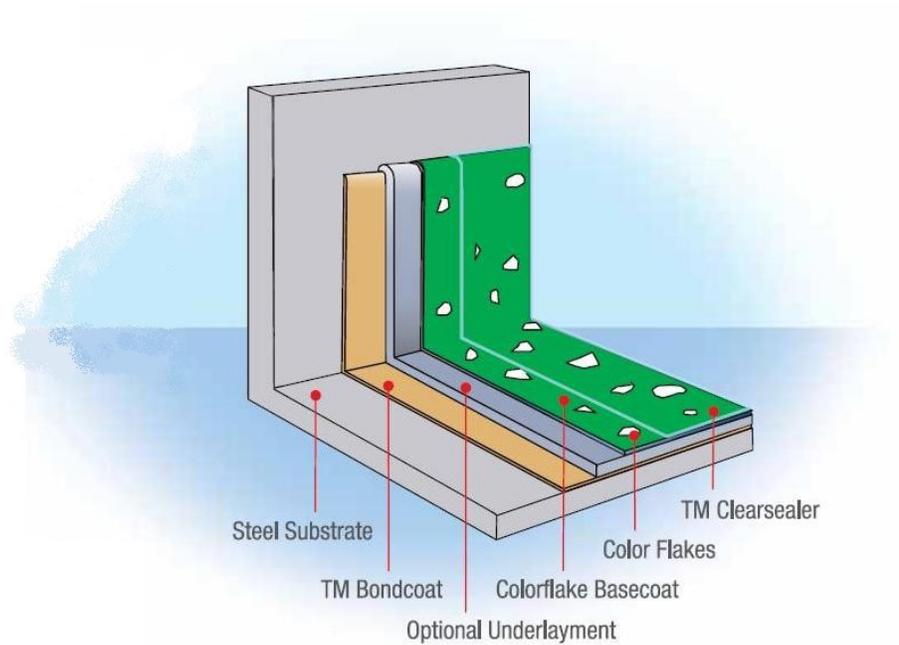


FIGURE 1 COLORFLAKE DECK COVERING LAYERS

WORK ITEM 24: FWD Gray Water Tank Strainers, Install

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to install strainers to FWD Gray Water Tank Pumps (i.e. No. 1 and No.2) piping listed in Table 1.

TABLE 1 – LIST OF TANKS

SYSTEM	PIPING	LOCATION	COAST GUARD DRAWING
FWD Gray Water Tank (3-34-0-W)	Pump No.1 and Pump No.2	Auxialry Machinery Room (5-36-01-E)	750-WMSL-528-504

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 750-WMSL-500-002, Rev E, Resilient Hanger Details & Installation (ASC500002)

Coast Guard Drawing 750-WMSL-528-015, Rev E, Plumbing & Interior Deck Drains and Vent System Unit 2110 (ASC528211-PD)

Coast Guard Drawing 750-WMSL-528-504, Rev -, FWD Gray Water Tank Strainer Install

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 0850 (SFLC Std Spec 0850), 2022, General Requirements for Drawing Preparation

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not Applicable

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Piping
- Deck Plating
- Engine Room Bilges

NOTE

Ship check by the Contractor is recommended to determine exact components' location, interferences and piping required for this work item. For ship check, the Contractor must contact the Contracting Officer.

3.2 Welding and brazing requirements. The Contractor must perform all welding and allied processes, and nondestructive examination (NDE) in accordance with SFLC Std Spec 0740.

3.3 Fluid handling. The Contractor must drain and dispose of residual fluid and cleaning fluid in compliance with all applicable Federal, state, and local laws, ordinances, regulations and SFLC Standard Specification 0000. Notify the COR (in writing) at least 5 days prior to removal of wastes and fluids. Document a complete chain of custody record of the removed contents and generated wastes, from the vessel to the point of final destination or delivery. Submit document to the COR upon completion of work.

3.4 Hangers. The Contractor must support all new piping against vibration in accordance with Coast Guard Drawing 750-WMSL-500-002. Pipe hangers must be rubber lined. Hanger spacing must be no greater than 6 feet. Relocate existing piping hangers as needed to support new piping and valve installation. Pipe hanger must be painted in white color.

3.5 Labels and tags. The Contractor must provide Labels and Tags in accordance with Para 3.3.12 of SFLC Std Spec 0000 and Coast Guard Drawing 750-WMSL-528-504.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

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3.6 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.7 Piping rip out. The Contractor must rip out piping of Pump No.1 and Pump No.2 in accordance with Coast Guard Drawing 750-WMSL-528-504 and SFLC Std Spec 0740. Immediately after rip out, install blank flanges and gaskets over all openings and secure each flange with at least two bolts, 180 degrees apart. Visually inspect associated flanges and piping for damage and corrosion; submit a CFR.

3.8 Strainer installation. The Contractor must install strainers, piping, valves and foundation to Pump No.1 and Pump No.2 in accordance with Coast Guard Drawing 750-WMSL-528-504 and SFLC Std Spec 0740. Ensure blank flanges are removed prior to strainer installation.

3.9 Pipe preservation. The Contractor must prepare and coat the external surfaces of the new piping using the system specified for “Piping, Interior (Piping, Insulated and Uninsulated, Under 200°F)” Appendix B (Cutter and Boat Interior Painting Systems) in SFLC Std Spec 6310.

3.10 Strainer foundation preservation. The Contractor must prepare and coat the foundation of the new strainer foundation using the system specified for “Machinery, Interior (Operating Temperature, Under 200°F)” Appendix B (Cutter and Boat Interior Painting Systems) in SFLC Std Spec 6310.

3.11 Leak test. After completing all authorized mechanical (i.e. threaded, bolted, etc.) joint repairs, the Contractor must test the system's operation using the system fluid at normal operating pressure. Ensure zero visible leakage from or deformation of mechanical parts by repairing all leaks and discrepancies. Submit a CFR.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.12 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

3.13 Redlined drawing deliverable(s). The Contractor must “red-line” 750-WMSL-528-504 to reflect the work or deviations specified in this work item in accordance SFLC Std Spec 0850.

3.13.1 Preliminary/draft submission. No later than 24 hours after completion of this work item, submit a draft copy of the "red-lined" drawing(s) to the COR for review and approval.

3.13.2 Final submission. No later than 10 calendar days after receiving Coast Guard comments or completion of the availability, whichever occurs first, incorporate all comments and deliver one set of the final red-lined drawing(s) to the COR.

3.14 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, (Touch-ups and minor coating repairs).

4. NOTES

This section is not applicable to this work item.

WORK ITEM 25: Aft Gray Water Piping, Modify

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to install inline strainers on the suction side of gray water discharge pumps and install transfer piping between the forward and aft gray water tanks.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST (\$/UNIT)
N	Strainer, Sediment (3 inch IPS, Simplex Basket, 1/2 inch Perforated)	NSN: 4730-01-428-3199	2 ea.	5,500.00

*Government-loaned property, which must be returned to the vessel upon completion of the availability.

**New or refurbished equipment that the Government may provide for installation in place of existing equipment.

***Government-furnished property, which is to be supplied by either the vessel or the C4IT Service Center.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 750-WMSL-528-502, Rev -, Forward Gray Water Tank Transfer to Aft Tank

Coast Guard Drawing 750-WMSL-528-503, Rev A, Aft Gray Water Tank Strainer Install

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

None.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.1.5 Contamination prevention. The Contractor must take all precautions to prevent contamination of personnel and spaces in accordance with all applicable Federal, state, and local regulations.

3.1.6 Fluid handling. The Contractor must remove and dispose of removed fluids from the affected piping system, in accordance with all applicable Federal, state, and local regulations.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.3 Gray water piping modification. The Contractor must modify the gray water system piping in accordance with Coast Guard Drawing 750-WMSL-528-502 and 750-WMSL-528-503.

3.3.1 Remove a section of piping downstream of the aft gray water pump station and cut a hole in the top of aft gray water tank for new piping. Refer to Coast Guard Drawing 750-WMSL-528-502 for location of work.

3.3.2 Install new piping and valve attaching the top of the aft gray water tank to the existing transfer piping. Work in accordance with Coast Guard Drawing 750-WMSL-528-502.

3.3.3 Remove sections of piping on the suction side of the gray water pumps #3 and #4 in accordance with Coast Guard Drawing 750-WMSL-528-503.

3.3.4 Install piping, valves, strainers, and strainer foundations to the suction side of the gray water pumps #3 and #4 in accordance with Coast Guard Drawing 750-WMSL-528-503.

3.3.5 All welding, brazing, or other hot work must be conducted in accordance with SFLC Std Spec 0740. The Contractor must supply a Marine Chemist with current certification to gas free space prior to any hot work.

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3.3.6 NDE. The Contractor must perform NDE of the newly installed piping and structures in accordance with SFLC Std Spec 0740, Appendix C. Submit a CFR.

3.5 Boundary test, air hose. The Contractor must inspect and perform an air hose test of all affected boundaries in accordance with SFLC Std Spec 0740, Appendix C. Submit a CFR.

3.6 Hydrostatic test. After all authorized repairs, the Contractor must hydrostatically test all new and disturbed piping and components of the gray water system in accordance with SFLC Std Spec 0740, Appendix C, Hydrostatic Test. Ensure zero leakage from or permanent deformation of pressure-containing parts by repairing all leaks, deformations, and discrepancies. Submit a CFR.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.7 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

3.8 Piping preservation. The Contractor must prepare and coat the external surfaces of the piping using the system specified for “Piping, Interior (Piping, Insulated and Uninsulated, Under 200°F)” Appendix B (Cutter and Boat Interior Painting Systems) in SFLC Std Spec 6310.

3.9 Pipe labeling. The Contractor must label affected piping as follows:

3.9.1 Stencil the following onto the pipe/lagging surfaces:

- Name of the piping system service.
- Destination, where feasible.
- Direction of flow, indicated by an arrow three inches long pointing away from the lettering (for reversible flow, point an arrow away from each end of the lettering).

3.9.2 Ensure all lettering and arrow(s) are as follows:

- In general, black color except white for dark-colored piping.
- Applied in conspicuous locations and preferably near control valves.

3.10 Touch-up preservation, general. The Contractor must prepare and coat all new and disturbed exterior and interior surfaces, as applicable, to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs).

4. NOTES

This section is not applicable to this work item.

WORK ITEM 26: Temporary Services, Provide

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to provide temporary services to the Cutter, during the performance of this availability.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

None

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022,
General Requirements

Surface Forces Logistics Center Standard Specification 0450 (SFLC Std Spec 0450), 2022,
Electrical Power for Contractor Tools and Equipment

Surface Forces Logistics Center Standard Specification 8635 (SFLC Std Spec 8635), 2022,
Temporary Services

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

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3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Extended temporary services. If the performance period of the contract is extended by the KO, the Contractor must continue to provide all temporary services as specified herein for the extension period.

3.3 Portable Sanitation Units. The Contractor must provide 08 units (i.e. 04 Male, 04 Female) units (To Include Toilets, Sinks, And Showers) for the duration of all sewage and grey water maintenance.

NOTE

It is recommended the contractor perform a site visit and coordinate with the COR to establish proper location for installation of temporary sanitary services

3.3.1 The Contractor must ensure the following:

- Sinks are provided with fresh hot and cold water.
- Electrical convenience GFI receptacles, in accordance with NFPA 70, National Electric Code (NEC), are located in vicinity of sinks.
- Toilets have doors or privacy dividers.
- Toilets are flushable.
- Lockers are capable of being locked.
- Units are air conditioned.

3.3.2 The Contractor must provide and install the electrical cables to Portable Sanitation Units in accordance with the SFLC Std Spec 0450.

4. NOTES

This section is not applicable to this work item.