USCGC MARIA BRAY (WLM 562)

SPECIFICATION FOR DRYDOCK REPAIRS

FY2021

(Rev-0, 3 Aug 2021)

TABLE OF CONTENTS

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 175 WLM 114-001, Rev D, Shell Appendages

Coast Guard Drawing 175 WLM 130-001, Rev -Mods to Buoy Deck Incidental to Hawser Pipe Cover

Coast Guard Drawing 175-WLM 162-001, Rev E, Stack A & D 1 & 2 Panels

Coast Guard Drawing 175-WLM-167-001, Rev L, Structural Closures

Coast Guard Drawing 175 WLM 184-001, Rev A, V850 Transducer Adaptor Ring

Coast Guard Drawing 175 WLM 185-001, Rev -, Foundation Incidental to Boss 2.2 GPM OWS Installation

Coast Guard Drawing 175 WLM 202-002, Rev G, MPCMS Wiring Data (COED)

Coast Guard Drawing 175 WLM 245-001, Rev A, Propeller

Coast Guard Drawing 175 WLM 245-002, Rev A, Z-drive Propeller Details, Modified Design

Coast Guard Drawing 175-WLM 256-001, Rev K, Seawater Cooling System Diagram

Coast Guard Drawing 175-WLM 256-003, Rev D, Seawater Cooling System, Fr 61 Fwd Blocks 910, 920, 930

Coast Guard Drawing 175 WLM 256-004, Rev J, Sheets 5 and 13, Seawater Cooling System A & D, Hull Blocks 940-970

Coast Guard Drawing 175-WLM 256-012, Rev B, ASW System Piping Modifications

Coast Guard Drawing 175 WLM 256-013, Rev A, Sea Bay Thermometer Installation

Coast Guard Drawing 175 WLM 262-001, Rev J, Lube Oil System Diagram

Coast Guard Drawing 175 WLM 262-002, Rev H, Waste Oil System Diagram

Coast Guard Drawing 175 WLM 262-005, Rev G, Lube Oil System A/D – Hull Blocks 910, 930, 940, & 970

Coast Guard Drawing 175 WLM 320-001, Rev AP, Electrical One-Line Diagram

Coast Guard Drawing 175 WLM 320-004, Rev G, Power System Deck Plan ER and Pump Rm Hull Block 920

Coast Guard Drawing 175 WLM 320-012, Rev -, Power System Mods Incidental to OWS Removal/Installation One-Line Diagram

Coast Guard Drawing 175-WLM-422-1, Rev G, Navigation, signal & Searchlight Block, Isometric and Arrangement

Coast Guard Drawing 175-WLM-422-2, Rev F, Navigation, signal & Searchlight Elementary Wiring Diagram

Coast Guard Drawing 175-WLM-505-002 Rev F Mechanical Remote Valve Operators Arrangement and Details

Coast Guard Drawing 175 WLM 505-003, Rev B, Sea Connection Arrangements

Coast Guard Drawing 175 WLM 506-001, Rev G, Overflows, Air Escapes & Sounding Tubes Diagram

Coast Guard Drawing 175-WLM -528-001, Rev F, Plumbing and Interior Deck Drains Diagram

Coast Guard Drawing 175-WLM -528-002, Rev M, Weather Deck Drains Diagram

Coast Guard Drawing 175-WLM-528-009, Rev H, Weather Deck Drains A/D Hull Block 910,920,930,940,960,970

Coast Guard Drawing 175-WLM-529-002 Rev G Main Drainage System Diagram

Coast Guard Drawing 175 WLM 533-006, Rev D, Independent Tank Potable Water Hb 950

Coast Guard Drawing 175 WLM 541-001, Rev H, Fuel Oil System Diagram

Coast Guard Drawing 175 WLM 541-006, Rev C, Independent Tanks, Emergency Generator Day Tank IIP:7-1

Coast Guard Drawing 175-WLM 549-1, Rev G, Onboard Lubrication Requirements

Coast Guard Drawing 175-WLM 551-5, Rev E, Compressed Air System a/D Hull Block 940, 950

Coast Guard Drawing 175 WLM 561-001, Rev J, Z-drive Hydraulic System Diagram

Coast Guard Drawing 175-WLM 568-001, Rev B, Bow Thruster Arrangement & Detail

Coast Guard Drawing 175-WLM 568-002, Rev N, Bow Thruster Detail

Coast Guard Drawing 175 WLM 573-001, Rev U, Buoy Deck Arrangement

Coast Guard Drawing 175 WLM 581-001, Rev F, Anchor Handling System Arrangement

Coast Guard Drawing 175 WLM 582-001, Rev D, Mooring and Towing, A & D

Coast Guard Drawing 175 WLM 593-001, Rev G, Sewage & Waste Water System Diagram

Coast Guard Drawing 175 WLM 593-002, Rev H, Oily Bilge System Diagram

Coast Guard Drawing 175 WLM 593-009, Rev E, Independent Tanks, Sewage Holding Tank

Coast Guard Drawing 175 WLM 593-013, Rev C, Oily Water Separator A&D

Coast Guard Drawing 175 WLM 593-014, Rev A, OWS System Operating Instructions BOSS 2.2T-107-YM

Coast Guard Drawing 175 WLM 601-001, Rev T, General Arrangement Inboard and Outboard Profiles

Coast Guard Drawing 175 WLM 601-003, Rev N, Booklet of General Drawings 552-564

Coast Guard Drawing 175-WLM-612-001, Rev G, Lifelines/Rails & Stanchions

Coast Guard Drawing 175 WLM 633-001, Rev D, Cathodic Protection

Coast Guard Drawing 175 WLM 635-001, Rev F, Hull Thermal and Acoustic Insulation Schedule

Coast Guard Drawing 175 WLM 801-001, Rev A, Hull Lines

Coast Guard Drawing 175 WLM 801-003, Rev A, Curves of Form

Coast Guard Drawing 175 WLM 801-006, Rev J, Docking Plan

Coast Guard Drawing 175-WLM 801-015, Rev C, Scantlings, Decks & Platforms

Coast Guard Drawing 175 WLM 801-019, Rev C, Shell Expansion

Coast Guard Drawing 175 WLM 920-001, Rev K, Hull Block 920 Panels

Coast Guard Drawing 175-WLM 960-001, Rev M, Hull Block 960 Panels

Coast Guard Drawing 175-WLM 960-003, Rev B, Hull Block 960 Assembly

Coast Guard Drawing 175-WLM 970-001, Rev K, Hull Block 970 Panels

Coast Guard Drawing 175-WLM 970-004, Rev G, Hull Block 970 - Transverse Frames

Coast Guard Fleet Drawing FL 2804-12, Rev -, U.S.C.G. Emblem

Coast Guard Fleet Drawing FL 2804-22, Rev A, Consolidated Visual ID for Cutters

COAST GUARD PUBLICATIONS

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

Coast Guard Technical Publication (TP) 3446, Jun 2009, Doppler Speed Log, Model SRD-500 Dual Axis

Coast Guard Technical Publication (TP) 3498, Section A, Jul 2015, Buoy Chain Winch

Coast Guard Technical Publication (TP) 3605A, Nov 2007, MPCMS Operating Manual (Volume 1)

Coast Guard Technical Publication (TP) 3605B, SWBS 86; Section B; Machinery Plant Control & Monitor System (MPCMS) Z-Drive Direction Indicator System Technical Manual

Coast Guard Technical Publication (TP) 3628, SWBS 568, Section A, March 2017, Bow Thruster – (Bird-Johnson Company)

Coast Guard Technical Publication (TP) 3631, Section 581-A, Sep 2013, Manufacturer's Instruction Book-SWBS Groups 573-581, Anchor Windlass

Coast Guard Technical Publication (TP) 3653, Jul 2013; SWBS 245, Section A; Z-drive - Model 1350-H

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

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

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

Surface Forces Logistics Center Standard Specification (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

Surface Forces Logistics Center Standard Specification 8634 (SFLC Std Spec 8634), 2020, Drydocking

Surface Forces Logistics Center Standard Specification 8635 (SFLC Std Spec 8635), 2020, Temporary Services

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2020, Temporary Hull Accesses

OTHER REFERENCES

American Bureau of Shipping (ABS) Approved Chain, Accessory and Bar Manufacturing Facilities List, Oct 2016

American National Standards Institute/American Water Works Association (ANSI/AWWA) C652, 2011, Disinfection of Water-Storage Facilities

American National Standards Institute/NSF International (ANSI/NSF) 61, 2015, Drinking Water System Components - Health Effects

American Society for Nondestructive Testing (ASNT) SNT-TC-1A, 2013, Recommended Practice for Personal Qualification and Certification in Nondestructive Testing

American Society of Mechanical Engineers (ASME) B16.34, 2017, Valves-Flanged, Threaded, and Welding End

APM: If work is being done in DD, no cofferdam is needed; delete cofferdam protective measures paragraph 3.1.3 and above NAVSEA ref. Above NAVSEA ref is accessible on-line

ASTM International (ASTM) A106, 2015, Standard Specification for Seamless Carbon Steel Pipe, for High-Temperature Service

ASTM International (ASTM) D1330, 2015, Standard Specification for Rubber Sheet Gaskets

ASTM International (ASTM) D4138, 2013, Standard Practices for Measurement of Dry Film Thickness of Protective Coating Systems by Destructive, Cross-Sectioning Means

ASTM International (ASTM) D5363, 2016, Standard Specification for Anaerobic Single-Component Adhesives (AN)

ASTM International (ASTM) F992, 2017, Standard Specification for Valve Label Plates

Commercial Item Description (CID) A-A-59313, Nov 2003, Thread Compound; Anti-seize, Zinc Dust-Petrolatum

Commercial Item Description (CID) A-A-59316, 2003, Abrasive Materials for Blasting

Federal Specification (Fed Spec) HH-P-151, Mar 1991, Packing; Rubber-Sheet, Cloth-Insert

Federal Specification (Fed Spec) QQ-N-281, Oct 1985, Nickel-Copper Alloy Bar, Rod, Plate, Sheet, Strip, Wire, Forgings, and Structural and Special Shaped Sections

Federal Specification (Fed Spec) RR-C-271, Rev E, Dec 2010, Chain and Attachments, Welded and Weldless

Federal Specification (Fed Spec) RR-C-271, Rev E, Mar 2016, Chains and Attachments, Carbon and Alloy Steel

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-61, 2013 Edition, Pressure Testing Of Steel Valves

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-67, 2017 Edition, Butterfly Valves

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-72, 2018 Edition, Ball Valves with Flanged or Butt-Welding Ends for General Service

Manufacturers' Standardization Society of the Valve and Fittings Industry (MSS) SP-80, 2013 Edition, Bronze Gate, Globe, Angle and Check Valves

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS), SP-58, 2009, Pipe Hangers and Supports – Materials, Design, Manufacture, Selection, Application and Installation

MIL-A-18001, May 2005, Anodes, Sacrificial Zinc Alloy (Commercially Accepted - ASTM B418)

MIL-A-22262, Mar 1996; Abrasive Blasting Media Ship Hull Blast Cleaning

MIL-C-24633, Oct 2014, Chain, Stud Link, Anchor, Low Alloy Steel, Flash Butt Welded

MIL-DTL-1222, Dec 2000, Studs, Bolts, Screws and Nuts for Applications Where a High Degree of Reliability Is Required

MIL-DTL-23549, Sep 2016, Grease, General Purpose

Mil-DTL-24643/15, Power and Lighting, Watertight, Circuit Integrity

MIL-F-24402, May 1995, Filters (Hydraulic), Filter Elements (High Efficiency), and Filter Differential Pressure Indicators, General Specification

MIL-I-3064, Mar 1991, Insulation, Electrical, Plastic-Sealer

MIL-PRF-16173, Sep 2006, Corrosion Preventive Compound, Solvent Cutback, Cold-Application

Mil-S-24235/9E, 1992, Stuffing Tubes, Metal, And Packing Assemblies For Electric Cables, Brass and Steel, for Decks and Bulkhead With Pipe Protection.

MIL-S-45180, 1998, Sealing Compound, Gasket, Hydrocarbon Fluid and Water Resistant

MIL-STD-2003-3A, Sep 2009, Electric Plant Installation Standard Methods for Surface Ships & Submarines (Penetrations)

Naval Sea Systems Command (NAVSEA) Underwater Ship Husbandry Manuals (UWSH) S0600-AA-PRO-160, Nov 2011, Chapter 16, Cofferdams

NAVSEA Drawing 804-5773931, Rev A, Acoustic & Thermal Insulation For Compartments Installation Details

Recovered Energy, Inc, BOSS 107 Separator System Operation & Maintenance Manual – YM Model

Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) C-6183B, 2019, Cork and Rubber Composition Sheet; for Aromatic Fuel and Oil Resistant Gaskets

Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) G-6032, 2014, Grease, Plug Valve, Gasoline and Oil Resistant, NATO Code Number G-363, Metric

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), 2012, Power Tool Cleaning to Bare Metal

The Society for Protective Coatings (SSPC), January 2015, Paint Application Specification No. 2 (PA-2), Procedure for Determining Conformance to Dry Coating Thickness Requirements

The Society for Protective Coatings (SSPC)/NACE International (NACE) Joint Surface Preparation Standard SSPC-SP 6/NACE No. 3, 2007, Commercial Blast Cleaning

The Society for Protective Coatings (SSPC)/NACE-International (NACE) Joint Surface Preparation Standard SSPC-SP 10/NACE No. 2, 2007, Near-White Blast Cleaning

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)
12	Y	Starboard Z-drive (CCW rotation)	NSN: 2010-21-920-0919	1 ea.	500,250.00
12	Y	Port Z-drive (CW rotation)	NSN: 2010-21-920-0899	1 ea.	500,250.00
12	Y	Special Alignment Pointer Set- CG Tool	N/A	1 ea.	500.00
12	Y	Z Drive Alignment Tool	NSN: 5220-01-F16-4720	1 ea.	3600.00
13	N	***Fathometer Transducer, Shallow Water, 50-200 kHz (Airmar Technology SS505)	NSN: 5845-01-470-2500	1 ea.	343.63
14	Y	***Sperry SRD 500 Doppler speed log	NSN: 5999-01-472-7499	1 ea.	16504.43
18	N	Anchor Windlass Overhaul kit	NSN: 5430-01-546-4684	1 ea.	12,474.00
18	N	Ball Valve	NSN: 4820-01-013-3430	1 ea.	87.36
18	N	Valve, Counterbalance	NSN: 4820-01-F16-4571 PN: CBEH-LKN-BCL Sun Hydraulics Corp	1 ea.	354.00
18	N	** Motor, Hydraulic	NSN: 4320-01-419-3520	1 ea.	1,811.00
18	N	** Valve, Linear, Directional Control	NSN: 4810-01-511-3173	1 ea.	983.14
18	N	Hydraulic Brake	NSN: 2530-01-F14-4033 P/N: 90B3C4G087	1 ea	2000.00
35	N	Boss 2.2 GPM OWS	NSN: 4330-01-F13-3461 PN: BOSS 2.2T-107 YM	1 ea.	14,300.00
36	Y	Winch, Boat Davit	NSN: 2030-01-505-1581 PN: 49396	1 ea	$22,366.77
36	N	Wire Rope Assembly, 75', 5/8", 6x37, IWRC, EIPS	NSN: 4010-01-602-8365	1 ea	600.00
40	N	26 IN x 66 IN QA Watertight Door, Steel, LH Swing; W/O Fixed Light	NIIN: 014863599	1	5894.27
43	N	**8" Simplex Strainer	BF-150B, with T-bolt hinged cover)	2 ea.	20,000.00
43	N	**3" Duplex Strainer	NSN: 4730-01-643-2221	1 ea.	10,400.00

50	N	Seal Kit, Thruster	NSN: 2010-01-555-9048	1 ea.	4376.00
50	N	Anode, Zinc	NSN: 5365-01-495-5350	9 ea.	113.75
50	N	**Seal Spacer (B125SM44178)	NSN: 2010-01-495-6823	1 ea.	700.00
50	N	**Shaft Sleeve	NSN: 2010-01-495-2638	1 ea	5702.40

***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	Hull Plating, Side Scan, Ultrasonic Testing
15	Sea Valves and Waster Pieces, Overhaul Or Renew
16	Sea Bay, Clean and Inspect
18	Anchor Windlass, Inspect And Service
36	Single Point Davit Winch, Replace

PRINCIPAL CHARACTERISTICS - TENDER

175' WLM, BUOY TENDER	
PHYSICAL	
Length overall	174' 8"
Length between perpendiculars	155' 1"
Depth	14' 8"
Maximum beam	36' 0"
Designed draft	8' 0"
Mast height (above 8' waterline)	58' 8"
Frame spacing	20"
Full load displacement	855.15 Long Tons SW
Light load displacement	719.78 Long Tons SW
Minimum op condition displ	852.19 Long Tons SW
HULL	
Hull material	Steel
MACHINERY	
Main propulsion	Two Caterpillar 3508 DITA V-8 diesel; 999 BHP ea @ 1500 RPM Two Ulstein 360 degree steerable Z-Drives, 403 SRPM @ 1600 ERPM
Reduction gears	Two Z-Drive units, Cardan shafting; 3.973:1 gear ratio
Shaft seal	John Crane Type ND
Shaft bearings	Five pedestal mounted, Cooper split roller bearings
Number of propellers	2
Number of blades	4
Diameter	57.1"
Rudders	None; Z-drive
Ship's service generators	Three Caterpillar Model 3406 DITA Turbocharged; 285KW, 450V, 60 Hz, 1800 RPM
Emergency diesel generator	One Caterpillar Model 3406 DIT 210 KW, 24V, 60 Hz, 1800 RPM
TANK CAPACITIES	
Diesel oil capacity (100%)	16,385 gal
Fresh water capacity (100%)	7,339 gal
Lubricating oil (100%)	86 gal

General Requirements

1. SCOPE

1.1 Intent. This standard specification invokes general requirements for conducting vessel repairs performed at a commercial contractor's 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), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

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. 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.

NOTE

The requirements of paragraph 3.1 (General) applies to all work under the scope of this contract, whether explicitly stated in work items or not, and to all other work subsequently authorized by changes, modifications, or extensions to the contract.

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. Ensure that all colors and color coat/paint schemes are in accordance with COMDTINST M10360.3, Chapter 6 (Cutter and Boat Colors Exterior and Interior).

NOTE

Unless a waiver has been granted (in writing) by the KO, deviations from authorized coatings (listed in Appendix C of SFLC Std Spec 6310) and colors and color schemes (provided in Chapter 6 of COMDTINST M10360.3) are strictly prohibited.

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

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

3.5.1 Contractor operated (non USCG) facilities. The Contractor must provide and maintain environmental protection as defined in SFLC Std Spec 0000 Appendix A, Requirements for Environmental Protection at Contractor Operated (Non USCG) Facilities, as applicable, 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 small quantity conditionally exempt.

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 must be 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 must be 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, and must be 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 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 A, Requirements For Environmental Protection At Contractor Operated (Non USCG) Facilities for HW disposal.

3.6 Local Policy. None.

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:

None.

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.

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

QA-2 - QUALITY ASSURANCE INSPECTION FORM
(ENVIRONMENTAL READINGS)

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE

Use one sheet for each activity. Record conditions every four hours from before surface preparation to application of final coating system coat.							
DATE & TIME	ACTIVITY (SURFACE PREPARATION, PRIMER COAT, BARRIER COAT, TOP COAT, ETC…)	LOCATION (FRAME & DECK, RELATION TO EQUIPMENT, ETC.)	TEMPERATURE				% REL. HUMID-ITY
			DEW PT.	SURFACE	AMBIENT	ΔT | DP - SURFACE |	

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

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 (INCL. FRAME #'S)			AREA (SQFT)

SURFACE PREPARATION METHOD		PROFILE ACHIEVED (MILS)		
		MIN	MAX	MEAN
SSPC-SP-10/NACE No. 2	☐			
SSPC-SP WJ-1/NACE WJ-1	☐			
SSPC-SP WJ-2/NACE WJ-2	☐			
SSPC-SP WJ-3/NACE WJ-3	☐			
SSPC-SP WJ-4/NACE WJ-4	☐			
SSPC-SP-3	☐			
SSPC-SP-11	☐			
SSPC-SP-11 (inaccessible area)	☐			
Brush-blasting (non-metallic substrate)	☐			
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

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	☐			
SSPC-SP WJ-1/NACE WJ-1	☐			
SSPC-SP WJ-2/NACE WJ-2	☐			
SSPC-SP WJ-3/NACE WJ-3	☐			
SSPC-SP WJ-4/NACE WJ-4	☐			
SSPC-SP-3	☐			
SSPC-SP-11	☐			
SSPC-SP-11 (inaccessible area)	☐			
Brush-blasting (non-metallic substrate)	☐			
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 Reading (mils)					
Mean Reading (mils) IAW ASTM DD4417).					

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

QA-4 - QUALITY ASSURANCE INSPECTION FORM
(SURFACE SOLUBLE SALT CONDUCTIVITY LOG)

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

SOLUBLE SALT CONDUCTIVITY MEASUREMENTS IAW SSPC-GUIDE 15.		
DATE	TEST LOCATIONS	CONDUCTIVITY (MICROSIEMENS/CM)

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

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

WORK ITEM 1: Hull Plating, Side Scan, Ultrasonic Testing

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform thickness measurements of underwater (u/w) hull plating by ultrasonic side scan method.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 801-6, Rev H; Docking Plan

Coast Guard Drawing 175 WLM 801-19, Rev C; Shell Expansion

COAST GUARD PUBLICATIONS

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

OTHER REFERENCES

American Society for Nondestructive Testing (ASNT) SNT-TC-1A, 2013, Recommended Practice for Personal Qualification and Certification in Nondestructive Testing

3. REQUIREMENTS

3.1 General.

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

- 3.2 Side scan requirements and procedures.

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 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:

- Hull zinc anode system
- Docking blocks.

3.2 Work coordination and preparation. The Contractor shall plan all specified vessel work detailed in this specification package to ensure the side scan survey does not necessitate a work stoppage. The Contractor shall abide by the following guidance, to facilitate the ultrasonic survey:

- Ensure that all u/w body surface preparation and primer coat application tasks are completed within ten days of lifting the vessel.
- Provide a continuous supply of fresh water at .50 gpm within 50 feet of the vessel with standard hose bib fitting.
- Provide 110 VAC electrical power, and scaffolding or other suitable means of access to bring inspection personnel within one foot of all the body surface inspection areas that are five feet above ground level.
- After completion of the hull survey, and authorized hull repairs, resume/complete u/w body preservation process by applying the second coat of the anti-corrosive coating system, and all anti-fouling paint coats.
- Pay close attention to manufacturer's recommended practices in regards to paint system overcoat time limitations and required degree of surface cleanliness prior to resuming u/w body coating application.

3.3 Side scan requirements and procedures. The Contractor shall ensure the following referring to the Coast Guard drawings listed in Section 2 (References) herein as guidance during the performance of the tasks specified below and submit a CIR.

3.3.1 Testing company and personnel. Provide the services of a qualified ultrasonic testing company, with suitable side scan equipment, to conduct a "Scanning Crawler Automated Test" of the vessel's u/w hull plating for the presence of metal corrosion and deterioration. Ensure the following:

- All scanning operations are completed by personnel meeting the personnel qualification and certification, as required by contractor process. This contractor developed personnel qualification and certification process must meet, at a minimum, ASNT Recommended Practice No. SNT-TC-1A.
- An SNT Level III Analyst is on site, to oversee the project and evaluate the collected data.
- An SNT Level III or II Analyst is on site, to verify with a hand held gauge all areas on the hull identified as thinner than the specified criteria, in order to expedite all repair procedures.
- Qualified personnel are provided to complete all on-site corrosion inspections.

3.3.2 Coast Guard notification. Accomplish all required tasks within 10 calendar days of the start of the availability.

3.3.2.1 Provide a daily update to the COR on all areas inspected and potential issues or schedule changes.

3.3.2.2 Notify the COR at least 3 days prior to completion for an onsite review of readings and repair areas.

3.3.3 Scanning parameters. Use the following parameters during the course of this inspection:

- Automated scanning resolution must be set to 0.5" x 0.5"
- Plates where scan data indicating wastage greater than or equal to 25% nominal plate thickness must be highlighted in "RED" and designated "repair areas".
- Plates where scan data indicating wastage greater than or equal to 15% to 24% of nominal plate thickness must be highlighted in "YELLOW".
- Plates where scan data indicating wastage greater than or equal to 10% to 14% of nominal plate thickness must be highlighted in DARK GREEN.
- Hand held UT readings must be taken to verify bad metal areas found with the side scan equipment. All readings must be provided to the COR and the lowest reading marked on the hull at the bad metal location.
- Areas that are accessible but cannot be reached by the automated scanner must be scanned with a hand-held meter at a resolution of 2" x 2". Any repair areas found during the hand scan must be marked on the ships hull and their approximate positions recorded on the plate drawings and report summary..

3.3.3.1 Any scanning parameter or scope of work changes must be approved by the KO.

3.3.3.2 The echo to echo transducer is not authorized due to inconsistent readings and technical difficulties.

3.3.3.3 There shall be no deviation from the color scheme specified above.

3.3.4 Ensure that the side scan inspection area includes the Port, Starboard, and Transom exterior shell plate below the water line, but shall exclude the following list.

- Areas under and within 6-inches of blocks and side blocks (areas that are accessible 6 inches from blocks and side blocks must be hand scanned.)
- Areas up to 6-inches around any obstacle on the hull including sea suctions, discharges, rudderposts, knuckle, bow stem, stabilizer tubes, and stern tubes, as applicable.
- Any areas blocked by immovable scaffolding or shipyard activity.

3.4 Side scan reports. The Contractor shall submit to the COR a final report within 3 working days after the side scan inspection is completed. A copy of all repair areas shall be clearly marked, in yellow or white, on the provided shell plate drawing(s), and provide a summary document of same areas. Submit two hard copies of the report with two CD's containing the electronic (raw) data, as part of the CIR submission prior to departing the job site. Ensure the reports include:

- Inspection overview.
- Data sheets for each plate with designated repair areas outlined in blue.
- Mosaic of scanned data overlaid on Coast Guard Drawing 175 WLM 801-19.

3.4.1 Photos. Provide digital photos of all designated repair areas.

3.4.2 Electronic files. Ensure CD's contain a complete copy of the report, interactive data files, and digital

pictures. All electronic files shall be compatible with standard USCG workstation operating software. Electronic files format shall be such that the CG has the capability to change the percent of wastage (format conditioning) per plate. Electronic files shall be capable of being opened using MS Word, MS Excel, or PDF software. Digital pictures shall be recorded in JPEG format.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 2: Hull Plating, U/W Body, Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect/survey the vessel's Under Water (U/W) hull plating, including U/W appendages and coating system.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 114-001, Rev D, Shell Appendages

Coast Guard Drawing 175 WLM 801-006, Rev H, Docking Plan

Coast Guard Drawing 175 WLM 801-019, Rev C, Shell Expansion

COAST GUARD PUBLICATIONS

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

OTHER REFERENCES

ASTM International (ASTM) D4138, 2013, Standard Practices for Measurement of Dry Film Thickness of Protective Coating Systems by Destructive, Cross-Sectioning Means

The Society for Protective Coatings (SSPC), January 2015, Paint Application Specification No. 2 (PA-2), Procedure for Determining Conformance to Dry Coating Thickness Requirements

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).

3.2 Inspection. The Contractor must accompany the Underwater Hull Inspection Board (UWHIB) in the performance of the below inspection tasks, as applicable, using the drawings listed in Section 2 (References) as guidance. The Contractor must provide the following, to facilitate the UWHIB in assessing the condition of the designated U/W hull components and systems:

- A hull repair supervisor and a marker.
- Temporary staging and other necessary equipment, as applicable, for ensuring safe access to all areas of the U/W hull.

NOTES

1. The COR will convene the UWHIB as soon as possible after the vessel has been dry-docked and before any work (except U/W hull cleaning/wash down) is performed on the U/W hull and appendages.

2. Some of the components and/or systems addressed in this work item may not be applicable to all vessel classes.

3.2.1 Hull plating.

3.2.1.1 The Contractor must inspect the condition of the hull plating (including thruster tunnel plating, as applicable), for the presence of marine growth, deformation, and any evidence of major corrosion or electrolytic action.

3.2.1.2 The Contractor must inspect the hull and keel areas, report on the condition of butt-welded seams, doubler plates, lap seams, and for any signs of damaged plating or unusual waviness in the plating.

3.2.2 Sea chests and all other cooling system intake components. The Contractor must inspect all sea chests, sea beam arrays, tunnels, hull openings, and grates for general appearance, loose, damaged, or missing grates, loose or missing fasteners, condition of sea strainers and lockwire on bolts, marine growth on grating slots, and any obstructions in the openings that might prevent proper suction and discharge of water.

3.2.3 Z-Drive and associated components. The Contractor must inspect the condition of propellers for signs of corrosion, pitting, erosion, fouling, cracks, dings, and nicks by side and blade; inspect fairwaters, rope guards, shafts, and mechanical seals - look for missing screws, physical damage to the blades, pitting, condition of dunce caps, and condition of securing devices.

3.2.4 Transducers. The Contractor must check general condition for cuts, cracks, corrosion, and surface defects around the openings. Check transducer securing nuts for tightness, and inspect cables for chafing and other damage.

3.2.5 Zinc anodes.

3.2.5.1 The Contractor must remove all marine growth and oxide coating from all hull, rudder, shaft strut, sea chest, sea beam array, z-drive, and thruster tunnel zinc anodes, or water jet drives anodes, as applicable, using a light-wire brush.

3.2.6.2 The Contractor must visually inspect all zinc anodes; check the soundness of mounting strap and stud welds, missing fasteners, and percentage of remaining material.

3.2.6 Coating system inspections. The Contractor must accomplish the below inspections, in conjunction with the underwater hull inspection conducted by the Underwater Hull Inspection Board (UWHIB). Document the condition found as "Partial - Condition A", "Partial - Condition B", "Partial Condition C", or "100%", as applicable (see 4.1 (Definitions)). Submit a CFR.

NOTE

The following inspections are for determining the existing condition of the coating system for the underwater body surfaces, which are deemed "Critical-coated" surfaces; they must be carried out by a SSPC-QP-1 certified contractor/sub-Contractor or a NACE Inspector – see SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for "critical-coated surfaces").

3.2.6.1 Visual. Perform a visual inspection of the existing U/W body coating system.

4. NOTES

4.1 Definitions.

4.1.1 "Partial – Condition A": The condition that exists where the substrate is exposed in up to 33% of the entire U/W body.

4.1.2 "Partial - Condition B": The condition that exists where the anticorrosive (AC) undercoating system has incurred damage, but, the u/w body hull substrate is not exposed in any location.

4.1.3 "Partial - Condition C": The condition that exists where damage is confined to the antifoulant (AF) topcoating; the epoxy undercoating system is not exposed in any location.

4.1.4 "100%": The condition that exists where more than 33% of the U/W body hull substrate is exposed.

4.2 UWHIB convention. The COR will convene the UWHIB as soon as possible after the vessel has been dry-docked and before any work (except U/W hull cleaning/wash down) is performed on the U/W hull and appendages.

WORK ITEM 3: Hull Plating Freeboard, Preserve, 100 Percent

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to preserve 100% of the freeboard surfaces defined in 4.1 Definition of freeboard surfaces.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 601-001, Rev L, General Arrangement and Inboard and Outboard Profiles

Coast Guard Fleet Drawing FL 2804-12, Rev -, U.S.C.G. Emblem

Coast Guard Fleet Drawing FL 2804-22, Rev-, Consolidated Visual ID for Cutters

COAST GUARD PUBLICATIONS

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

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

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) and to the following specific components, spaces and equipment:

- Areas where underwater body coating system interfaces with freeboard coating system (unless u/w body surfaces are also being preserved).
- Adjacent deck surfaces and deck fittings.
- Deck equipment.

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:

- None.

3.2 Initial inspection. Prior to removing the existing coating system, the Contractor must inspect and verify whether or not all hull identification numbers and letters have permanent markings (weld beads or impressions), showing their location on the hull. Submit a CFR.

3.3 Surface preparation optional methods. The Contractor must have the option of using either high/ultrahigh pressure water Jetting or abrasive blasting to achieve the required surface preparation, prior to application of the coating system specified in 3.6 (Preservation requirements). The Contractor may add abrasives to the waterjet stream, for one or both of the following reasons:

- Achieving greater productivity.
- Achieving the required surface profile.

NOTE

Waterjetting without abrasive addition does not provide any additional anchor profile to the surface, beyond what was present after the previous surface preparation.

3.4 Substrate inspection. After completing surface preparation and before coating application, the Contractor must perform a visual inspection of the prepared substrate, and submit a CFR.

3.5 Pre-surface preparation wash. The Contractor must accomplish low-pressure (less than 5,000 psi) fresh water wash of all affected surfaces, to remove soluble chlorides and other surface contaminants. Capture, contain, and dispose of wash water for proper disposal in accordance with all Federal, state and local regulations.

3.6 Preservation requirements. The Contractor must accomplish the following tasks:

3.6.1 System particulars. Prepare and coat 100% of the freeboard surfaces as designated in paragraph 1.1 (Intent) with the system specified for “Freeboard/Superstructure/Mast (Freeboard/Superstructure)” in SFLC Std Spec 6310. Select the following:

- Select “Option II” system, for the applicable metal substrate.
- Black (17038), as the top/finish coat color..

3.6.2 Visual identification markings. The Contractor must paint all distinctive visual safety and identification markings as follows:

3.6.2.1 Decals. Coast Guard Emblem decals may be substituted for painted emblems. Vinyl adhesive letters and numbers may also be substituted for painted letters and numbers - at the Contractor's discretion.

3.6.2.2 Painted markings. Paint all distinctive visual identification markings, including the Coast Guard diagonal stripes, "U.S. COAST GUARD" legends, hull numbers, and draft marks in accordance with SFLC Std Spec 6310, and Coast Guard Drawings FL 2804-12 and FL 2804-22 as applicable.

NOTES

Surfaces being preserved are considered "critical-coated surfaces".

Although there may be several possible procurement sources for the Coast Guard Emblem decals and vinyl adhesive letters and numbers, one known source is:

Brace Enterprises
10250 SE 138 Terrace
Dunnellon, FL 34431

352-489-4442 / Fax: 352-489-4476
www.braceenterprise.com

3.6.3 Tear drop. Not applicable.

3.7 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).

4. NOTES

4.1 Definition of freeboard surfaces. For the purposes of this item the freeboard is defined as exterior steel hull surfaces from the upper limit of the boot-topping to the top of the bulwark, as shown on Coast Guard Drawing 175 WLM 601-001.

WORK ITEM 4: Appendages, U/W, Leak Test

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform leak test of the U/W appendages.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 114-001, Rev D, Shell Appendages

Coast Guard Drawing 175 WLM 184-001, Rev A, V850 Transducer Adaptor Ring

Coast Guard Drawing 175 WLM 801-006, Rev J, Docking Plan

Coast Guard Drawing 175 WLM 801-019, Rev C, Shell Expansion

COAST GUARD PUBLICATIONS

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

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

OTHER REFERENCES

ASTM International (ASTM) D5363, 2016, Standard Specification for Anaerobic Single-Component Adhesives (AN)

MIL-S-45180, 1998, Sealing Compound, Gasket, Hydrocarbon Fluid and Water Resistant

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 Leak test.

- 3.4 Appendage air test.

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).

3.2 Leak test. In the presence of the Coast Guard Inspector, the Contractor must accomplish the following tasks for all appendages as designated in Table 1 below, using the Coast Guard drawings listed in Section 2 (References) as guidance:

- Remove and dispose of all existing plugs (e.g. drain plugs, fill/vent plugs), as applicable.
- Submit a CIR noting any liquids draining from any of the appendages – indicating the presence of a leak.
- Dispose of any drained liquids in accordance with all Federal, state, and local laws and regulations.

CAUTION

Some liquids that are drained may be classified as hazardous materials or hazardous waste depending on state and local regulations. The vessel environmental coordinator may assist with determination of waste category.

3.3 Plug renewal. Upon completion of all work on appendages, the Contractor must accomplish the following tasks:

- Chase the hull insert threads of all plugs.
- Renew all stainless steel, Type 316 and Monel plugs (as applicable) in place of those removed.
- Coat new plugs prior to installation with a sealing and locking compound conforming to ASTM D5363-AN0123 or a flexible joint compound conforming to MIL-S-45180, Type II.

TABLE 1 – PLUGS FOR U/W APPENDAGES

APPENDAGE	FRAME	SIDE
Skeg	79 ½ to 92	CL
Kort Nozzle (part of Z-drive)	95	P/S

3.4 Appendage air test. The Contractor must accomplish the following tasks for any appendage from the above list designated by the Coast Guard Inspector, with an approved Change Request resulting from the CIR from paragraph 3.2:

- Perform an air test of the appendage, in accordance with SFLC Std Spec 0740, Appendix C.
- Submit a CIR.

4. NOTES

This section is not applicable.

WORK ITEM 5: Appendages, U/W, Internal, Preserve

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to preserve internal surfaces of designated U/W appendage(s) (see Table 1).

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 114-001, Rev D, Shell Appendages

Coast Guard Drawing 175 WLM 184-001, V850 Transducer Adaptor Ring

Coast Guard Drawing 175 WLM 801-006, Rev H, Docking Plan

Coast Guard Drawing 175 WLM 801-019, Rev C, Shell Expansion

COAST GUARD PUBLICATIONS

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

OTHER REFERENCES

MIL-PRF-16173, Sep 2006, Corrosion Preventive Compound, Solvent Cutback, Cold-Application

3. REQUIREMENTS

3.1 General.

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

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).

3.2 Preservation of void internal surfaces. The Contractor must accomplish the following tasks for each appendage listed in Table 1, using the Coast Guard Drawings listed in Section 2 (References) herein as guidance:

- Fill all appendage interior surfaces with a rust preventive compound conforming to MIL-PRF-16173, Class II, Grade 3, to coat all surfaces.
- Drain, collect, and dispose of remaining compound in accordance with all applicable Federal, state, and local regulations.
- Ensure that the coated surfaces are left exposed to the atmosphere for 24 hours to allow for adequate drying.

TABLE 1 - DRAIN PLUGS FOR U/W APPENDAGES

APPENDAGE	FRAME	SIDE
Skeg	79 ½ to 92	CL
Kort Nozzle (part of Z-drive)	95	P/S

4. NOTES

This section is not applicable to this work item.

WORK ITEM 6: Chain Lockers, Clean and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the Chain Locker(s).

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 581-001, Rev E, Anchor Handling System Arrangement

Coast Guard Drawing 175 WLM 601-001, Rev T, General Arrangement Inboard and Outboard Profiles

Coast Guard Drawing 175-WLM-529-002 Rev G Main Drainage System Diagram

Coast Guard Drawing 175-WLM-505-002 Rev F Mechanical Remote Valve Operators Arrangement and Details

COAST GUARD PUBLICATIONS

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

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General. The Contractor must refer to Coast Guard Drawing for guidance in accomplishing this work item.

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

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 below-listed:

- Anchors and chains.
- Fluid contents of chain locker(s).
- Deck grating.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

Recommend inspecting the condition of the reach rod and cycle/operate the drainage system valve.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard Personnel perform an initial operational test of the bilge sensor(s)/alarm(s), as applicable, to demonstrate existing operational condition. Submit a CFR.

3.3 Cleaning tasks. The Contractor must refer to Coast Guard Drawing 175 WLM 581-001

175 WLM 601-001 for guidance and clean all interior surfaces free of all foreign materials, such as sediment or sludge. Remove all persistent residues, taking care not to damage the coating system. Remove cleaning media and residues continuously during the washing process. Remove any residual wash media and wipe up residual moisture with clean lint-free cloths. Collect, contain, and dispose of all wash media, residues, and cleaning materials in accordance with all Federal, state, and local regulations.

3.4 Inspection. The Contractor must visually inspect sounding tubes and chain locker surfaces, including associated structural members. Submit a CFR including the following, as applicable:

- Structural condition
- Inaccessible areas
- Condition of coating system, including measurements taken, percentage, location, and type of coating failure.

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 the bilge sensor(s)/alarm(s) to be in satisfactory operating condition. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 7: Tanks, MP Fuel Stowage 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):

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Diesel Storage	3-24-1-F	5,934	600
Diesel Storage	3-24-2-F	5,934	600
Diesel Overflow	3-35-2-F	611	60

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 541-001, Rev H, Fuel Oil System Diagram

Coast Guard Drawing 175 WLM 541-006, Rev C, Independent Tanks, Emergency Generator Day Tank IIP:7-1

Coast Guard Drawing 175 WLM 601-003, Rev F, Booklet of General Drawings 552-564

COAST GUARD PUBLICATIONS

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

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

OTHER REFERENCES

Federal Specification (Fed Spec) QQ-N-281, Oct 1985, Nickel-Copper Alloy Bar, Rod, Plate, Sheet, Strip, Wire, Forgings, and Structural and Special Shaped Sections

Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) C-6183B, 2019, Cork and Rubber Composition Sheet; for Aromatic Fuel and Oil Resistant Gaskets

3. REQUIREMENTS

3.1 General.

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

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 below-listed:

- Fuel
- Piping
- Tank access cover

3.1.4.1 Remove up to a total of 6,000 gallons of diesel fuel. Document a complete chain of custody record of the removed tank contents from the vessel to the point of final destination or delivery. Submit document to the COR upon completion of work.

3.1.4.2 Dispose of removed fluids in accordance with all applicable Federal, state, and local regulations.

3.1.4.3 Provide the following to support Coast Guard personnel to refuel equipment:

- boom around cutter
- tagout crane way equipment
- Oil transfer supervisor.

NOTE
Vessel may come in with less tank fluid contents than specified above.

NOTE
Initial and post repair operational tests apply only to tanks that possess TLIs.

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 equipment listed below to demonstrate existing operational condition. Submit a CFR.

- TLI for tanks

3.3 Plug log. The Contractor must keep a written record of all plugs put in any tank vents. A separate list must be kept for each tank being entered.

3.3.1 Ensure that all plugs are removed from each tank upon completion of work in the tank.

3.3.2 The plug log must be available to the Coast Guard Inspector when the inspector is performing his close-out inspection on each tank.

3.4 Cleaning requirements. The Contractor must refer to Coast Guard Drawings 175 WLM 541-001, 175 WLM 541-006 and 175 WLM 601-003 for guidance. The Contractor must remove tank cover(s) and clean 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). Remove cleaning media and residues continuously during the washing process. Remove any residual wash media; and wipe up residual moisture with clean lint-free cloths.

3.5 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. 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.

3.6 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 CFR including the following, as applicable:

- Tank structural condition.
- Inaccessible areas.
- Condition of tank coating, including; measurements taken, percentage, location, and type of coating failure (if tank interior surfaces are coated).
- Tank level indicator (TLI) and/or float switch condition, as applicable.
- Sounding/vent tube and striker plate condition (including vent check valve and waster piece).
- Suction and discharge piping condition.
- Fastener material and condition (correct fastener material is stainless steel).

3.7 Tank closing. The Contractor must ensure that the tank(s) remain open for at least 24 hours after completion of any KO-authorized repair and preservation procedures. Notify the COR at least 24 hours prior to closing the tank(s). After satisfactory inspection by the Coast Guard Inspector and completion of all authorized repairs, close tank manhole cover(s) with new gasket material conforming to AMS-C-6183. Chase threads on studs to ensure even installation of the access covers. Renew any damaged nuts.

3.8 Operational test, post repairs. After completion of work and in the presence of the Coast Guard Inspector, the Contractor must thoroughly test and demonstrate the equipment listed below to be in satisfactory operating condition. Submit a CFR.

- Designated tank TLIs
- Vent check valves

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.9 Ultrasonic thickness (UT) measurement. The Contractor must take a total of 50 UT measurements of tank plating in each tank in accordance with SFLC Std Spec 0740, Appendix C in locations designated by the Coast Guard Inspector. Submit a CFR.

3.9.1 In addition to the UT measurements, take up to 10 pit-depth measurements within each tank, using a suitable pit depth gauge.

4. NOTES

4.1 Tank content removal. The Ship's force will pump down the tanks to the maximum extent possible with the installed pumping system.

4.2 Tank inspection. The Coast Guard Inspector will visually inspect the tank interior immediately prior to closing.

4.3 Tank content restoration. The Ship's force will procure new fluids and refill all tanks at the appropriate time.

WORK ITEM 8: Tanks, MP Fuel Service, 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 - FUEL SERVICE TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Diesel Service	3-79-1-F	1,475	100
Diesel Service	3-79-2-F	1,475	100
EDG Service	02-77-1-F	245	25

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 541-001, Rev H, Fuel Oil System Diagram

Coast Guard Drawing 175 WLM 541-006, Rev C, Independent Tanks, Emergency Generator Day Tank IIP:7-1

Coast Guard Drawing 175 WLM 601-003, Rev F, Booklet of General Drawings 552-564

COAST GUARD PUBLICATIONS

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

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

OTHER REFERENCES

Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) C6183, 2019, Cork and Rubber Composition Sheet; for Aromatic Fuel and Oil Resistant Gaskets

MIL-DTL-1222, Dec 2000, Studs, Bolts, Screws and Nuts for Applications Where a High Degree of Reliability Is Required

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor must submit a Critical Inspection Report as required by the following paragraphs:

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 below-listed:

- Fuel
- Piping
- Tank access cover

3.1.4.1 The Contractor must remove up to a total of 5,000 gallons of diesel fuel. Document a complete chain of custody record of the removed tank contents from the vessel to the point of final destination or delivery. Submit document to the COR upon completion of work.

3.1.4.2 Dispose of removed fluids in accordance with all applicable Federal, state, and local regulations (see 4.2 (Tank content restoration)).

NOTE
Vessel may come in with less tank fluid contents than specified above.
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 equipment listed below to demonstrate existing operational condition. Submit a CFR.

- Designated tank TLIs

3.3 Plug log. The Contractor must keep a written record of all plugs put in any tanks vents. A separate list must be kept for each tank being entered.

3.3.1 Ensure that all plugs are removed from each tank upon completion of work in the tank.

3.3.2 Ensure the plug log is available to the Coast Guard inspector when the inspector is performing his close-out inspection on each tank.

NOTE

Initial and post repair operational tests apply only to tanks that possess TLIs.

3.4 Cleaning requirements. The Contractor must remove tank cover(s) and clean 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). Remove cleaning media and residues continuously during the washing process. Remove any residual wash media; and wipe up residual moisture with clean lint-free cloths. The Contractor must refer to Coast Guard Drawings 175 WLM 541-001, 175 WLM 541-006 and 175 WLM 601-003 for guidance.

3.5 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. 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.

3.6 Inspection. The Contractor must accomplish the following tasks:

3.6.1 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 CFR including the following, as applicable:

- Tank structural condition.
- Inaccessible areas.
- Condition of tank coating, including measurements taken, percentage, location, and type of coating failure (if tank interior surfaces are coated).
- Tank level indicator (TLI) and/or float switch condition, as applicable.
- Sounding/vent tube and striker plate condition.
- Suction and discharge piping condition.
- Fastener material and condition (correct fastener material is stainless steel).

3.7 Tank closing. The Contractor must accomplish the following after completion of all KO-authorized repairs and/or preservation procedures:

3.7.1 For unpainted fuel tank(s) that are not ballasted, apply a heavy coat of lube oil to the entire tank interior(s).

3.7.2 Ensure that the tank(s) remain open for at least 24 hours. Notify the COR at least 24 hours prior to closing the tank(s). After satisfactory inspection by the Coast Guard Inspector and completion of all authorized repairs, close tank manhole cover(s) with new gasket material conforming to AMS-C-6183. Chase threads on studs to ensure even installation of the access covers. Renew any damaged or missing fasteners. Use MIL-DTL-1222 as guidance. Existing undamaged fasteners may be reused. (For purpose of bid, assume 10% of existing fasteners will require renewal.)

NOTES

For cutters with unpainted fuel tanks, the 24 hour tank opening period begins after completing the lube oil coating.

Coast Guard personnel will operate all shipboard machinery and equipment.

3.8 Operational test, post repairs. After completion of work and in the presence of the Coast Guard Inspector, the Contractor must thoroughly test and demonstrate the equipment listed below to be in satisfactory operating condition. Submit a CFR.

- Designated tank TLIs
- Vent check valves

3.9 Ultrasonic thickness (UT) measurement. The Contractor must take a total of 50 UT measurements of tank plating, in locations designated by the Coast Guard Inspector, in accordance with SFLC Std Spec 0740, Appendix C. Use Coast Guard Drawing {_____} as guidance. Submit a CFR.

3.9.1 In addition to the UT measurements, take up to 10 pit-depth measurements within each tank, using a suitable pit depth gauge.

4. NOTES

4.1 Tank content removal. The Ship's force will pump down the tanks to the maximum extent possible with the installed pumping system.

4.2 Tank content restoration. The Ship's force will procure new fluids and refill all tanks at the appropriate time.

WORK ITEM 9: Tanks, Potable Water, 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 - TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Potable Water	1-94-0-W	2,167	68
Potable Water	2-36-1-W	5,172	163

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 601-003, Rev F, Booklet of General Plans

Coast Guard Drawing 175 WLM 533-006, Rev D, Independent Tank Potable Water Hb 950

COAST GUARD PUBLICATIONS

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

OTHER REFERENCES

American National Standards Institute/NSF International (ANSI/NSF) 61, 2015, Drinking Water System Components - Health Effects

American National Standards Institute/American Water Works Association (ANSI/AWWA) C652, 2011, Disinfection of Water-Storage Facilities

3. REQUIREMENTS

3.1 General.

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

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:

- Fluid contents
- Piping
- RO system components
- Deck grating.

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 equipment listed below to demonstrate existing operational condition. Submit a CFR.

- TLI

3.3 Plug log. The Contractor must keep a written record of all plugs put in any tanks vents. A separate list must be kept for each tank being entered.

3.3.1 Ensure that all plugs are removed from each tank upon completion of work in the tank.

3.3.2 Ensure the plug log is available to the Coast Guard inspector when the inspector is performing his close-out inspection on each tank.

3.4 Tank content removal. The Contractor must remove and dispose of all fluids and/or residues in accordance with all applicable Federal, state, and local regulations. The Contractor must notify the Dockmaster prior to filling or draining the potable water tank(s), when this item is being executed in a drydock availability. The Contractor must refer to Coast Guard drawings 175 WLM 601-003 and 175 WLM 533-006 for guidance.

3.5 Tank cleaning. The Contractor must remove tank cover(s); clean tank interior surfaces free of all foreign materials, such as sediment, sludge and bacterial growth. Remove all persistent residues, taking care not to damage any tank coating system. 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. Collect, contain, and dispose of all wash media, residues, and cleaning materials in accordance with all Federal, state, and local regulations.

3.6 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 CFR including the following, as applicable:

- Tank structural condition.
- Inaccessible areas, if any.
- Condition of tank coating, including measurements taken, percentage, location, and type of coating failure.
- Tank level indicator (TLI) and/or float switch condition (if applicable).
- Sounding tube and striker plate condition.
- Suction and discharge piping condition.
- Fastener material and condition.

3.7 Tank closing. The Contractor must notify the COR at least 24 hours prior to closing the tank(s). After satisfactory inspection by the Coast Guard Inspector, and completion of all authorized repairs, close tank manhole cover(s) with new gasket material conforming to ANSI/NSF 61. Renew all stud cotton grommets (as applicable) upon reinstallation of manhole cover(s).

3.7.1 The Contractor must renew up to 10% of nuts and washers.

3.8 Tank disinfecting. After all other work involving the potable water system and tank closing have been completed, the Contractor must disinfect and treat the affected potable water tank(s) and associated disturbed piping and components, as necessary, to meet or exceed the requirements of AWWA C652. After tank disinfecting; remove and dispose of all treated water in accordance with all Federal, state and local regulations. Ensure that no one enters the tanks once disinfection is completed.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.9 Operational test, post repairs. After completion of work and in the presence of the Coast Guard Inspector, the Contractor must thoroughly test and demonstrate the equipment listed below to be in satisfactory operating condition. Submit a CFR.

- TLI

4. NOTES

This section is not applicable to this work item.

WORK ITEM 10: 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 - TANKS

TYPE OF STRUCTURE	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Forepeak Ballast Tank	3-0-0-V	3,309	99
Ballast Tank	3-35-6-V	7,922	238
Ballast Tank	3-35-1-V	7,922	238

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 601-003, Rev F, Booklet of General Drawings (552-564)

Coast Guard Drawing 175 WLM 601-002, Rev H, Booklet of General Drawings (IDA LEWIS)

COAST GUARD PUBLICATIONS

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

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

OTHER REFERENCES

ASTM International (ASTM) D1330, 2004, Standard Specification for Rubber Sheet Gaskets

3. REQUIREMENTS

3.1 General.

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

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).

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 equipment listed below to demonstrate existing operational condition. Submit a CFR.

- TLI's for tanks listed in paragraph 1.1

3.3 Plug log. The Contractor must keep a written record of all plugs put in any tanks vents. A separate list must be kept for each tank being entered.

3.3.1 Ensure that all plugs are removed from each tank upon completion of work in the tank.

3.3.2 The plug log must be available to the Coast Guard inspector when the inspector is performing his close-out inspection on each tank.

3.3 Content removal. The Contractor must remove access cover(s); remove and dispose of all fluids and/or residues in accordance with all applicable Federal, state, and local regulations. Plug all inlet and outlet piping in the tank to prevent contaminants from entering the tank. Use plugs with an attached lanyard, ring or other system that will ensure plugs are not lost in the pipe openings. Maintain a plug accountability log outside the tank(s) to prevent any of the installed temporary plugs from being lost inside the tank or forgotten inside at tank closure.

3.4 Cleaning. The Contractor must clean the designated structure's (see paragraph 1.1 (Intent)) interior surfaces free of all foreign materials, such as sediment, sludge and fungal growth. Remove all persistent residues, taking care not to damage the tank coating system. Remove cleaning media and residues continuously from the compartment during the washing process. Remove any residual wash media and wipe up residual moisture with clean lint-free cloths. Collect, contain, and dispose of all wash media, residues, and cleaning materials in accordance with all Federal, state, and local regulations. The Contractor must refer to Coast Guard Drawing 175 WLM 601-003 for guidance.

3.5 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 including the following, as applicable:

- Structural condition.
- Inaccessible areas, if any.
- Condition of coating, including measurements taken, percentage, location, and type of coating failure.
- Tank level indicator (TLI) and/or float switch condition.
- Sounding tube and striker plate condition.
- Suction and discharge piping condition.
- Fastener material (stainless steel) and condition.
- Anodes (as applicable).

3.6 Closing. The Contractor must ensure that the compartment(s) remain open for at least 24 hours after completion of any KO-authorized tank repairs and preservation. Notify the COR at least 24 hours prior to closing the compartment(s). After satisfactory inspection by the Coast Guard Inspector, and completion of all authorized repairs, close the manhole cover(s) with new gasket material conforming to ASTM D1330 and new cotton grommets on each stud (as applicable).

3.6.1 The Contractor must renew up to 10% of fasteners.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.7 Operational test, post repairs. After completion of work and in the presence of the Coast Guard Inspector, the Contractor must thoroughly test and demonstrate the equipment listed below to be in satisfactory operating condition. Submit a CFR.

- TLIs

3.8 Ultrasonic thickness (UT) measurement. The Contractor must take a total of 50 UT measurements of tank plating, in locations designated by the Coast Guard Inspector, in accordance with SFLC Std Spec 0740, Appendix C. Submit a CFR.

3.8.1 In addition to the UT measurements, take a total of 10 pit-depth measurements, using a suitable pit depth gauge

4. NOTES

This section is not applicable to this work item.

WORK ITEM 11: Tanks, Dirty Oil and Waste, 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 – TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Oily Water	3-74-0-F	937	28
Waste Oil	3-77-0-F	586	18

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 601-003, Rev F, Booklet Of General Plans

COAST GUARD PUBLICATIONS

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

OTHER REFERENCES

Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) C6183, 2019, Cork and Rubber Composition Sheet; For Aromatic Fuel And Oil Resistant Gaskets

3. REQUIREMENTS

3.1 General.

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

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).

3.2 The Contractor must remove up to a total of 100 gallons of waste oil and oily water, to facilitate gas-freeing. Dispose of removed fluids in accordance with all applicable Federal, state, and local regulations.

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 the equipment listed below to demonstrate existing operational condition. Submit a CFR.

- TLI's for tank(s) listed in paragraph 1.1 (Intent)

3.4 Plug log. The Contractor must keep a written record of all plugs put in any tanks vents. A separate list must be kept for each tank being entered.

3.4.1 Ensure that all plugs are removed from each tank upon completion of work in the tank.

3.4.2 Ensure the plug log is available to the Coast Guard inspector when the inspector is performing his close-out inspection on each tank.

NOTE

Vessel may come in with less tank fluid contents than specified above.

3.5 Cleaning requirements. The Contractor must remove tank cover(s) and clean tank interior surfaces free of all foreign materials, such as sediment or sludge, taking care not to damage the coating system (if applicable). Use Coast Guard Drawing 175 WLM 601-003 for guidance. Remove cleaning media and residues continuously during the washing process. Remove any residual wash media; and wipe up residual moisture with clean lint-free cloths.

3.6 Tank content and waste disposal. The Contractor must dispose of tank contents and all cleaning fluids in compliance with all applicable Federal, state, and local laws, ordinances and regulations. 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.

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 CFR including the following, as applicable:

- Tank structural condition.
- Inaccessible areas.
- Condition of tank coating, including measurements taken, percentage, location, and type of coating failure.
- Tank level indicator (TLI) and/or float switch condition.
- Sounding tube and striker plate condition.
- Suction and discharge piping condition.
- Fastener material and condition (correct fastener material is stainless steel).

3.8 Tank closing. The Contractor must ensure that the tank(s) remain open for at least 24 hours after completion of all authorized repair and preservation procedures. Notify the COR at least 24 hours prior to closing the tank(s). After satisfactory inspection by the Coast Guard Inspector and completion of all authorized repairs, close tank manhole cover(s) with new gasket material conforming to AMS-C-6183.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.9 Operational test, post repairs. After completion of work and in the presence of the Coast Guard Inspector, the Contractor must thoroughly test and demonstrate the equipment listed below to be in satisfactory operating condition. Submit a CFR.

- TLI's for tank listed in paragraph 1.1 (Intent)

4. NOTES

4.1 The Coast Guard Inspector will visually inspect the tank interior immediately prior to closing.

WORK ITEM 12: Z-Drive Propulsion Unit, Renew (Drydock)

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew the designated (port / starboard) Z-drive propulsion unit(s), while the vessel is in drydock.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
Y	Starboard Z-drive (CCW rotation)	NSN: 2010-21-920-0919	1 ea.	500,250.00
Y	Port Z-drive (CW rotation)	NSN: 2010-21-920-0899	1 ea.	500,250.00
Y	Special Alignment Pointer Set- CG Tool	N/A	1 ea.	500.00
Y	Z Drive Alignment Tool	NSN: 5220-01-F16-4720	1 ea.	3600.00

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 245-001, Rev A, Propeller

Coast Guard Drawing 175 WLM 245-002, Rev A, Z-drive Propeller Details, Modified Design

Coast Guard Drawing 175-WLM 551-5, Rev E, Compressed Air System a/D Hull Block 940, 950

Coast Guard Drawing 175 WLM 561-001, Rev J, Z-drive Hydraulic System Diagram

Coast Guard Drawing 175 WLM 635-001, Rev F, Hull Thermal and Acoustic Insulation Schedule

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3653, Jul 2013; SWBS 245, Section A; Z-drive - Model 1350-H

Coast Guard Technical Publication (TP) 3605B, SWBS 86; Section B; Machinery Plant Control & Monitor System (MPCMS) Z-Drive Direction Indicator System Technical Manual

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

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

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

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2020, Temporary Hull Accesses

OTHER REFERENCES

MIL-F-24402, May 1995, Filters (Hydraulic), Filter Elements (High Efficiency), and Filter Differential Pressure Indicators, General Specification

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.1 (SSPC-SP 1), 2015, Solvent Cleaning

3. REQUIREMENTS

3.1 General.

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

- 3.7.3 Post-surface preparation cleaning and inspection

3.1.2 Tech Rep. The Contractor must provide the services of a qualified Tech Rep, who is familiar with the Ulstein model number 1350-H (Supported by Pacific Star Marine) Z-drive propulsion unit, to accomplish the following tasks – on site:

- 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.
- Technical Representative must be present for all disassembly, inspection, and reassembly of the Z-drive system.

3.1.2.1 Ensure that the Tech Rep has a résumé of demonstrated experience with the system/equipment stated above.

3.1.2.2 Submit a copy of the Tech Rep’s résumé and a list of references 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).

3.1.3.1 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.

NOTE

Be aware that plastic bags may be used only when arrangement or configuration prevents the use of the other sealing methods specified above.

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

- Insulation and/or lagging
- Hydraulic piping and hoses
- ASW piping
- Pneumatic piping
- Lighting wiring and fixtures
- Control panels
- Electrical boxes.
- Portable railing bolted to the grating surrounding the Z-drive.
- Shaft guards/covers

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 The existing Z-drive itself since being renewed (and possibly damaged/leaking) must not be operationally tested.

3.3 Patch removal. The Contractor must cut the access opening required on the 01 Level (23'-0" above baseline). The outline of this access opening is visible on the deck from previous installations. Follow the outline, cut deck plate and lift off of the Cutter. Perform all work required to open and close the access openings in accordance with SFLC Std Spec 8636.

3.3.1 When the access opening is not being utilized for rigging, it must be kept covered by temporary plywood sheets and a tarp for safety and to limit exposure of internal compartments from the elements.

3.3.2 Boundary test. The Contractor must verify the integrity of all boundaries affected by this work item using one of the methods described in Std Spec 0740, Appendix C. Submit a CFR.

3.4 System draining. The Contractor must drain the lubrication, steering, and seal oils from both the Z-drive propulsion units in accordance with TP- 3653 and Coast Guard Drawing 175 WLM 245-001. Dispose all drain fluids in accordance with applicable Federal, state, and local environmental regulations.

3.4.1 The quantities of existing system oil (for each Z-Drive unit) to be drained and disposed of are:

- Lube and Seal Oil - 120 gallons.
- Steering Oil - 92 gallons.

3.4.2 Once the systems have been drained, open all system tanks and clean to dry bare metal removing all condensation residue using new low-lint cleaning cloths conforming to CID A-A-59323, Type II.

3.5 Designated Z-drive propulsion unit(s) renewal. The Contractor must receipt inspect the new GFP Z-drive

3.5.1 Furnish all crane service and riggers required to initially receive the new Z-drive and then later load removed Z-drive onto Government provided transportation. Z-drive will arrive in a horizontal position in a shipping stand. The same shipping stand will be re-used to return removed Z-drive. See photograph at end of specification.

3.5.2 Inspect the new GFP unit for lockwire. If missing, install required lockwire per Technical Representative's guidance. CG Tech Pub 3653 as well as comparison to existing Z-drive (when removed) must be referenced for lockwire configuration.

3.5.3 Inspect the new GFP unit's clutch for rust, water, or shipping damage. Technical Representative must assist in the inspection.

3.5.4 Stand the new unit upright and stabilize the cort nozzle with straps and come alongs so that it does not rotate during rigging. See Figure at end of specification, for recommended rigging.

3.5.5 Remove the clutch control system and the steering feedback boxes from the existing units and install them on the new GFP units.

NOTE

The above step is necessary because the GFP Z-drives come configured for non-tractor controlled Z-drives. This Cutter has tractor controls.

3.5.6 Turn the nozzle so that it is turning dead astern. To ensure nozzle is exactly at 180^{o}, use two plumb bobs and measure each side of the nozzle. Adjust nozzle until both readings are equal. Remove the inspection cover where the lube oil dip stick is located and punch mark the turning gear and the housing.

NOTE

The punch marks are to give the Cutter a reference point in case of a mechanical failure of the feedback boxes.

3.6 Remove existing designated unit. The Contractor must disconnect all ship service connections (electrical, pneumatic, lubrication, etc.) that will prohibit or impede vertical unshipping of the Z-drive. Tag all wires and removed hardware to ensure correct reassembly. Cap or seal all broken piping connections.

3.6.1 Remove the Cardan shaft from the Z-drive's clutch in accordance with the instructions of CG Tech Pub 3653. Rig the Cardan shaft away from the Z-drive to allow for Z-drive vertical removal.

3.6.2 Install alignment pointers and document existing state of alignment.

NOTE

This is necessary to understand any difficulties in obtaining satisfactory alignment of new Z-drives. In the past the new Z-drives would not align with existing drive shaft, and expensive drive shaft realignment was undertaken. It was not apparent if alignment problem was pre-existing or caused by the new Z-drive's introduction.

3.6.3 Unbolt the flange bolting.

3.6.4 Connect rigging to Z-drive unit, under technical representatives guidance and in accordance with the instructions of CG Tech Pub 3653. Rig the Z-drive to the pier. The Z-drive frame has padeyes permanently installed to aide rigging evolution.

3.6.5 Once the Z-drive has been removed from Z-drive well, Contractor must install temporary covers over opening for personnel safety and to prevent dust/debris/grit from entering the Cutter.

3.7 Preserve the Z-drive sea well. With the z-drive removed, Contractor must prepare and paint the interior of the sea well not normally accessible. Coordinate painting with removal/installation of sea well covers (see Figure).

3.7.1 Pre-surface preparation wash. Accomplish low-pressure (less than 5,000 psi) fresh water wash of all affected surfaces, to remove soluble chlorides and other surface contaminants. Refer to SSPC-SP 1, for guidance.

3.7.2 Surface preparation and coating application. Prepare and coat the inside surfaces of the sea well from bottom of opening to the top where mounting flange resides, with the system specified for "Underwater (U/W) Body and Boot-Top (U/W Body and Boot-Top, Icebreaker <235', in Salt Water)", in SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems).

3.7.2.1 Ensure that the first AF coat is applied over the AC undercoating, while it is still tacky.

3.7.3 Post-surface preparation cleaning and inspection. After completion of surface preparation and prior to coating application, accomplish the following tasks and submit a CIR.

3.7.3.1 Perform a visual inspection of the prepared sea well body steel substrate.

3.7.3.2 Perform solvent cleaning of all prepared surfaces, in accordance with SSPC-SP 1. Capture, contain, and dispose of all wastes from solvent cleaning, in accordance with all Federal, state and local regulations..

NOTE

Lists of all authorized coating materials and suppliers, and coating colors are listed in SFLC Std Spec 6310, Appendix C (Cutter and Boat Authorized Coatings).

The preservation specified here is intended to mirror (not alter, superced, or diminish) the requirements found in related Work Item "U/W Body, Preserve (100%)." In some cases this Z-drive Renewal Work Item may be performed without the related Work Item "U/W Body, Preserve (100%)" in the package.

3.7.3.3 Do not paint flange face (of the sea well) that the gasket seats against.

3.8 Install the new GFP Z-drive. The Contractor must connect rigging to Z-drive unit, under Tech Rep's guidance and the instructions of CG Tech Pub 3653, and rig the Z-drive from the pier onto the ship. Ensure that during final landing on the flange the gasket is not damaged.

3.8.1 Clean the flange surface in preparation for new gasket. Renew the gasket with a new Contractor furnished one, following Technical Representative's guidance and the instructions of CG Tech Pub 3653.

3.8.2 Bolt the Z-drive to the flange under technical representative's guidance and the instructions of CG Tech Pub 3653. During the bolting operation, check the Cardan shaft's alignment using laser alignment equipment and techniques. Special alignment pointers will be used in addition as second check, these pointers are provided GFE. Slight movement of the Z-drive unit may be necessary to ensure Z-drive is in proper alignment. After final torquing make final measurements of Z-drive alignment and obtain Technical Representatives concurrence that alignment is acceptable.

3.9 Run-outs. The Contractor must perform run-outs on the provided GFE alignment pointers to ensure straightness.

3.9.1 The Z-drive must be aligned by laser alignment techniques under the direction of the Technical Representatives. The pointers must be used as a second check and visual proof of proper alignment.

3.10 Piping, hoses and fluids. The Contractor must pump out the 6 to 7 gallons of storage oil from the new Z-drive unit's main pod. Dispose of oil in accordance with applicable Federal, state and local environmental regulations.

3.10.1 Connect all disturbed piping and hoses. During connection, visually inspect all hoses for wear and defects. Submit a CFR to report and discovered damage.

3.10.2 Bolt the Cardan shaft to the Z-drive unit's clutch under Tech Rep's guidance and the instructions of CG Tech Pub 3653.

3.10.3 Furnish new replacement oils conforming to the manufacturer's recommendations to the seal oil tank, the Z-drive units and to the steering hydraulic systems. Follow the procedures for renewing the Contractor-furnished oils and filters in accordance with TP-3653. The replacement oil must be filtered through a non-bypass type filter with a 10-micron filter element conforming to MIL-F-24402 during refilling.

3.10.3.1 The total amount of new oil required for this entire specification is as follows:

- Lube and Seal Oil 140 gallons. Approved oils are shown in "Approved Mineral Lubricants" table of TP-3653.

NOTE

Previously 120 gallons was advertised as correct quantity of Lube and Seal Oil. That was based on the TP 3653, but actual experience has shown the true amount is closer to the above stated 140 gallons.

- Steering Oil 92 gallons. Approved oils are shown in "Approved Mineral Lubricants" table of TP-3653.

3.11 Patch replacement. The Contractor must prepare the edges of the access opening plate (patch). Position the plate in place. Install the removed access opening plate using continuous full-penetration welds from both sides in accordance with SFLC Std Spec 0740.

3.11.1 Non-destructive test new insert welds in accordance with SFLC Std Spec 0740. Repair all weld deficiencies and retest. Submit a CFR with weld inspection results to the Coast Guard Inspector.

3.12 Addition of pneumatic pressure regulator. The Contractor must modify the existing ship's service compressed air supply (125 psig) that already provides air supply to accommodate the new pressure

reducer. The new Z-drive is delivered with a new type of clutch installed. The new clutch is designed to operate on 85 psig air supply.

3.12.1 Procure the following pressure regulator (1 for each Z-drive being renewed):

- Norgren Excelon® 74 Pressure Regulators for Compressed Air Systems and Pneumatic Control
- R74G/R Series Inline and Modular Air Line Preparation Products
- R74G-4AK-RMG (1/2 PTF threaded ports)

3.12.2 The existing air supply to Z-drives is depicted in CG Dwg 175-WLM 551-1 (sheet 3). New pressure reducer will be inserted downstream of the existing filter depicted as item 9 on drawing sheet. Contractor supply required threaded fittings to accomplish piping changes. Materials must be consistent with existing materials (CG Dwg 175-WLM 551-5).

3.12.3 During Z-drive commissioning/start-up inspect disturbed joints for air leaks and set pressure regulator to 85 psig.

3.13 Restoration. The Contractor must renew all removed/disturbed shell plating insulation in accordance with CG Dwg 175-WLM 635-1.

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, paragraph 3.1.13 (Touch-ups and minor coating repairs.)

3.15 Calibration. The Contractor, in conjunction with Coast Guard Inspector, must calibrate the actual versus the indicated azimuth position mechanical indicators throughout the entire azimuth range in accordance with TP-3653. Only Coast Guard Inspector must operate shipboard equipment.

3.15.1 Coordinate with the Coast Guard Inspector during calibration to allow for the electronic indicators in the MPCMS and MSCC systems to be also verified true and accurate.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.16 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.

3.16.1 The systems must be inspected for oil leaks prior to undocking and while Z-drive propulsion units are operationally tested.

3.16.2 Operational testing must be performed under the supervision of the Tech Rep.

4. NOTES

4.1Additional Cutter requirements. When the new clutches are introduced, besides the pressure reducer being added to provide the required 85psig air, Cutter must ensure that the required console changes and solenoid switch adjustments also occur. Contact IBCT-PL if additional information is required.

FIGURE 1. Z-DRIVE SHIPPING STAND AND SHIPPING ORIENTATION

FIGURE 2. HISTORIC Z-DRIVE LIFTING ON-OFF CUTTER PHOTOGRAPH

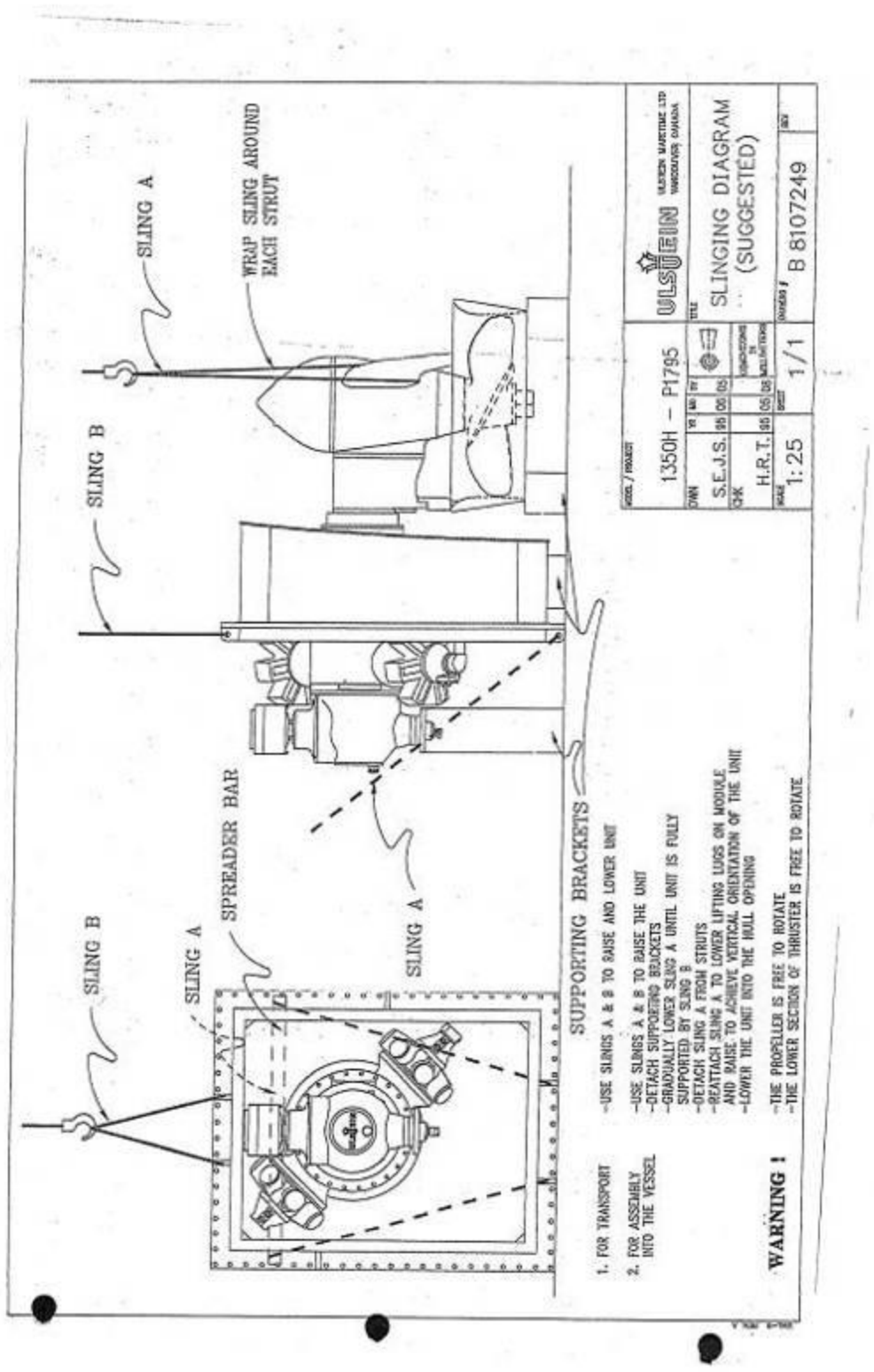


FIGURE 3. Z-DRIVE RIGGING DIAGRAM (PAGE FROM TECH PUB)

Figure, Z-drive Sea Well

Figure, Z-drive Sea Well Covers Installed

FIGURE 4. Z DRIVE SEA WELL AND COVERS INSTALLED

WORK ITEM 13: Fathometer Transducer, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew the transducer(s).

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	***Fathometer Transducer, Shallow Water, 50-200 kHz (Airmar Technology SS505)	NSN: 5845-01-470-2500	1 ea.	343.63

***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 175 WLM 184-001, Rev-, CRP-V850 Transducer Adapter Ring

COAST GUARD PUBLICATIONS

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

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

OTHER REFERENCES

Federal Specification (Fed Spec) HH-P-151, Mar 1991, Packing; Rubber-Sheet, Cloth-Insert

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).

3.1.3.1 Transducer and lines. Protect all exposed ends of transmission lines, control lines, connectors, and cables from weather, moisture, and physical damage while they are disconnected from the transducer. Take all necessary measures to protect transducer from damage during the performance of work. Inform the COR, in writing, of all damage, if any, that is incurred by the transducer.

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

3.2 Transducer renewal particulars. The Contractor must accomplish the following tasks using Coast Guard Drawing 175 WLM 184-001 for guidance:

3.2.1 Transducer removal. Disconnect and remove the existing fathometer transducers. Retain the mounting hardware for reinstallation. Dispose of the removed transducers.

NOTE

Do not discard any hull ring adapter(s). They are to be reused with the new transducer(s).

3.2.2 New transducer installation. Install new Government-furnished transducer(s), in place of the removed. Reinstall each hull ring adapter and transducer in accordance with the applicable drawing listed in Section 2 (References) using new gaskets, mold release coating, and adhesive sealants. Apply mold release aerosol coating to both adaptor orifice and transducer to facilitate future removal of the transducer from the adaptor ring.

NOTE

A piece of neoprene or a washer may need to be placed at the bottom of the hull ring adaptor to facilitate transducer and bottom of hull ring flushness.

3.2.2.1 Using chocking compound as transducer bedding material, install transducer into hull ring adaptor. After the chocking compound has cured, paint the bottom half of the hull ring adaptor and transducer in accordance with drawing notes.

3.2.2.2 Renew the transducer head to hull ring gasket with new gasket conforming to HH-P-151, Class 4. Using appropriate thickness gasket, place gasket on adaptor plate of transducer; apply ½" bead of marine adhesive on adaptor plate along the inside edge of the gasket. Install transducer flush with hull.

3.2.2.3 Reconnect each transducer cable to its terminal board in the adjacent connection box. Renew all stuffing tube packing and seals. Inspect the connection in the presence of the Coast Guard Inspector. Submit a CFR. If cable renewal is authorized via approved Change Request, cut the transducer cable to

length leaving 2-foot service loop in the cable. Ensure cables are installed in a manner to prevent any chaffing which may require new cable way clamps and stuffing tubes.

3.2.2.4 Following completion of transducer installation, fabricate a ¾" × 3" × ¼" aluminum label plate, engraved with ¼-inch high numbers stating the installation date. Affix a label plate, using suitable epoxy cement. Ensure that the label plate is visible and legible, without the need to move equipment or cables.

3.2.2.5 Thoroughly clean the transducer radiating surfaces with a strong solution of household detergent to remove any oil, dirt, and all other surface contaminants.

3.3 Transducer seal. If not waterborne, the Contractor must inspect the transducer to ensure that its outer circumference is installed flush to the hull ring and the transducer cover plate forms a tight seal with the hull ring. Submit CFR.

3.4 Post installation tests. After completion of work, the Contractor must accomplish the following tasks, in the presence of the Coast Guard Inspector:

3.4.1 Preliminary leak test. If not waterborne, inspect and perform a water hose test of all affected boundaries in accordance with SFLC Std Spec 0740, Appendix C. If waterborne, slowly back off the emergency cover plate bolts and allow seawater to flood the transducer well. No leakage allowed. Submit a CFR.

3.4.2 Not waterborne. Replace the hull ring set screws with new Monel fasteners, coating the threads with anti-seize compound. Recess the set screws ⅛" and cover with beeswax tallow.

3.4.3 Waterborne. Using a diver, remove and retain the hull ring set screws. Install an emergency cover plate and gasket over the transducer to be renewed. If available, the vessel's emergency cover plate may be used; otherwise a new cover plate must be fabricated and turned over to the vessel at the completion of the work.

3.4.3.1 Slowly back off the fasteners that normally maintain the transducer pressure boundary to sea. Ensure that any leakage through the emergency cover plate pressure boundary is minor prior to proceeding with transducer removal.

3.4.3.2 Upon completion of work and preliminary leak testing, completely remove the emergency cover plate. Clean all vacated tapped holes of anti-seize compound and beeswax tallow. Chase all threads. Install new Monel set screws in each hull ring, coating the threads with anti-seize compound. Recess the set screws ⅛" and cover with beeswax tallow.

3. 5 Leak repairs. The Contractor must observe each transducer for leaks during the vessel re-floating process (if dry docked) or emergency cover plate removal (if waterborne). Repair all leaks detected. Submit a CFR.

3.6 Operational test – post repairs. After completion of work, the Contractor must thoroughly test and prove the transducer(s) to be in satisfactory operating condition. Submit a CFR.

4. NOTES

4.1 Operation of equipment. Coast Guard personnel will operate all shipboard machinery and equipment.

WORK ITEM 14: Underwater Speed Log, Transducers, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew the designated underwater speed log transducers.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
Y	***Sperry SRD 500 Doppler speed log	NSN: 5999-01-472-7499	1 ea.	16504.43

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

2. REFERENCES

COAST GUARD DRAWINGS

None.

COAST GUARD PUBLICATIONS

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

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

Coast Guard Technical Publication (TP) 3446, Jun 2009, Doppler Speed Log, Model SRD-500 Dual Axis

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):

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).

3.1.3.1 Protect all exposed connectors and cables from weather, moisture, and physical damage while they are disconnected from the underwater log transducer.

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

3.2 Underwater log transducer removal. The Contractor must disconnect and remove the existing Sperry SRD 500 Doppler speed log, using TP 3446 as guidance. Turn over the Doppler speed log to the Coast Guard PA as a MTI item.

3.3 New underwater log transducer installation. The Contractor must install new Government-furnished underwater log transducer and remake all electrical connections.

3.4 Post installation tests. The Contractor must accomplish the following tasks after completion of work, in the presence of the Coast Guard Inspector:

3.4.1 Water hose test. If not waterborne, inspect and perform a water hose test of all affected boundaries in accordance with SFLC Std Spec 0740, Appendix C. Submit a CFR.

3.4.2 Static head test. While waterborne, inspect the underwater log transducer penetration for leakage. Repair all leaks. Submit a CFR.

NOTE
Coast Guard personnel will operate all shipboard

3.4.3 Operational test – post repairs. While underway after completion of work, witness an operational test of the new underwater log transducer to demonstrate that it is operating satisfactorily. Submit a CFR.

4. NOTES

4.1 Operation of equipment. Coast Guard personnel will operate all machinery and equipment.

WORK ITEM 15: Sea Valves and Waster Pieces, Overhaul Or Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to overhaul or renew sea water (hull) valves and Waster Pieces.

1.1.1 Valves designated for overhaul.

TYPE	SIZE (inches)	DESCRIPTION	FRAME NO. VALVE NO.	PRESSURE (psig)
Gate	8"	Stbd Strainer In	MSW-V-3-69-1	50
Gate	8"	Port Strainer In	MSW-V-3-69-2	50
Gate	8"	Stbd Strainer Out	MSW-V-3-69-3	50
Gate	8"	Port Strainer Out	MSW-V-3-69-4	50
Gate	6"	Port Sea Chest Rn	ASW-V-2-70-2	50
Globe	6"	Stbd Sea Chest Rn	ASW-V-2-70-1	50
Globe	5	#1FP Ovbd Dschg	FM-V-4	125
Check	5	#1FP Ovbd Dschg	FM-V-2-66-1	125
Gate	6	#1FP Suction	FM-V-3-67-2	125
Gate	6	#2FP Suction	FM-V-3-81-2	125
PSI Reg Vlv	4	#2FP Ovbd Dschg CkVlv	FM-V-2-84-1	125
PSI Reg Vlv	4	#1FP Back Psi Ovbd Dschg Vlv	FM-V-2-65-3	125
Check	4	#1FP Back Psi Ovbd Dschg Chk Vlv	FM-V-30	125

1.1.2 Valves designated for renewal.

TYPE	SIZE (inches)	DESCRIPTION	FRAME NO. VALVE NO.	PRESSURE (psig)
Gate	3”	#1 MDE Suction	V127-3	50
Gate	3”	#2 MDE Suction	V127-1	50
Butterfly	3”	ASW Suction	V659-1	50
Gate	2.5	#1 SSDG Suction	V126-2	50
Gate	2.5	#2 SSDG Suction	V126-1	50
Gate	2.5	#3 SSDG Suction	V126-3	50
Check	2	Z-Drive Ovbd Dschg	ASW-V-30	150
Gate	2	Z-Drive Ovbd Dschg	ASW-V-2-88-1	150
Gate	1 ¼	HP3&4 Ovbd Dschg	ASW-V-2-85-1	150
Check	1 ¼	HP3&4 Ovbd Dschg	V723-1	150
Gate	2	HP1&2 Ovbd Dschg	ASW-V-2-61-14	150
Check	2	HP1&2 Ovbd Dschg	ASW-V-34	150
Check	1”	ASW Ovbd	V723-2	150
Gate	1”	HPU Cooler Dschg	ASW-V-2-24-1	400
Gate	3	#2FP Ovbd Dschg Vlv	FM-V-4	125
Gate	3	Mn Drain Ovbd FR20	MD-V-2-20-2	150
Check	3	Mn Drain Ovbd Chk FR20	1-MD-V-2	150
Gate	3	Mn Drain Ovbd FR65	MD-V-2-62-2	150
Check	3	Mn Drain Ovbd Chk FR65	2-MD-V-2	150
Gate	3	Mn Drain Ovbd FR84	MD-V-V-2-81-1	150
Check	3	Mn Drain Ovbd Chk FR84	2-MD-V-13	150
Check	3	Mn Drain Ovbd Chk FR90 STBD	3-MD-V-2	150
Gate	3	Mn Drain Ovbd FR90	MD-V-2-88-1	150
Check	2	CHT Ovbd	CHT-V-2-83-2	150
Globe	2	CHT Ovbd/Tnk 3Way	CHT-V-13	150
Gate	2	CHT Ovflw Disch Check Vlv	TV-V-16	150

Check	2	GW Pmp OB Disch Gag Scupper	WD-V-2-86-3	150
Globe	2	GW OB Disch COV	WD-V-2-86-1	150
Globe	2	Grey Wtr Ovbd/Tnk 3Way	WD-V-2-88-4	150
Globe	2	Grey Wtr Ovbd/Tnk 3Way	WD-V-2-88-2	150
Check	2	Grey Wtr Overboard	WD-V-2-91-2	150
Gate	3/4	OWS Ovbd Dschg	OW-V-2-62-1	150
Check	¾	OWS Ovbd Dschg Ck Vlv	OW-V-24	150

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM 256-001, Rev H, Seawater Cooling System Diagram

Coast Guard Drawing 175-WLM 256-003, Rev A, Seawater Cooling System, Fr 61 Fwd Blocks 910, 920, 930

Coast Guard Drawing 175-WLM 256-004, Rev J, Seawater Cooling System A & D, Hull Blks 940-970

COAST GUARD PUBLICATIONS

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

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

OTHER REFERENCES

American Society of Mechanical Engineers (ASME) B16.34, 2017, Valves-Flanged, Threaded, and Welding End

ASTM International (ASTM) F992, 2017, Standard Specification for Valve Label Plates

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-61, 2013 Edition, Pressure Testing Of Steel Valves

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-67, 2017 Edition, Butterfly Valves

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-72, 2018 Edition, Ball Valves with Flanged or Butt-Welding Ends for General Service

3. REQUIREMENTS

3.1 General.

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

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 below-listed:

- Deck plates
- Piping
- Insulation
- Pipe contents
- Associated system tanks and filters
- Valve flanges.

3.2 Valve material. The Contractor must assume all above-listed valves (paragraphs 1.1.1 and 1.1.2) have a bronze housing and flanged connections for the purposes of bidding. The Contractor must verify required valve list against referenced drawings and by ship-check prior to purchasing any materials. If the actual required valve list differs from what is listed in this work item, submit a CFR.

3.3 Fluid handling. The Contractor must drain and dispose of all residual fluids in the piping system in accordance with all Federal, state, and local rules and regulations.

3.4 Remove. The Contractor must remove all designated valves in Section 1.1 (Intent). Immediately after valve removal, 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; submit a CFR.

3.5 Contractor’s option for valve renewal. The Contractor may, at no additional cost to the Government, opt to renew valves designated for overhaul if preferable for the Contractor. If the Contractor elects to renew valves designated for overhaul, ensure all new valves are commercial-standard type valves, conforming to the applicable standard listed in Table 1 (Valve Standards). New valves must be equivalent (including identical material) to the valve being renewed. Visually inspect the piping, flange and mounting arrangements; and submit a CFR detailing any required modifications to accommodate the new valve(s). If the Contractor elects to renew a valve after attempting overhaul, if will be at no additional cost to the Government.

NOTE

This work item requires the Contractor to provide to the Government installed valves meeting the designated test requirements. This work item includes the cost of EITHER overhaul OR renewal of each designated valve.

3.6 Overhaul. The Contractor must accomplish the following as required for each valve designated for overhaul (not including valves the Contractor has opted to renew) to meet the specified valve testing standard:

3.6.1 Disassemble. The Contractor must disassemble the valve to the extent necessary to perform the required work.

NOTE

Complete disassembly of some valves may not be necessary to accomplish overhaul.

3.6.2 Clean. The Contractor must clean all internal surfaces and visually inspect for defects in body and structural material. Inspect the surface finish and condition of seats, disks, parting faces, plugs, and sealing surfaces.

3.6.3 Machine. The Contractor must conduct all machining necessary, including but not limited to grind, lap and spot-in seat-to-disk, in order to obtain an acceptable leakage rate at or below valve testing standards (see Table I below).

3.6.4 Reassemble. The Contractor must reassemble the valve using new hardware and software (packing, O-rings, gaskets, seal rings, non-metallic seats, pins, washers, inserts, etc.).

3.6.5 Test. The Contractor must test the overhauled valves in accordance with the applicable standards listed in Table 1 (Valve Standards). Submit a CFR.

TABLE 1 - VALVE STANDARDS

VALVE TYPE	INDUSTRY STANDARD
Steel Valves	MSS SP-61
Butterfly Valve	MSS SP-67
Ball Valves, Flanged or Butt-Welded Ends	MSS SP-72
Bronze Gate, Globe, Angle and Check Valves	MSS SP-80
All others	ASME B16.34

3.7 Renewal.

3.7.1 Valve renewal. The Contractor must renew all designated with commercial-standard type valves, conforming to the applicable standard listed in Table 1 (Valve Standards). The Contractor must replace any Mil-Std valves listed for renewal with equivalent commercial standard valves. The Contractor must be aware substitution of body material or trim set is not authorized.

3.7.2 Waster piece inspection. The Contractor must visually inspect all waster pieces associated with the valves specified for overhaul and/or renewal listed in paragraph 1.1 (Intent), as applicable. Evaluate the

percentage of remaining material for each waster piece and submit a CFR. Renewal of waster pieces may be the subject of a CR.

3.8 Valve reinstallation/installation. Upon completion of all authorized work, the Contractor must accomplish the following:

- Remove and dispose of all blank flanges and associated gaskets.
- Reinstall/install all overhauled and new valves with new gaskets.
- Renew all missing or damaged valve label plates.
- Renew all bolting hardware.
- 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).

3.9 Valve labeling. The Contractor must install valve label plates on all new valves in accordance with ASTM F992.

3.10 Leak test. After completing all authorized mechanical (i.e. threaded, bolted, etc.) joint repairs, the Contractor must test the effected seawater 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.

3.11 Hydrostatic test. After all authorized repairs, the Contractor must hydrostatically test all new and disturbed piping and components of the effected seawater 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.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 16: Sea Bay, Clean and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the Sea Bay System.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 256-004, Rev J, Sheets 5 and 13, Seawater Cooling System A & D, Hull Blocks 940-970

Coast Guard Drawing 175 WLM 256-013, Rev -, Sea Bay Thermometer Installation

Coast Guard Drawing 175 WLM 505-003, Rev A, Sea Connection Arrangements

Coast Guard Drawing 175 WLM 633-001, Rev D, Cathodic Protection

COAST GUARD PUBLICATIONS

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

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

OTHER REFERENCES

ASTM International (ASTM) D1330, 2004, Standard Specification for Rubber Sheet Gaskets

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

Paragraph 3.2.3 "Inspections".

3.1.2 Tech Rep.

Not applicable.

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). Known interferences include, but are not limited to the below-listed:

- Seawater piping.
- Chlorinator unit.
- Temperature sensor.

3.1.5 Piping isolation. If this item is scheduled to be accomplished while the cutter is pier side, the Contractor shall submit a piping isolation plan to the COTR, within 24 hours before work is begun, Upon approval of isolation plan, then proceed with isolating the piping system.

NOTE

Piping isolation is required to prevent compartment flooding. Additionally, due to space limitations, it may be necessary to remove/reinstall piping to facilitate access.

3.2 Requirements. The Contractor shall accomplish the following tasks:

3.2.1 Content removal. Remove the manhole cover and drain all fluids within the sea bay and the associated piping. Dispose of all removed fluids in accordance with all applicable Federal, state, and local regulations.

3.2.2 Cleaning.

3.2.2.1 Clean all interior surfaces of the sea bay (including all accessible interior and exterior piping surfaces) to completely remove all visible marine growth, loose rust, loose mill scale, loose coatings, and other foreign materials such as sediment or sludge. Remove all persistent residues, taking care not to damage the coating system.

3.2.2.2 Remove cleaning media and residues continuously from the sea bay during the washing process. Remove all residual wash media and wipe up residual moisture with clean cloths. Collect, contain, and dispose of all wash media, residues, and cleaning materials in accordance with all Federal, state, and local regulations.

3.2.2.3 After cleaning, visually inspect all sea bay and associated piping surfaces; submit a CFR .

3.2.2.4 Renew all disturbed gaskets and seals.

3.2.3 Inspection. Visually inspect all sea bay interior surfaces and manhole cover surfaces for damage and deterioration; and submit a CIR, to include but not be limited to, the following:

- Degree of fouling; quantity of marine growth present.

- Structural condition.
- Condition of manhole cover (to include fasteners and gasket seating surfaces).
- Piping condition.
- Coating system condition.
- Inaccessible areas, if any.
- Percent deterioration of zinc anodes.

3.2.3.1 Ultrasonic thickness (UT) measurement. The Contractor shall take a total of 50 UT measurements in accordance with SFLC Std Spec 0740, Appendix C in locations designated by the Coast Guard Inspector and using Coast Guard Drawing listed in Section 2 “References” as guidance. Submit a CIR.

3.2.3.1.1 In addition to the UT measurements, take a total of 40 pit-depth measurements, using a suitable pit depth gauge

3.3 Sea bay closing. After all authorized repairs, in the presence of the Coast Guard Inspector, the Contractor shall reinstall the sea bay manhole cover with new gasket material conforming to ASTM D1330.

4. NOTES

4.1 Location. The Sea Bay is located centerline in the Engine Room, at Frame 68 – as shown on Coast Guard Drawing 175 WLM 633001, Sheet 3; and has one access - an 18" x 15" manhole on the top; dimensions are approximately 40" longitudinally, 72" transversely, and 33" vertically..

WORK ITEM 17: Sea Bay, Preserve 100%

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to preserve 100% of the interior surfaces of the Sea Bay (See Section 4.1 (Location)).

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 256-004, Rev J, Sheets 5 and 13, Seawater Cooling System A & D, Hull Blocks 940-970

Coast Guard Drawing 175 WLM 256-013, Rev -, Sea Bay Thermometer Installation

Coast Guard Drawing 175 WLM 505-003, Rev A, Sea Connection Arrangements

Coast Guard Drawing 175 WLM 633-001, Rev D, Cathodic Protection

COAST GUARD PUBLICATIONS

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

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

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2020, Temporary Hull Accesses

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 - 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). Known interferences include, but are not limited to the below-listed:

- Seawater piping.
- Chlorinator unit.
- Temperature sensor.

3.1.5 Temporary access openings. With express permission of the KO via submission of a CFR and in accordance with SFLC Std Spec 8636, the Contractor may perform all work required to cut open and close temporary access openings to facilitate accomplishment of the work specified herein.

3.2 Sea Bay and piping preservation. The Contractor shall prepare and coat all interior surfaces of the Sea Bay, including all accessible associated piping, using the coating system specified for "Underwater Water (U/W) Body and Boot-Top (U/W Body and Boot-Top, Icebreaker <235', in Salt Water)", in SFLC STD SPEC 6310, Appendix A (Cutter and Boat Exterior Painting Systems).

3.3 In-process quality control measures. The Contractor shall 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).

NOTE
Surfaces being preserved are considered "critical-coated surfaces".

4. NOTES

4.1 Location. The Sea Bay is located centerline in the Engine Room, at Frame 68 – as shown on Coast Guard Drawing 175 WLM 633001, Sheet 3; and has one access - an 18" x 15" manhole on the top; dimensions are approximately 40" longitudinally, 72" transversely, and 33" vertically.

WORK ITEM 18: Anchor Windlass, Inspect And Service

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and service the double wildcat and double gypsy hydraulic anchor windlass assembly.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	Anchor Windlass Overhaul kit	NSN: 5430-01-546-4684	1 ea.	12,474.00
N	Ball Valve	NSN: 4820-01-013-3430	1 ea.	87.36
N	Valve, Counterbalance	NSN: 4820-01-F16-4571 PN: CBEH-LKN-BCL Sun Hydraulics Corp	1 ea.	354.00
N	** Motor, Hydraulic	NSN: 4320-01-419-3520	1 ea.	1,811.00
N	** Valve, Linear, Directional Control	NSN: 4810-01-511-3173	1 ea.	983.14
N	Hydraulic Brake	NSN: 2530-01-F14-4033 P/N: 90B3C4G087	1 ea	2000.00

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

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 581-001, Rev F, Anchor Handling System

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3631, Section 581-A, Sep 2013, Manufacturer's Instruction Book-SWBS Groups 573-581, Anchor Windlass

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

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in Table 1:

- Task# 1
- Task# 2

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall 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 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). Known interferences include, but are not limited to the below-listed:

- Port and starboard anchors (remove at the swivel shot).
- Port and starboard anchor chains.

NOTE

Each anchor weighs 2,250 pounds and each chain is 1-1/8 inch Stud-Link, Grade III with a length of 7 shots.

3.2 Inspection and service particulars. The Contractor shall perform the tasks designated in Table 1 below, using Coast Guard Drawing 175 WLM 581-001 as guidance.

TABLE 1 – RECURRING MAINTENANCE 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	Anchor Windlass Assembly	3.2.1 (Operate and Inspect)	Submit A CIR.
2	Disassemble and Inspect	1	Anchor Windlass Assembly	3.2.3 (Disassemble and inspect)	Disassembly includes, but is not limited to the following: • Hydraulic Motor. • Band Brake Handwheel, Bevel Gear Box, and Linkage Assemblies up the Band Brake Assembly • DCV assembly. • Hydraulic Brake.

#	TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
					• Primary Reducer. • Worm Reducer. • Counterbalance Valve • Band Brake Assembly. • Band Brake Lining. • Wildcat. • Main Gypsy/Capstan Shaft Assembly. Submit A CIR.
3	NDE	1	Anchor windlass assembly and foundation	3.2.5 (NDE)	Weld joints to NDE: all joints attaching winch foundations to deck.
4	Reassemble	1	Anchor Windlass Assembly		Reassemble anchor windlass assembly with provided GFP – see 1.2 (Government-furnished property).
5	Renew	All	Snap Rings, Thrust Buttons, O-Rings, Gaskets, Keys, Shims, Lockwashers, Dowel Pins, Thrust Washers, Cotter Pins, Clamp, Grease Fittings, Foundation Bolts Washers And Nuts .	N/A	Perform all renewals during reassembly and reinstallation, in accordance with TP-3631, Section 581-A.
6	Renew	1	Counterbalance Valve	C2.4 (Valves and manifolds)	GFP.
7	Preserve	1	Anchor windlass assembly and foundation	3.2.4 (Preservation)	
8	Renew	7.75 Gallons	Worm Reducer and Primary Reducer Oil	D2.4 (Open gearing and gear reducers)	See TP-3631, Section 581-A.
9	Groom and Lubricate	1	Anchor Windlass Assembly	3.2.6 (Groom and Lubricate)	
10	Final Op Test	1	Anchor Windlass	B2.5 (Anchor Windlass)	Submit CFR.
11	Fabricate and Install	1	Label plate	B2.9 (Label plate)	System: Anchor Windlass

3.3 Additional maintenance requirements. The Contractor shall perform only the additional tasks (s) marked with an "X" in Table 2 below.

TABLE 2 – ADDITIONAL MAINTENANCE REQUIREMENTS

#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
	Renew	1	Hydraulic Motor		GFP
X	Renew	1	Directional Control Valve assembly		GFP
	Renew	1	Main Shaft		
X	Renew	All	Hoses	C2.2 (Hose Assemblies)	

4. NOTES

4.1 Overhaul kit contents. Listed below is breakdown for the Anchor Windlass Assembly Overhaul Kit (NSN: 5430-01-546-4684):

Item #	Part #	Description	Qty	UOM
1	J194467	SEAL, SHAFT	1.00	EA
2	J20A1030	SEAL KIT,	1.00	EA
3	J20A0052	BALL BEARING,	1.00	EA
4	J20A0053	NEEDLE BEARING HYD MOTOR, HYDRAULIC	1.00	EA
5	J20A0151	SEAL KIT,HYDRAULIC MOTOR,	1.00	EA
6	J20A0054	SPRING KIT HYD MOTOR, HYDRAULIC MOTOR	1.00	EA
7	J194480	O-RING	1.00	EA
8	J20C0061	SEAL KIT, FOR HYDRAULIC BRAKE,	1.00	EA
9	J194481	GASKET	1.00	EA
10	J20B0027	DISC KIT HYD MOTOR BRAKE, ESKRIDGE BRAKE	1.00	EA
11	J194822	MASTER REPAIR KIT	1.00	EA
12	J20C1046	BEARING, REDUCER,	2.00	EA
13	J20C0057	TAPERED ROLLER BEARING CONE, TAPERED	2.00	EA
14	J20C0006	OIL SEAL,, CONE DRIVE GEAR PART NO:,	1.00	EA
15	J20C0144	BEARING CUP,	2.00	EA
16	J20C0145	BEARING CONE,	2.00	EA
17	J20C0009	OIL SEAL 356W525,	2.00	EA
18	JA2005500	THRUST WASHER, 5.00 OD X 3.25 ID X .25	2.00	EA
19	JA2024300	BUSHING, WILDCAT, 3.75 OD X 3.255 ID X	4.00	EA
20	JA2036700	THRUST WASHER, 1.75 OD X 1.031 ID X 0.25	2.00	EA
21	JA2036601	PIN, BRAKE, 4.50 LG,SST 304, ,	2.00	EA
22	JA2001401	BRAKE NUT, 2.5 DIA X 3.0 LG,BRONZE, 660	2.00	EA
23	JD2002402	LINING, BRAKE NONASBESTOS, 0.38 X 4.00 X	2.00	EA
24	J11C0034	RIVETS, BRASS, SEMI TUBE, .19 DIA X 0.75	104.00	EA
25	J07B1003	VALVE, CARTRIDGE,	1.00	EA
26	J17E0072	SEAL KIT, COUNTERBALANCE VALVE, (PORT A)	1.00	EA
27	J20D0013	HYD CONTROL VALVE SEAL KIT,	1.00	EA

FIGURE 5. OVERHAUL KIT CONTENTS

WORK ITEM 19: Anchor Chains and Ground Tackle, Inspect and Repair

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform inspection, preservation and repairs to the anchor chain assemblies (port and starboard), including associated ground tackle.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 581-001, Rev F, Anchor Handling System Arrangement

COAST GUARD PUBLICATIONS

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

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

OTHER REFERENCES

American Bureau of Shipping (ABS) Approved Chain, Accessory and Bar Manufacturing Facilities List, Oct 2016

Federal Specification (Fed Spec) RR-C-271, Rev E, Mar 2016, Chains and Attachments, Carbon and Alloy Steel

MIL-DTL-23549, Sep 2016, Grease, General Purpose

MIL-C-24633, Oct 2014, Chain, Stud Link, Anchor, Low Alloy Steel, Flash Butt Welded

The Society for Protective Coatings (SSPC)/NACE International (NACE) Joint Surface Preparation Standard SSPC-SP 6/NACE No. 3, 2007, Commercial Blast Cleaning

The Society for Protective Coatings (SSPC) Surface Preparation Specification No. 1 (SSPC-SP 1), 2015, Solvent Cleaning

3. REQUIREMENTS

3.1 General.

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

- 3.2.3 (Inspections).

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:

- Port and starboard anchors.

3.2 Required work particulars. The Contractor must use the chain description (see 4.1 (Component characteristics)) and Coast Guard Drawing 175 WLM 581-001 for guidance, for accomplishing the tasks specified below for each anchor chain assembly.

3.2.1 Removal. Disconnect and remove the anchor and anchor chain assembly and fake out the chain on the drydock floor or in a suitable location, to facilitate the performance of the tasks specified herein.

NOTE

The use of Coast Guard equipment (e.g. anchor windlass) for off-loading and on-loading of anchors and anchor chain is authorized. Coast Guard personnel will operate all Government equipment.

3.2.2 Pre-inspection surface preparation.

3.2.2.1 Pressure wash the anchor, anchor chain and other components with fresh water and a fire hose to remove any mud, salts, or other contaminants adhering to the chain

3.2.2.2 Prepare the anchor and all shots of chain to a “Commercial Blast” standard, in accordance with SSPC-SP 6.

3.2.3 Inspections. Perform the following inspections and submit a CIR:

3.2.3.1 Visual inspection. Visually inspect the following:

- All swivels, outboard swivel shots, pelican hook and shackles, and cats paw (if applicable).
- Entire length of Shot 1, Shot 2, Shot n-1, and Shot n.

NOTES

1. For the purpose of reference in this item, the shots will be referred to by numbers. Mark each shot with a removable tag. Moving inboard from the anchor, the shots will be referred to as follows: ANCHOR, Shot 1, Shot 2, Shot 3...Shot n-2, Shot n-1, Shot n, and BITTER END. These shot numbers are designated in the order existing prior to work, and will not change - although the shot order itself will change.

2. Number n in the paragraph above is equal to the number of shots per chain.

3.2.3.2 Measurements – and condemning criteria.

3.2.3.2.1 Determine the suitability for continued service of the anchor chain assembly, by checking wire diameter dimension, using information provided in Table I (Dimensions for Condemning Anchor Chain) as guidance, as applicable. Gage the wire diameter of ten links per shot of chain, ensuring that each link must be separated by approximately 10% of the shot length.

NOTE

For commercial grade chain, use 90 percent of the link diameter for condemning criteria.

3.2.3.2.2 If a Change Request has been released, perform six-link dimension, as specified in "Note 2" in Table I (Dimensions for Condemning Anchor Chain).

NOTE

Change Request will only be authorized to perform six link inspection only if ship's force has reported that the anchor chain has been jumping the capstan.

TABLE 1 - DIMENSIONS FOR CONDEMNING ANCHOR CHAIN

SIZE OF CHAIN (INCHES)	90 PERCENT OF LINK DIAMETER(1) (INCHES)	SIX-LINK DIMENSION(2) (INCHES)
1	0.90	26-3/4
1-1/8	1.013	30-1/16
1-1/4	1.125	33-7/16
1-3/8	1.238	36-3/4
1-1/2	1.35	40-1/8
1-5/8	1.463	43-7/16
1-3/4	1.575	46-13/16
1-7/8	1.688	50-1/8
2	1.80	53-1/2
2-1/8	1.913	56-13/16
2-1/4	2.025	60-3/16
2-3/8	2.138	63-1/2
2-1/2	2.25	66-7/8
2-5/8	2.363	70-3/16
2-7/8	2.475	73-9/16
3	2.558	76-7/8

1. Use a micrometer, caliper or GO/NO-GO gage* to check wire diameter dimension. Gage is to be made by Contractor/repair facility in accordance with the dimensions shown in Table 1 above. Check the diameters at right angles to the link. When measuring with a micrometer or caliper take one-half the sum of the two diameters as representing the line diameter.

2. Take six-link measurements with a load applied to the chain in order to take all slack out of the chain. Use a bar gauge to check the six-link dimension. When the gauge will not fit over six links, the chain has been stretched beyond allowable limit. Measure six links for the entire length of each shot, measuring from every third link.

***When using a GO/NO-GO gage, a failed check is to be verified by measuring with a micrometer or caliper. Measure the diameter at right angles and take one-half the sum of the two diameters as representing the link diameter. Take measurements on clean, bare metal.**

3.2.4 Detachable link assemblies maintenance.

NOTE

Detachable link components are not interchangeable.

3.2.4.1 Renew all detachable taper pin and link assemblies and associated link plugs.

3.2.4.2 Assemble detachable links, swivels and shackles; and repack with molybdenum disulfide grease (MIL-DTL-23549).

3.2.4.3 Change the relative position of the shots, as designated by the Coast Guard Inspector, to distribute the wear on the chain, ensuring that shot must be rotated end for end upon reinstallation, as follows: ANCHOR, Shot 3... Shot n-2, Shot n-1, Shot n, Shot 1, Shot 2, BITTER END.

3.2.4.4 Renew shackle at bitter end of chain.

3.2.5 Chain renewal. If a Change Request has been released, renew designated section of chain with material conforming to MIL-C-24633. See paragraph 4.2 (Supply Information).

3.2.6 Surface coating. Using the coating system specified for "Anchor/Anchor Chain" in SFLC Std Spec 6310, Appendix A (Cutters and Boats Exterior Painting Systems), do the following:

3.2.6.1 Perform solvent cleaning of all surfaces specified to be coated (see below), in accordance with SSPC-SP 1.

3.2.6.2 Coat the anchor and all shots of chain Black (17038).

3.2.6.3 Color-coat the following shots:

- Shot n-1: Black (17038).
- Shot n: Black (17038).
- Shot 1: Yellow (13538).
- Shot 2: Red (11105).

3.2.6.4 Color coat/mark all detachable links, adjacent chain links, shackles, and swivels as follows and in accordance with attached Figure "Painting and Markings On Mooring Chain".

3.2.6.4.1 Remove all existing stainless steel wire prior to the installation of new markings.

3.2.6.4.2 Paint first shot detachable link (15 fathom mark) red (11105).

3.2.6.4.3 Paint second shot detachable link (30 fathom mark) white (17925).

3.2.6.4.4 Paint third shot detachable link (45 fathom mark) blue (15182).

3.2.6.4.5 Repeat pattern of red, white and blue for all subsequent detachable links up to the next to last shot.

3.2.6.4.6 The first link on each side of the 15 fathom detachable link must be painted white (17925). The first link at each side of the detachable link must also be marked by one turn of stainless steel wire around the stud. The first two links on each side of the 30 fathom (second shot) detachable link must be painted white (17925). The second link at each side of the detachable link must also be marked by two turns of wire around the stud. Repeat pattern for all subsequent shots up to the next to last shot.

3.2.7 Chain restowing. When directed by the Coast Guard Inspector, reassemble the anchor and anchor chain; restow the anchor chain in its chain locker, free for running, with the anchor properly housed and secured with the chain stopper set.

3.2.7.1 Lead the bitter ends down and through the deck bolts in the chain locker and secure to the chain locker pad eye.

3.2.7.2 Back out the chains to ensure the chain stopper is set properly.

3.2.7.3 Ensure that:

- the bitter ends of the chain are securely fastened in the chain locker with new bitter end shackles, conforming to Fed Spec RR-C-271, Type IV-A, Class 3, Grade A.
- the ground tackle is kept ready for use.
- nothing interferes with a readiness to veer or slip the anchors.
- the detachable links located just inboard of the riding stopper and the detachable link tool set are readily accessible for use in slipping the anchor chains in an emergency.
- the anchor has a crown buoy attached, with sufficient length of rope to facilitate indicating the depths of water in which moored.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.3 Operational test, post repairs. After completion of work, the Contractor must, in the presence of the Coast Guard Inspector, thoroughly test the anchor chain assembly to prove satisfactory operating condition, by releasing the chain stoppers and lowering both anchors under power to the drydock floor (or waterline, as applicable), letting out one additional shot, and raising again to ensure chains run on the wildcats without binding.

3.3.1 Correct any discrepancies, house the anchors and set the anchor chain pelican hooks.

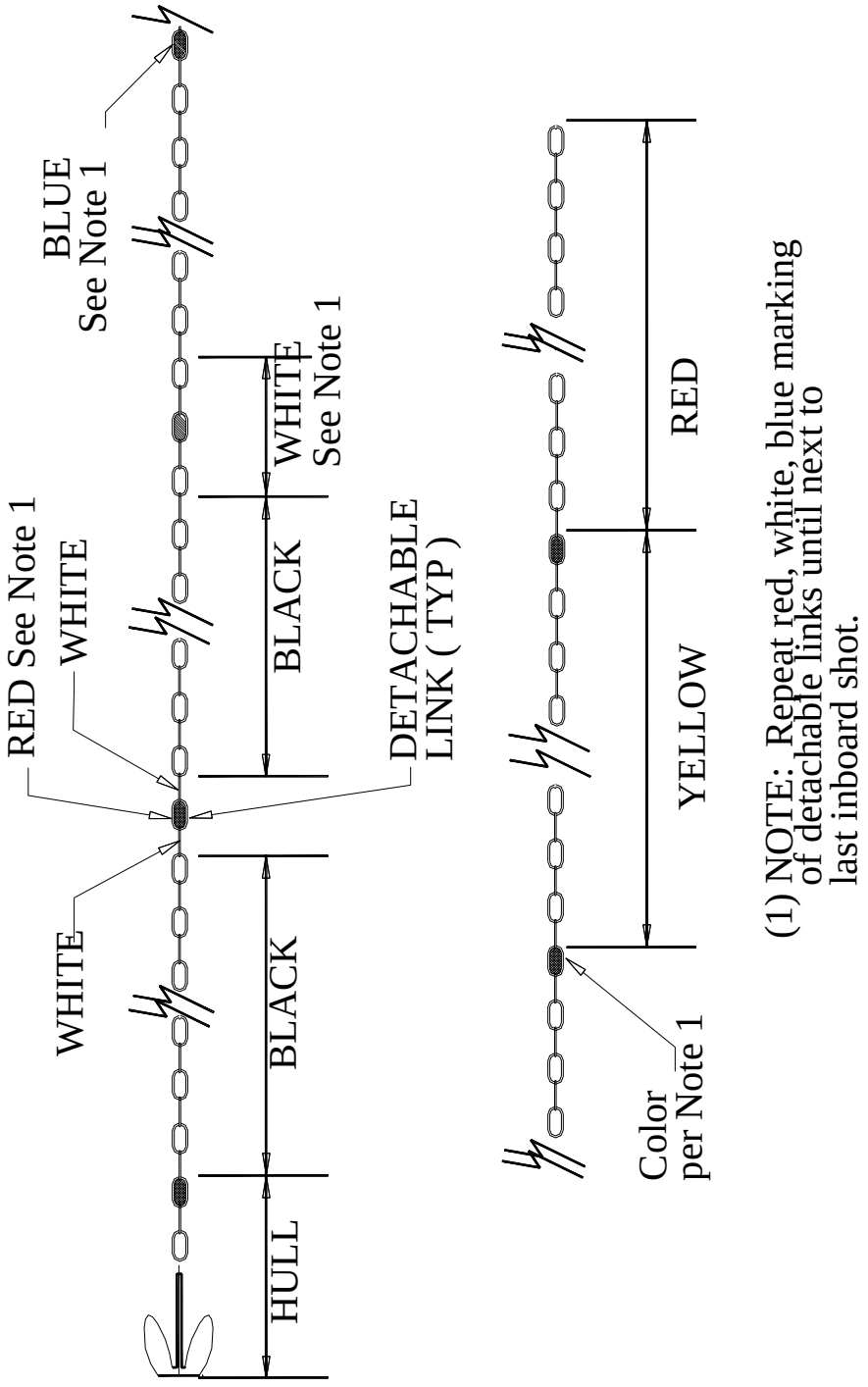
3.3.2 Submit a CFR.

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 Component characteristics. Each anchor weighs 2,250 pounds and each chain is 1-1/8 inch Stud link, with a length of 7 shots. All shots of anchor chain include the corresponding detachable link(s).

PAINTING AND MARKINGS ON MOORING CHAIN



(1) NOTE: Repeat red, white, blue marking of detachable links until next to last inboard shot.

4.2 Supply information. An ABS approved list of chain manufacturers may be found at the following website: http://ww2.eagle.org/en/rules-and-resources/approved-manufacturers-and-products.html

WORK ITEM 20: Hull Fittings (Mooring and Towing), Inspect and Test

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect the below designated hull fittings:

QTY	DESCRIPTION	LOCATION	APPLICABLE REFERENCE
1	Chock, Deck Mounted, (PanamaType) 12" x 10"	Focsle Deck, Forpeak, CL	Coast Guard Drawing 175 WLM 582
2	Chock, Deck Mounted, (PanamaType) 12" x 10"	Focsle Deck, Forpeak, P/S	Coast Guard Drawing 175 WLM 582
2	Bitt, Double, 12"	Focsle Deck, Frame 0, P/S	Coast Guard Drawing 175 WLM 582
1	Pad Eye, 1-1/2" (for Towing)	Focsle Deck, Frame 5, CL	Coast Guard Drawing 175 WLM 582
2	Chock, Roller Button, 16"	Focsle Deck, Frame 10, P/S	Coast Guard Drawing 175 WLM 582
2	Bitt, Double, 12"	Focsle Deck, Frame 12, P/S	Coast Guard Drawing 175 WLM 582
2	Chock, Deck Mounted, (PanamaType) 12" x 10"	Focsle Deck, Frame 15, P/S	Coast Guard Drawing 175 WLM 582
2	Bitt, Double, 8"	Buoy Deck, Frame 42, P/S	Coast Guard Drawing 175 WLM 582
2	Chock, Closed Railing, 6" x 12"	Buoy Deck, Frame 45, P/S	Coast Guard Drawing 175 WLM 582
1	Bitt, Double, 12"	01 Deck, Frame 66, Stbd	Coast Guard Drawing 175 WLM 582
2	Chock, Deck Mounted, (PanamaType) 12" x 10"	01 Deck, Frame 72, P/S	Coast Guard Drawing 175 WLM 582
1	Bitt, Double, 12"	01 Deck, Frame 77, Port	Coast Guard Drawing 175 WLM 582
1	Towing Bitt, 14" Sch 120 Pipe	01 Deck, Frame 90, CL	Coast Guard Drawing 175 WLM 582
2	Chock, Deck Mounted, (PanamaType) 12" x 10"	01 Deck, Frame 93, P/S	Coast Guard Drawing 175 WLM 582

2	Bitt, Double, 12”	01 Deck, Frame 96, P/S	Coast Guard Drawing 175 WLM 582
2	Chock, Deck Mounted, (PanamaType) 12” x 10”	01 Deck, Frame 100, P/S	Coast Guard Drawing 175 WLM 582
1	Tow Rail and Posts, 8” Sch 120 pipe	01 Deck, Along Transom	Coast Guard Drawing 175 WLM 582

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 582-001, Rev D, Mooring and Towing, A & D

COAST GUARD PUBLICATIONS

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

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

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.

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).

3.2 Inspection and test particulars. The Contractor must accomplish the following for designated fitting designated in paragraph 1.1, and submit a CFR.

3.2.1 Visual. Visually inspect all cleaned surfaces for excessive damage, wear, corrosion, distortion, elongation of holes, gouges, pits, and cracks.

3.2.2 NDE. Perform nondestructive examination (NDE) of all designated fittings, including all components and associated welds (including but not limited to deck mounting and base/foundation welds) or other mounting hardware, in accordance with SFLC Std Spec 0740, Appendix C. Use a NDE method not requiring coating removal.

3.3 Touch-up preservation. 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 21: Grey Water Holding Tanks, 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 – TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (Gallons)	LOW SUCTION (Gallons)
Grey Water Collection Tank	3-83-1-W	2,822	
Grey Water Collection Tank	3-83-2-W	2,822	

1.2 Government-furnished property.

None.

1. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 506-001, Rev G, Overflows, Air Escapes & Sounding Tubes Diagram

Coast Guard Drawing 175 WLM-528-001, Rev E, Plumbing and Interior Deck Drains Diagram

Coast Guard Drawing 175 WLM 593-001, Rev G, Sewage & Waste Water System Diagram

Coast Guard Drawing 175 WLM 593-009, Rev E, Independent Tanks, Sewage Holding Tank

Coast Guard Drawing 175 WLM 633-001, Rev D, Cathodic Protection

COAST GUARD PUBLICATIONS

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

OTHER REFERENCES

ASTM International (ASTM) D1330, 2015, Standard Specification for Rubber Sheet Gaskets

3. REQUIREMENTS

3.1 General.

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

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).

3.1.3.1 Plug all inlet and outlet piping in the tank(s) to prevent contaminants from entering. Use plugs with an attached lanyard, ring or other system that will ensure plugs are not lost in the pipe openings.

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.
- Pump(s).
- Zincs.

3.2 Plug log. The Contractor must keep a written record of all plugs put in any tank vents. A separate list must be kept for each tank being entered.

3.2.1 Ensure that all plugs are removed from each tank upon completion of work in the tank.

3.2.2 The plug log must be available to the Coast Guard Inspector when the inspector is performing his close-out inspection on each tank.

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 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.

3.5 Cleaning. The Contractor must accomplish the following for the tank(s) listed. The Contractor must refer to Coast Guard drawings 175 WLM 593-001,175 WLM 593-009, 175 WLM 506-001, 175 WLM 528-001, 175 WLM 633-001, and Tech Pub 3611 Manufacturers Instruction Book, SWBS Group 202, Section A for guidance.

3.5.1 Content removal. Remove and dispose of all contents, fluids, and/or residues in accordance with all applicable Federal, state, and local regulations

3.5.2 Cleaning requirements. Remove manhole cover(s). 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. 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. 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. Remove and clean the eductors and level switches inside of the tank(s). Reinstall the eductors and level switches upon completion of tank cleaning. Use new gaskets and o-rings to install/reinstall all removed/disturbed components.

3.6 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 the Tank and Void Inspection Form, and a CFR including the following, as applicable:

- Tank structural condition.
- Inaccessible areas.
- Condition of tank coating, including measurements taken, 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).

3.7 Control panel assembly. The Contractor must 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

3.8 Closing. The Contractor must notify the COR at least 24 hours prior to closing the tank(s). After satisfactory inspection by the Coast Guard Inspector, and completion of all authorized repairs, close the manhole cover(s) with new gasket material conforming to ASTM D1330.

3.8.1 Chase threads on studs to ensure even installation of the access covers. Renew any damaged or missing fasteners. Existing undamaged fasteners may be reused. For purpose of bid, assume 10% of existing fasteners will require renewal. Renew all nylon insert/nylock nuts.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.9 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.

3.9.1 The Contractor must adjust the set point on each of the vacuum pressure switches (as applicable) to the set points noted previously.

3.9.2 The Contractor must verify operation of the low and high level switches/alarms and that the pumps cycle from lead to lag status during operation. Demonstrate proper operation of tank TLIs to prove satisfactory operating condition.

3.9.3 Upon completion of testing and, in the presence of the Coast Guard Inspector, the Contractor must pump tank(s) to the limit of the ship's installed pumps.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 22: Sewage Holding Tanks, 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 – TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (Gallons)	LOW SUCTION (Gallons)
Sewage Holding Tank	2-84-2-W	847	80
Vacuum Collection Tank	2-82-2-W	330	30

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 506-001, Rev G, Overflows, Air Escapes & Sounding Tubes Diagram

Coast Guard Drawing 175 WLM-528-001, Rev E, Plumbing and Interior Deck Drains Diagram

Coast Guard Drawing 175 WLM 593-001, Rev G, Sewage & Waste Water System Diagram

Coast Guard Drawing 175 WLM 593-009, Rev E, Independent Tanks, Sewage Holding Tank

Coast Guard Drawing 175 WLM 633-001, Rev D, Cathodic Protection

COAST GUARD PUBLICATIONS

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

OTHER REFERENCES

ASTM International (ASTM) D1330, 2015, Standard Specification for Rubber Sheet Gaskets

3. REQUIREMENTS

3.1 General.

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

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).

3.1.3.1 Plug all inlet and outlet piping in the tank(s) to prevent contaminants from entering. Use plugs with an attached lanyard, ring or other system that will ensure plugs are not lost in the pipe openings.

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.
- Pump(s).
- Zincs.

3.2 Plug log. The Contractor must keep a written record of all plugs put in any tank vents. A separate list must be kept for each tank being entered.

3.2.1 Ensure that all plugs are removed from each tank upon completion of work in the tank.

3.2.2 The plug log must be available to the Coast Guard Inspector when the inspector is performing his close-out inspection on each tank.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.4 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 Service disruption. When sewage collection service is disrupted due to contractor repairs, the Contractor must refer to SFLC Standard Spec 0000 par 3.2.11 to provide required temporary facilities.

3.5 Cleaning and inspection requirements. The Contractor must accomplish the following for the tank(s) listed in paragraph 1.1 (Intent), referring to Coast Guard drawings 175 WLM 593-001,175 WLM 593-009, 175 WLM 506-001, 175 WLM 528-001, 175 WLM 633-001, and Tech Pub 3611 Manufacturers Instruction Book, SWBS Group 202, Section A for guidance:

3.5.1 Content removal. Remove and dispose of all contents, fluids, and/or residues in accordance with all applicable Federal, state, and local regulations

3.5.2 Cleaning requirements. Remove manhole cover(s). 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. 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. 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. Remove and clean the eductors and level switches inside of the tank(s). Reinstall the eductors and level switches upon completion of tank cleaning. Use new gaskets and o-rings to install/reinstall all removed/disturbed components.

3.5.3 Inspection. 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 including the following, as applicable:

- Tank structural condition.
- 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).

3.5.4 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

3.6 Closing. The Contractor must notify the COR at least 24 hours prior to closing the tank(s). After satisfactory inspection by the Coast Guard Inspector, and completion of all authorized repairs, close the manhole cover(s) with new gasket material conforming to ASTM D1330.

3.6.1 Chase threads on studs to ensure even installation of the access covers. Renew any damaged or missing fasteners. Existing undamaged fasteners may be reused. For purpose of bid, assume 10% of existing fasteners will require renewal. Renew all nylon insert nuts.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.7 Operational test, post repairs. After completion of work, the Contractor must accomplish the following in the presence of the Coast Guard Inspector, and submit a CFR:

3.7.1 Adjust the set point on each of the vacuum pressure switches (as applicable) to the set points noted previously.

3.7.2 Verify operation of the low and high level switches/alarms and that the pumps cycle from lead to lag status during operation. Demonstrate proper operation of tank TLIs to prove satisfactory operating condition.

3.7.3 Upon completion of testing and, in the presence of the Coast Guard Inspector, pump tank(s) to the limit of the ship's installed pumps.

4. NOTES

4.1 Vessel equipment. The cutter is equipped with an ENVIROVAC Model 1122 Vacuum Sewage System. The vacuum tank is made of 316L stainless steel. The sewage collection tank is equipped with two (2) magnetic level switches, two (2) vacuum pressure switches, two (2) sewage ejectors, two (2) solenoid operated ball valves, and other associated components. (Ships with hull numbers 551 through 558 use a mercury float level sensor switch.) Point of contact for the system is listed below.

ENVIROVAC Inc.

1260 Turret Dr.

Rockford IL. 6115-1486

(815) 654-8300

4.2 Eductor seal information.

Ref. No.	Part Number	Description	Qty Per Assembly	Total Quantity
2	5500020-005	O-ring	1	2
3	5500033-002	Gasket, Ring, 125 x 100 x 2mm	1	2
4	5500033-001	Gasket, Ring, 135 x 90 x 2mm	2	4
5	5600032	Nozzle, 45mm	1	2

4.3 Sewage Holding tank data. The sewage holding tank is described in Coast Guard Drawing 175 WLM 593-009. The sewage holding tank has two (2) type ZHS-42 stud mounted zincs installed inside of the tank, as described in Coast Guard Drawing 175 WLM 633-001 and is fitted with a manual internal wash down system and a tank level indicating system as well as high level and low level alarms and pump controls. The sewage tank is vented on top of the stack as shown in Coast Guard Drawing 175 WLM 506-001.

WORK ITEM 23: Tanks, Ballast, Preserve, 100 Percent

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to prepare and coat 100% of the surfaces of the following tank(s):

TABLE 1 - TANKS

TYPE OF STRUCTURE	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Forepeak Ballast Tank	3-0-0-V	3,309	99
Ballast Tank	3-35-6-V	7,922	238
Ballast Tank	3-35-1-V	7,922	238

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 601-003, Rev F, Booklet of General Drawings (552-564)

Coast Guard Drawing 175 WLM 601-002, Rev H, Booklet of General Drawings (IDA LEWIS)

COAST GUARD PUBLICATIONS

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

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

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2020, Temporary Hull Accesses

OTHER REFERENCES

ASTM International (ASTM) D1330, 2010, Standard Specification for Rubber Sheet Gaskets

3. REQUIREMENTS

3.1 General.

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

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).

3.2 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.

NOTE

Any ballast tanks being listed for preservation will have been pumped down to low suction by ship's force prior to arrival at the Contractor facilities.

3.3 Content removal. The Contractor must remove and dispose of all fluids and/or residues in accordance with all applicable Federal, state, and local regulations. Plug all inlet and outlet piping in the tank to prevent contaminants from entering the tank. Use plugs with an attached lanyard, ring or other system that will ensure plugs are not lost in the pipe openings. Maintain a plug accountability log outside the tank(s) to prevent any of the installed temporary plugs from being lost inside the tank or forgotten inside at tank closure.

3.4 Surface preservation. The Contractor must accomplish the following tasks for the tanks listed in paragraph 1.1 (Intent):

3.4.1 The Contractor must remove and retain the tank manhole cover(s).

3.4.2 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 for "Tanks and Voids, Ballast Tanks; Option I or II " in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). Select finish/top coat color to match existing.

3.4.3 The Contractor must prepare and coat all manhole cover external surfaces to match existing adjacent surfaces, using the system specified for "Decks, Metal Interior and Non-Skid Areas (Steel and Aluminum Decks - Wet Areas, Food Preparation Areas, Exit Areas, and Areas Subject To Condensation)", 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 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).

NOTE

Surfaces being preserved are considered "critical-coated surfaces".

3.6 Inspection. After surface preparation and before coating application, the Contractor must visually inspect all tank interior and manhole cover surfaces; including, but not limited to bulkheads, floor and overhead plating, structural members, fasteners and gasket seating surfaces. Submit a CFR including the following, as applicable:

- Structural condition.
- Inaccessible areas.
- Tank level indicator (TLI) and/or float switch condition.
- Sounding tube and striker plate condition.
- Suction and discharge piping.
- Fastener condition.

3.7 Tank closing. The Contractor must ensure that the tank(s) remain open for at least 24 hours after completion of the tasks specified above. Notify the COR at least 24 hours prior to closing the tank(s).
3.7.1 After satisfactory inspection by the Coast Guard Inspector and after all authorized repairs, accomplish the following:

- Reinspect all TLIs, as applicable, to verify proper operation. Submit CFR.
- Close tank manhole cover(s) with new gasket material conforming to ASTM D1330 and new cotton grommets on all studs (as applicable).

3.7.2 The Contractor must renew up to 10% of missing or damaged nuts and washers.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 24: Chain Locker, Preserve, 100 Percent

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to prepare and preserve 100% of the Chain Locker surfaces.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 581-001, Rev E, Anchor Handling System Arrangement

Coast Guard Drawing 175 WLM 601-001, Rev T, General Arrangement Inboard and Outboard Profiles

Coast Guard Drawing 175-WLM-529-002 Rev G Main Drainage System Diagram

Coast Guard Drawing 175-WLM-505-002 Rev F Mechanical Remote Valve Operators Arrangement and Details

COAST GUARD PUBLICATIONS

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

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

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2020, Temporary Hull Accesses

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):

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 below-listed:

- Anchors and chains.

3.2 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.

3.3 Surface preservation. The Contractor must notify the Coast Guard Inspector 48 hours prior to beginning surface preparation. Remove access cover(s); prepare and coat all chain locker surfaces, including associated structural members, and including the internal surfaces of the access cover(s), using the system specified for "Chain Lockers", in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). Select finish/top coat color to match existing adjacent surfaces.

NOTE

High pressure waterjetting is not acceptable for surface preparation on surfaces to be coated with inorganic zinc.

3.4 Inspection. After surface preparation and before paint application, the Contractor must perform a visual inspection of all prepared surfaces and sounding tubes in accordance with Coast Guard Drawing 175 WLM 581-001

175 WLM 601-001. Submit a CFR.

3.5 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".

4. NOTES

This section is not applicable to this work item.

WORK ITEM 25: Tanks, Grey Water Holding, Preserve 100 Percent

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to prepare and preserve 100% of the surfaces of the following tank(s):

TABLE 1 – TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (Gallons)	LOW SUCTION (Gallons)
Grey Water Collection Tank	3-83-1-W	2,822	280
Grey Water Collection Tank	3-83-2-W	2,822	280

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 506-001, Rev G, Overflows, Air Escapes & Sounding Tubes Diagram

Coast Guard Drawing 175 WLM-528-001, Rev E, Plumbing and Interior Deck Drains Diagram

Coast Guard Drawing 175 WLM 593-001, Rev G, Sewage & Waste Water System Diagram

Coast Guard Drawing 175 WLM 593-009, Rev E, Independent Tanks, Sewage Holding Tank

Coast Guard Drawing 175 WLM 633-001, Rev D, Cathodic Protection

COAST GUARD PUBLICATIONS

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

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

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2020, Temporary Hull Accesses

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):

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). The Contractor must be aware that interferences in way of work include, but are not limited to the following:

- Piping
- Pump(s)
- Zincs.

3.2 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.

NOTE

Requirements for tank opening and closing, content disposal, and inspection are covered in the clean and inspect item.

3.3 Surface preservation. The Contractor must accomplish the following tasks for the tanks listed in paragraph 1.1 (Intent), and refer to Coast Guard drawings 175 WLM 593-001,175 WLM 593-009, 175 WLM 506-001, 175 WLM 528-001, 175 WLM 633-001, and Tech Pub 3611 Manufacturers Instruction Book, SWBS Group 202, Section A for guidance in accomplishing this work item.

3.3.1 Remove and retain the tank manhole cover(s).

3.3.2 Prepare and coat all (100%) 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 for "Tanks and Voids (Grey Water, Sewage, and CHT Tanks), Option I", in SFLC Std Spec 6310, Appendix B (Cutters and Boat Interior Paint Systems). Select finish/top coat color to match existing.

3.3.3 Prepare and coat all manhole cover external surfaces to match existing adjacent surfaces, using the system specified for “Decks, Metal Interior and Non-Skid Areas (Steel and Aluminum Decks)”, in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). Select finish/top coat color to match existing adjacent surfaces.

3.4 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).

NOTE
Surfaces being preserved are considered “critical-coated surfaces”.

4. NOTES

This section is not applicable to this work item.

63110_ESD_0121_FLT
REC_12314_FLT_175' WLM (ALL) (0611)

WORK ITEM 26: Tanks, Potable Water Preserve, 100 Percent

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to prepare and coat 100% of the surfaces of the following tank(s):

TABLE 1 - TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Potable Water	1-94-0-W	2,167	68
Potable Water	2-36-1-W	5,172	163

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 601-003, Rev F, Booklet of General Plans

Coast Guard Drawing 175 WLM 533-006, Rev D, Independent Tank Potable Water Hb 950

COAST GUARD PUBLICATIONS

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

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

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2020, Temporary Hull Accesses

OTHER REFERENCES

American National Standards Institute/NSF International (ANSI/NSF) 61, 2008, Drinking Water System Components - Health Effects

American National Standards Institute/American Water Works Association (ANSI/AWWA) C652, 2011, Disinfection of Water-Storage Facilities

3. REQUIREMENTS

3.1 General.

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

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).

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”.

3.3 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.

3.4 Tank content removal. The Contractor must remove and dispose of all tank contents in accordance with all applicable Federal, State, and local regulations. The Contractor must notify the Dockmaster prior to filling or draining the potable water tank(s).

3.5 Surface preservation. The Contractor must accomplish the following tasks for the tanks listed in paragraph 1.1 (Intent):

3.5.1 Remove and retain the tank manhole cover(s).

3.5.2 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 for "Tanks and Voids (Potable Water Tanks)" in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). Select finish/top coat color to match existing.

3.5.3 Prepare and coat all manhole cover external surfaces to match existing adjacent surfaces, using the system specified for "Decks, Metal Interior and Non-Skid Areas (Steel and Aluminum Decks - Wet Areas, Food Preparation Areas, Exit Areas, and Areas Subject To Condensation)", in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). Select finish/top coat color to match existing adjacent surfaces.

3.5.4 Heated air must be used if necessary to maintain the proper temperature during cure. Ventilation must be a continuous airflow with a minimum of one complete air change every four (4) hours.

3.5.5 Fully coated tanks must be cured in accordance with the manufacturer's instructions for NSF/NEHC certification under the same conditions before being filled.

NOTE

Typical curing times are at least 7 days, and range up to 14 days (or longer), depending on the paint selected and environmental conditions.

3.5.6 Curing time must be based on paint manufacturer's recommendations for the specific application.

CAUTION

Verify application and cure requirements with paint manufacturer prior to paint purchase and application. Lack of attention to environmental conditions can adversely impact paint system cure, cause unnecessary contract time delays, and negatively impact crew health and vessel habitability when tanks are put back into service.

DO NOT assume paint Product Data Sheet to be accurate. Contact paint manufacturer directly to verify, as formulations change and new application information may be available.

3.5.7 Freshly painted potable water tanks must be rinsed at least twice with freshwater before being disinfected and put into service.

3.6 Inspection. After surface preparation and before coating application, 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 including the following, as applicable:

- Structural condition
- Inaccessible areas
- Tank level indicator (TLI) and/or float switch condition
- Sounding tube and striker plate condition
- Suction and discharge piping.

3.7 Tank closing. The Contractor must ensure that the tank(s) remain open for at least 24 hours after completion of the tasks specified above. Notify the COR at least 24 hours prior to closing the tank(s). After satisfactory inspection by the Coast Guard Inspector and after all authorized repairs, accomplish the following:

- Reinspect all TLIs, as applicable, to verify proper operation. Submit a CFR.
- Close tank manhole cover(s) with new gasket material conforming to ANSI/NSF 61 and new

stud cotton grommets (where applicable).

3.6 Tank disinfecting. After all other work involving the potable water system and tank closing have been completed, the Contractor must disinfect and treat the affected potable water tank(s) and associated disturbed piping and components, as necessary, to meet or exceed the requirements of AWWA C652. After tank disinfecting, remove and dispose of all treated water in accordance with all Federal, state and local regulations. Ensure that no one enters the tanks once disinfection is completed.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 27: Tanks (Sewage Vacuum Collection), Preserve "100%"

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to prepare and preserve 100% of the following tank(s):

TABLE 1 – TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (Gallons)	LOW SUCTION (Gallons)
Sewage Holding Tank	2-84-2-W	847	85
Vacuum Collection Tank	2-82-2-W	330	30

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 506-001, Rev G, Overflows, Air Escapes & Sounding Tubes Diagram

Coast Guard Drawing 175 WLM-528-001, Rev E, Plumbing and Interior Deck Drains Diagram

Coast Guard Drawing 175 WLM 593-001, Rev G, Sewage & Waste Water System Diagram

Coast Guard Drawing 175 WLM 593-009, Rev E, Independent Tanks, Sewage Holding Tank

Coast Guard Drawing 175 WLM 633-001, Rev D, Cathodic Protection

COAST GUARD PUBLICATIONS

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

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

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2020, Temporary Hull Accesses

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General. The Contractor shall refer to Coast Guard drawings 175 WLM 593-001,175 WLM 593-009, 175 WLM 506-001, 175 WLM 528-001, 175 WLM 633-001, and Tech Pub 3611 Manufacturers Instruction Book, SWBS Group 202, Section A for guidance.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not Applicable.

3.1.3 Protective measures. The Contractor shall 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 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). Known interferences include, but are not limited to the following:

- Piping.
- Pump(s).
- Zincs.

3.1.5 Temporary access openings. With express permission of the KO via submission of a CFR and in accordance with SFLC Std Spec 8636, the Contractor may perform all work required to cut open and close temporary access openings to facilitate accomplishment of the work specified herein.

NOTE
Requirements for tank opening and closing, content disposal, and inspection are covered in the clean and inspect item.

3.2 Surface preservation. The Contractor shall accomplish the following tasks for the tanks listed in paragraph 1.1 (Intent):

3.2.1 Remove and retain the tank manhole cover(s).

3.2.2 Prepare and coat all tank interior surfaces (including the 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 for "Tanks and Voids (Grey Water, Sewage, and CHT Tanks), Option I in SFLC Std Spec 6310, Appendix B (Cutters and Boat Interior Paint Systems). Select finish/top coat color to match existing.

3.2.3 Prepare and coat all manhole cover external surfaces to match existing adjacent surfaces, using the system specified for “Decks, Metal Interior and Non-Skid Areas (Steel and Aluminum Decks - Wet Areas, Food Preparation Areas, Exit Areas, and Areas Subject To Condensation)”, in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). Select finish/top coat color to match existing adjacent surfaces.

NOTE

Surfaces being preserved are considered “critical-coated surfaces”.

3.3 In-process quality control. The Contractor shall 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. 4 TLI. The Contractor shall, upon completion of work, reinstall tank TLIs and level control switches and access covers.

3.4.1 Demonstrate proper operation of all TLIs and level control switches. Fill tanks with water and pump down. Demonstrate operation of automatic controls on the sewage pumps and turbid water pumps.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 28: Decks - Exterior, Preserve ("Non-Skid Broadcast Grit" System)

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to preserve the following exterior deck surfaces:

- 01 Deck – Forecastle.
- 01 Deck - Port And Starboard Air Castles.
- 01 Deck –Starboard Boat Deck.
- 01 Deck – Fantail.
- 02 Deck.
- 03 Deck.
- Flying Bridge.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 601-001, Rev L, General Arrangement and Inboard and Outboard Profiles

COAST GUARD PUBLICATIONS

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

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.

Not applicable.

3.1.3 Protective measures. The Contractor shall protect non-affected vessel's equipment, components, and spaces during surface preparation and coating application procedures, as specified in SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection). Specific areas/ equipment/ components to be protected include, but are not limited to:

- Adjacent vertical (beyond what is specified in paragraph 3.2.1 (System particulars)).
- Deck fittings.
- Deck equipment.

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 below-listed:

- Life rafts.
- Pump cans.
- Locker.
- SCBA air pump.
- Small boat.
- Flat box.

3.2 Preservation requirements particulars. The Contractor shall accomplish the following tasks. Use Coast Guard Drawing 175 WLM 601-001 as guidance.

3.2.1 Pre-surface preparation wash. Prior to accomplishing surface preparation, accomplish low-pressure (less than 5,000 psi) fresh water wash of all affected surfaces, to remove soluble chlorides and other surface contaminants. Capture, contain, and dispose of wash water for proper disposal in accordance with all Federal, state and local regulations.

3.2.2 Surface preparation and coating application. Prepare and coat the weather deck surfaces designated in paragraph 1.1 (Intent), including bitt and chock foundations, machinery rack guards and machinery foundations, hatches and hatch guards, stanchion sockets, vent pipes, angle coaming area, and approximately six inches up all adjacent vertical surfaces (as applicable); select and use the the system specified for "Weather Decks Non-Skid, Broadcast Grit for Steel, Option I" in SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems).

3.2.2.1 Surface preparation optional methods. The Contractor shall have the option of using either high/ultrahigh pressure water Jetting, abrasive blasting, or a combination of the two, to achieve the required surface preparation. The Contractor may add abrasives to the waterjet stream, for one or both of the following reasons:

- Achieving greater productivity.
- Achieving the required surface profile.

NOTE

Waterjetting without abrasive addition does not provide any additional anchor profile to the surface, beyond what was present after the previous surface preparation.

3.2.2.2 Substrate inspection. After completion surface preparation and before coating application, perform a visual inspection of the prepared substrate, and submit a CFR.

3.2.2.3 Color selection. Select and use authorized paint as specified in SFLC Std Spec 6310, Appendix A, note 28. Use Gray as the finish/top coat color.

3.2.2.4 Nonskid exclusion. Do not apply non-skid aggregate over vertical surfaces, and the following areas:

- Within two inches of deck fittings, hatches, welds, and protrusions.
- Within six inches of deck coaming, bulkheads, and deck edges.
- Within six inches of all deck edges and bulkheads.
- Within two inches of deck foundations (two inches measured from outermost portion of foundation, for example, foundation brackets on anchor windlass).
- Over deck fittings.
- Over waterways.
- Over welds.

NOTES

1. Surfaces being preserved are considered "critical-coated surfaces".

2. Unless a containment system is used to contain surface preparation dust and debris and coating application overspray during pier side/dockside preservation, the following must be adhered to:

a. All surface preparation tools/equipment must vacuum-shrouded.

b. Coatings must be applied by brushing or rolling.

3.2.2.5 Non-skid surface appearance and texture. Ensure that the non-skid surface shall show continuous and reasonably uniform profile. Aggregate shall present a rough uniformly coarse appearance over the entire surface with no loosely bound clumps of particles.

3.3 In-process quality control measures. The Contractor shall 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).

4. NOTES

4.1 Definition of coaming. Vertical raised sections of deck plating around an opening that provide a frame and/or deflect water, such as around a hatch or gooseneck.

WORK ITEM 29: Decks – Exterior (Buoy or Construction Deck), Preserve 100%

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to preserve the Buoy Deck surfaces, shown on Coast Guard Drawings 175 WLM 573-001 and 175 WLM 601-001 (see 4.1 (Definitions)).

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 130-001, Rev -Mods to Buoy Deck Incidental to Hawser Pipe Cover

Coast Guard Drawing 175 WLM 573-001, Rev T, Buoy Deck Arrangement

Coast Guard Drawing 175 WLM 601-001, Rev L, General Arrangement and Inboard and Outboard Profiles

Coast Guard Drawing 175 WLM 920-001, Rev K, Hull Block 920 Panels

COAST GUARD PUBLICATIONS

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

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

Coast Guard Technical Publication (TP) 3498, Section A, Jul 2015, Buoy Chain Winch

OTHER REFERENCES

MIL-A-22262, Mar 1996; Abrasive Blasting Media Ship Hull Blast Cleaning

The Society for Protective Coatings (SSPC)/NACE-International (NACE) Joint Surface Preparation Standard SSPC-SP 10/NACE No. 2, 2007, Near-White Blast 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). Specific areas/equipment/components to be protected include, but are not limited to:

- Buoy crane.
- Adjacent bulkhead surfaces.
- Deck fittings.

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:

- Crossdeck winches.
- In-haul winch.
- Mechanical chain stoppers.
- Hydraulic chain stoppers.

3.2 Preservation particulars. The Contractor must accomplish the following tasks:

3.2.1 Pre-surface preparation wash. Accomplish low-pressure (less than 5,000 psi) fresh water wash of all affected surfaces, to remove soluble chlorides and other surface contaminants. Capture, contain, and dispose of wash water for proper disposal in accordance with all Federal, state and local regulations.

3.2.2 Surface preparation. Prepare all designated deck surfaces (see 4.1 (Definition) by abrasive-blasting to SSPC-SP10/NACE No. 2, using grit conforming to MIL-A-22262 (1.5 to 2.5 mil anchor profile).

3.2.3 Substrate inspection. After completion surface preparation and before coating application, the Contractor must perform a visual inspection of the prepared substrate, in the presence of the Coast Guard Inspector. Submit a CFR.

3.2.4 Surface coating. Coat all prepared surfaces with the coating system specified for "Weather Decks (Weather Deck, Buoy Tender Working Deck)", in SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems). Select a Gray (36231) inorganic zinc coating.

CAUTION

1. Unless a containment system is used during pier side/dockside preservation, the following must be adhered to:

a) All surface preparation tools/equipment must be vacuum-shrouded or close-looped systems, to contain surface preparation dust and debris.

b) Extreme precaution must be taken while spraying the inorganic zinc coating, to prevent coating application overspray.

2. Organic zinc coating may not be substituted for inorganic zinc for Buoy Deck surfaces.

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). Surfaces being preserved are considered "critical-coated surfaces".

3.4 Weight tests. After reinstallation of inhaul winch and crossdeck winches, the Contractor must accomplish the following (Coast Guard personnel will operate all equipment):

3.4.1 Inhaul winch. Perform all weight test requirements in accordance with CG TP-3498, Chpt 8, Para 8-6.4 (Static Load Test Weight: 24,750 (+1,238 -0) pounds; Rated Load Test Weight: 16,500 (+0 -825) pounds; and Emergency Brake Release Test Weight: 5,000 (+0 -250) pounds). Submit CFR.

3.4.2 Crossdeck winches. Perform weight tests in accordance with paragraph B2.3 (Winches).of SFLC Std Spec 5000 (Static Load Test Weight: 9,000 (450-0); Rated Load Test Weight: 6,000 (0-300) Pounds). Submit CFR

4. NOTES

4.1 Definitions.

4.1.1 Buoy Deck. The Buoy Deck surfaces are defined as horizontal surfaces, Main Deck, Frame 52 forward; also included are all vertical and horizontal edges on the mating surfaces of the buoy deck cargo hatch, including coaming, channels, channel support plate, and the plates/covers for the auto gripe system; and Hawser pipe cover; as shown on Coast Guard Drawings 175 WLM 130-001, 175 WLM 573-001 and 175 WLM 601-001, and 175 WLM 920-001.

4.1.2 Deck coaming. Coaming is defined as vertical raised sections of deck plating around an opening that provide a frame and/or deflect water, such as around a hatch or gooseneck.

WORK ITEM 30: Hull Plating Freeboard (Buoy Port Areas), Preserve

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to prepare and coat the buoy working areas, shown on Coast Guard Drawing 175 WLM 601-001 (see 4.1 (Definition of Buoy Port)).

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 601-001, Rev P, General Arrangement and Inboard and Outboard Profiles

COAST GUARD PUBLICATIONS

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

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.

Not applicable.

3.1.3 Protective measures - general. The Contractor must 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 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.

- Areas where underwater body coating system interfaces with freeboard coating system (unless u/w body surfaces are also being preserved).
- Adjacent deck surfaces and deck fittings.
- Buoy crane.
- Deck machinery.
- Buoy handling equipment.

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 Pre-surface preparation wash. Prior to accomplishing surface preparation, the Contractor must accomplish low-pressure (less than 5,000 psi) fresh water wash of all affected surfaces, to remove soluble chlorides and other surface contaminants.

3.1.5.1 Ensure that the water utilized for the low-pressure wash is of sufficient purity and quality that it does not prevent the surface being preserved from achieving the required degree of surface cleanliness or nonvisible contamination criteria.

3.1.5.2 Capture, contain, and dispose of wash water for proper disposal in accordance with all Federal, state and local regulations.

3.1.6 Substrate inspection. After completion surface preparation and before coating application, the Contractor must perform a visual inspection of the prepared substrate, and submit a CFR.

3.2 Preservation particulars. The Contractor must accomplish prepare and coat the designated buoy port surfaces in accordance with SFLC Std Spec 6310, using the system specified for "Freeboard/Superstructure, Steel – Prone to Mechanical Damage or High Wear".

3.2.1 Ensure that all non-affected surfaces adjacent to the designated areas are feathered into the designated area, in accordance with the feathering guidance provided in SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs).

NOTE

Waterjetting may not used as a surface preparation, in view of the fact that the specified coating system includes an Inorganic Zinc coating as the primer coat.

3.2.2 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).

NOTE

Surfaces being preserved are considered "critical-coated surfaces".

3.3 Repair of un-intended damages. The Contractor must repair all damages, including overspray,

incurred to surfaces not covered by the scope of this work item, during surface preparation and paint application procedures.

4. NOTES

4.1 Definition of Buoy Port. The Buoy Port areas are defined as freeboard surfaces between Frames 22 and 40, port and starboard, from the deck level down to the top of the boot-topping; and all inboard surfaces of the gunwale.

WORK ITEM 31: Cathodic Protection, Zinc Anodes, Renew,

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew the following cathodic protection anodes:

QTY	TYPE/DESCRIPTION	SIZE (INCHES)	LOCATION
39	ZHS/23	6” x 12” x 1-1/4”	See referenced drawing
11	ZHS/42	6” x 12” x 2-1/2”	See referenced drawing
10	ZSS/12	3” x 12” x 1-1/4”	See referenced drawing
16	ZTS/5	3” x 9” x 1-3/8”	See referenced drawing

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 633-001, Rev D, Cathodic Protection

COAST GUARD PUBLICATIONS

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

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

«REF_A»

OTHER REFERENCES

Commercial Item Description (CID) A-A-59313, Nov 2003, Thread Compound; Anti-seize, Zinc Dust-Petrolatum

MIL-A-18001, May 2005, Anodes, Sacrificial Zinc Alloy (Commercially Accepted - ASTM B418)

3. REQUIREMENTS

3.1 General.

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

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).

3.2 Renewal particulars. The Contractor must accomplish the following tasks. Use Coast Guard Drawing 175 WLM 633-001 as guidance

3.2.1 Removals. The Contractor must remove and dispose of all designated anodes (see Table under paragraph 1.1 (Intent)). Accomplish the following additional tasks, as applicable:

3.2.1.1 Retain all anode mounting hardware (studs, nuts, and washers).

3.2.1.2 Grind flush all residual roughness with the hull or mounting surfaces.

3.2.1.3 Visually inspect all mounting hardware, including studs, washers, and nuts. Verify the quality of the zinc anode stud weldment to the hull by tapping perpendicular on the nutted stud with a rubber hammer and submit a CFR.

3.2.2 New installations. Furnish and install new anodes conforming to MIL-A-18001, in place of the removed.

- Drill holes in each mounting strap, to facilitate stud attachment.

NOTE
All bolt studs may not have the exact same spacing.

- Renew up to 100% of mounting hardware.

- Ensure two star type lockwashers are installed: one between the nut and anode strap, and one between the anode strap and ship structure, to ensure electrical continuity between the anode and the attachment point.
- Apply antisieze compound, conforming to (CID) A-A-59313, to studs before each anode installation.
- Chip, grind, or wire-brush smooth all straps, welds, and mounting studs, as applicable. In addition, ensure that all installed anode surfaces are free of paint.

3.3 Electrical resistance testing. The Contractor must measure the electrical resistance between each anode surface and an adjacent metal ship structure, utilizing an OHM meter and a scale, to ensure that it is less than 0.1 ohm. Submit a CFR.

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

- External portions of studs, nuts, washers and straps, if applicable.
- Hull surfaces in way of removed anodes.

3.4.1 Wire brush all anodes within 24 hours before refloating the cutter. Take care not to disturb the U/W body coating system.

3.4.2 Do not paint new anodes.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 32: Drydock

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to drydock the vessel, undock the vessel, and perform various drydocking-related tasks.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 801-001, Rev A, Hull Lines

Coast Guard Drawing 175 WLM 801-003, Rev A, Curves of Form

Coast Guard Drawing 175 WLM 801-006, Rev J, Docking Drawing

COAST GUARD PUBLICATIONS

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

Surface Forces Logistics Center Standard Specification 8634 (SFLC Std Spec 8634), 2020, Drydocking

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):

- 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:

- Anchor assembly
- Load conditions
- U/W body appendages

3.2 Key personnel. The Contractor must determine key personnel and require their presence during all drydocking phases as required by SFLC Standard Spec 8634. Submit list of key personnel to the COR.

3.3 Docking and undocking. The Contractor must perform drydock and undock in accordance with SFLC Std Spec 8634, using Coast Guard Drawing 175 WLM 801-001, 175 WLM 801-003, and 175 WLM 801-006 for guidance.

3.4 Cutter conditions. The Contractor must use the Full Load Condition values listed below all in inches, for purposes of performing Pre-Award calculations as described in Appendix A (Requirements for Calculations) of SFLC Std Spec 8634.

- Displacement (LT SW): 878.473
- VCG (FT ABL): 14.072
- LCG (FT aft FP): 87.469
- LCF (FT aft FP): 91.327
- Trim (FT by bow): 0.274
- MT1" (LT-FT/Inch): 136.75

3.4.1 Blocking. The Contractor must facilitate docking the vessel in designated block position by arranging keel and side blocks and ensuring minimum block heights as shown on the vessel's docking plan.

TABLE 1 – BLOCKING

	BLOCK HEIGHT ABOVE DOCKING FACILITY DECK							
POS. #	MIN.	RUDDER REMOVAL	PROPELLER REMOVAL	SHAFT REMOVAL	STEEL PLATE	SITUATION AWARENESS	FIN STABILIZERS	ADDITIONAL
2	48"	NA	NA		NA	Sonar. Ensure clearance around sonar(s) at Frames 21-22 and Frames 51-52.	NA	None

NOTE - This vessel has a Z-drive propulsion system.

3.4.2 Cable, sling, or strap tension calculation. If the Contractor plans to use a vertical lift, crane, or travel/mobile lift to haul out the vessel, the Contractor must submit the cable, sling, or strap tension calculation specified in Table A1 and paragraph A2.7.2.7 of SFLC Std Spec 8634 with the Pre-Award calculations, using the loading condition specified in paragraph 3.4.

3.5 Pre-award calculations. The Contractor must provide to the KO a set of pre-award calculations, as described in SFLC Std Spec 8634 Appendix A.

3.5.1 Provide vertical side/bilge block offsets for any side blocks placed in a location where vertical offsets are not already defined by the docking plan.

3.5.2 Submit an alternate blocking arrangement, as part of the pre-award calculation submission, to compensate for any changes from the docking plan.

3.5.2.1 If the alternate blocking arrangement interferes with U/W hull plate inspection or 100% preservation of U/W body surfaces required under separate work items in this specification package, the Contractor must include a plan of how inspection/preservation will be accomplished. Plan must include any modifications necessary to the prescribed docking plan including removing, shifting, repositioning blocks, or fleeting the vessel at no additional cost to the Government.

NOTE

1. The USCG has established several approved alternate docking plans for each vessel-class, to facilitate complete access to the entire U/W body structure, for periodic comprehensive inspection and/or 100% preservation. This inspection and preservation pattern and periodicity is a configuration management concern that is a vital requirement of the contract. Intention to deviate from these plans (fewer blocks, block spacing, additional blocks, etc) is to be identified on pre-award calculations (Paragraph 3.5.2); an alternate docking plan and mitigation strategy will be provided to maintain preservation and inspection configuration.

2. Pre-award calculations may be deemed unsatisfactory - and may adversely affect contract award if they are submitted with the following detrimental factors:

a. No methods have been proposed that meet the requirements for the specified docking plan.

b. Proposed block shifting or fleeting risk-mitigating plan may result in delays in period of performance.

c. Proposed alternate docking plan violates USCG configuration management policies.

3.6 Planned availability, immediate work and routine inspections. The Contractor must perform designated routine drydocking work, in accordance with SFLC Std Spec 8634, paragraph 3.5.4 (within twenty four hours after docking).

3.6.1 Upon the COR convening the Coast Guard Underwater Hull Inspection Board (UWHIB), the Contractor must facilitate and participate in the UWHIB inspections of the underwater hull. The Contractor must provide a designated hull repair supervisor to accompany the UWHIB and mark on the hull proposed repairs areas, as necessary.

NOTES

1. **The COR will convene the UWHIB as soon as possible after the vessel has been dry-docked and the hull has been cleaned. No other work must take place until the UWHIB completes their inspections.**
2. **The UWHIB will recommend the extent of underwater body coating system preservation required based on the conditions found during the underwater hull survey.**

WARNING

Do not use chemical additives in the freshwater wash. Take extreme care to avoid damaging or removing existing intact underwater body coating.

3.7 Fuel offloading. The Contractor must be aware that fuel offloading is not mandatory to drydock the vessel.

3.8 Fleeting. Not required.

4. NOTES

4.1 Arrival conditions. The COR will advise the Contractor of the actual tank and draft readings when the vessel arrives, and will discuss with the Contractor any liquid loading changes necessary.

WORK ITEM 33: Temporary Services, Provide - Cutter

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), 2020, General Requirements

Surface Forces Logistics Center Standard Specification 8635 (SFLC Std Spec 8635), 2020, Temporary Services

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):

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).

3.2 Temporary service particulars. The Contractor must provide the below listed temporary services, in accordance with SFLC Std Spec 8635.

TABLE 1 - SERVICE SELECTION

*SUB-PARAGRAPH	TITLE	Y/N
3.3.1	Office space	Y
3.3.2	Telephone and internet access	Y
3.3.3	Parking	Y
3.3.4	Duty section berthing: __ male, __ female. Duty section berthing must be provided for {Note: Choose one and delete the rest: (1) The entire duration of the availability, (2) during disruption of berthing areas or (3) _____ days}	N
3.3.5	Electrical power (including all requirements in associated sub-paragraphs)	N
3.3.6	Hull grounding straps (not applicable when cutter is waterborne)	Y
3.3.7	Compressed air (including all requirements in associated sub-paragraphs)	N
3.3.8	Hazardous material/hazardous waste disposal (see Tables 2 and 3 below)	Y
3.3.9	Heavy lift equipment: 16 hour(s)}	Y
3.3.10	Water supply	Y
3.3.10.1	Potable water: 7,500 gallons, bulk	Y
3.3.10.2	Hot-circulating water	N
3.3.10.3	Cooling water	N
3.3.10.4	Firemain system (including all requirements in associated sub-paragraphs)	N
3.3.11	Steam (including all requirements in associated sub-paragraphs)	N
3.3.12	Refuse disposal	N
3.3.13	Sewage and grey water disposal (including all requirements in associated sub-paragraphs)	N
3.3.14	Storage – General (including all requirements in associated sub-paragraphs):	Y
3.3.14	Dry stores.	N
3.3.14	Paint and flammable stores.	N
3.3.14	Refrigerated stores.	N
3.3.15	Small boat storage (including all requirements in associated sub-paragraphs)	Y

***Each sub-paragraph number relates directly to the identical sub-paragraph number in SFLC Std Spec 8635.**

TABLE 2 - HAZARDOUS WASTE DISPOSAL – LIQUIDS (GALLONS)

PAINT THINNERS	ENGINE COOLANT	BILGE WATER
Xx	xx	500

TABLE 3 - HAZARDOUS WASTE DISPOSAL – SOLIDS

OILY FILTERS	OILY RAGS (LBS)	EMPTY 1-GAL CONTAINER*	EMPTY 5-GAL CONTAINER*	EMPTY 55-GAL CONTAINER*
xx	30	xx	xx	xx

***Previously housed hazardous materials.**

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.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 34: Sea Trial Performance, Support, Provide

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to provide support for the performance of sea trials.

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), 2020, General Requirements

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):

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).

3.2 Trial applicability. The Contractor must provide support to the vessel crew to perform sea trials for all work items that require conducting operational tests while the vessel is waterborne or underway, prior to the item certification as being complete. The Contractor must be responsible for ensuring all test procedures are prepared, approved, and distributed for the sea trials, and must be responsible for recording test data and submitting CFRs to the COR.

3.3 Sea trial agenda. The Contractor must prepare an agenda that details the Contractor's plans for ensuring completion of the required sea trials.

3.3.1 Agenda contents. The Contractor must ensure the agenda consists of chronological list of administrative events, inspection events and test events. Events must be arranged to permit expeditious conduct with minimum interference between concurrent events.

NOTE
Mutually compatible events may be scheduled simultaneously.

3.3.1.1 The Contractor must ensure the agenda identifies installation of any test equipment or component modification that could impact the normal operation of equipment or systems during performance of the trials.

3.3.1.2 The Contractor must ensure the agenda identifies any operating instructions or special test procedures that could impact the normal operations of equipment or systems.

3.3.1.3 The Contractor must ensure the agenda includes the full name, title, security clearance, home address, home telephone number and name of next of kin of each Contractor-personnel scheduled to ride the ship during performance of the trials.

3.3.2 Agenda submission requirements. The Contractor must submit four legible copies of the sea trial agenda to the COR two days prior to the scheduled trials. The Contractor must coordinate both the planning and conduct of the post-overhaul ship trials with the ship's force (see 4.1 (Equipment operation)).

3.4 Environmental compliance. The Contractor must abide by the below-listed rules, in addition to all other Federal, state, and local rules governing the overboard discharge of garbage and oil in the water.

3.4.1 Discharge of garbage.

TABLE 1 – GARBAGE RULES

GARBAGE TYPE	RULE
Plastics, including synthetic ropes, fishing nets, and plastic bags	Prohibited in all areas
Floating dunnage, lining and packing materials	Prohibited less than 25 miles from nearest land
Food waste, paper, rags, glass, metal, bottles, crockery and similar refuse	Prohibited less than 12 miles from nearest land
Comminuted or ground food waste, paper, rags, glass, etc…	Prohibited less than 3 miles from nearest land

3.4.2 Discharge of oil. The Contractor must be aware that the Federal Water Pollution Control Act prohibits the discharge of oil or oily waste upon or into any navigable waters of the U.S. The prohibition

includes any discharge that causes a film or discoloration of the surface of the water or causes a sludge or emulsion beneath the surface of the water.

CAUTION

Violators are subject to substantial civil and/or criminal sanctions including fines and imprisonment.

3.5 Dock trials. The Contractor must conduct dock trials to demonstrate the material readiness of the ship for sea trials. Additionally, all onboard tests conducted after installation and prior to sea trials to prove proper installation and satisfactory operation of equipment must be conducted in accordance with the requirements specified in the work items designated in paragraph 3.1 (Trial applicability). Ensure that the dock trials are begun no later than 12 hours prior to the scheduled sea trials.

3.5.1 The Contractor must provide a pier facility (or allow the cutter to move to a Coast Guard pier) in order to support dock trials. Dock trials may not be conducted while the cutter remains floating inside the dry-dock (not touching the blocks).

3.5.2 During dock trials, the Contractor must ensure the Contractor's personnel observe tests under their cognizance and make such adjustments and repairs, as required.

3.6 Sea trials. As soon as possible after completion of the dock trials, the Contractor must coordinate performance of the seal trials, based on the operational tests, as required in the applicable work items, for the following purpose:

- Performing tests that could not be performed while the ship was moored.
- Serving as final step in proving the success of the overhaul/repair tasks required in the designated work items, and ensuring that Contractor and COR are both satisfied that the ship is in all respects ready for final acceptance.

3.6.1 The Contractor must have representatives on board the cutter to observe the trials for the purpose of observing whether or not the repairs are satisfactory.

3.6.2 The Contractor must ensure the sea trials are be carried out in free route, away from other shipping, as designated by the COR.

3.7 Post-trial examination. After the completion of the sea trial, the Contractor must perform a careful and thorough examination of parts of the repaired machinery, as designated by the COR. If any part of the ship or its equipment fails to meet contractual requirements during trials, perform additional trials after corrective measures have been taken.

NOTES

1. Examples of dock trials include conducting cold (pre-light off) and hot checks, cycling machinery (rudders, BPU, turning gear, fin stabilizers), and conducting any post-docking shaft alignment verification checks. This time may also be used to on-load fuel, if needed for operations.

2. The conditions of the trials will be determined largely by the character of the work that has been performed in each case, and as designated by the COR. A full power trial should be run at this time unless the COR elects to defer this run until all new machinery parts are run-in or the training status of the crew permits full power operation without undue hazard.

3. This examination may be conducted by the Engineer Officer of the ship, in which case he will report the results of the examination to the COR, fully describing any defects or improper conditions found.

4. Representatives of manufacturers who have furnished ship components may be invited to witness trials subject to approval of the CO or OINC of the ship.

4. NOTES

4.1 Equipment operation. Coast Guard personnel will operate all shipboard machinery and equipment during all tests.

WORK ITEM 35: Oily Water Separator, Replace

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to remove the existing oil water separator (OWS) system S1-2T-A and install a new government-furnished Boss® Model 2.2T-107 YM OWS system, including installation of a new overboard discharge.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	Boss 2.2 GPM OWS	NSN: 4330-01-F13-3461 PN: BOSS 2.2T-107 YM	1 ea.	14,300.00

***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 Service Center.**

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 185-001, Rev -, Foundation Incidental to Boss 2.2 GPM OWS Installation

Coast Guard Drawing 175 WLM 202-002, Rev G, MPCMS Wiring Data (COED)

Coast Guard Drawing 175 WLM 256-001, Rev J, Seawater Cooling System Diagram

Coast Guard Drawing 175 WLM 262-002, Rev H, Waste Oil System Diagram

Coast Guard Drawing 175 WLM 320-001, Rev AL, Electrical One-Line Diagram

Coast Guard Drawing 175 WLM 320-004, Rev G, Power System Deck Plan ER and Pump Rm Hull Block 920

Coast Guard Drawing 175 WLM 320-012, Rev -, Power System Mods Incidental to OWS Removal/Installation One-Line Diagram

Coast Guard Drawing 175 WLM 593-002, Rev H, Oily Bilge System Diagram

Coast Guard Drawing 175 WLM 593-013, Rev C, Oily Water Separator A&D

Coast Guard Drawing 175 WLM 593-014, Rev A, OWS System Operating Instructions BOSS 2.2T-107-YM

Coast Guard Drawing 175 WLM 601-001, Rev T, General Arrangement Inboard & Outboard Profiles

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3605A, Nov 2007, MPCMS Operating Manual (Volume 1)

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

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

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

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2020, Temporary Hull Accesses

OTHER REFERENCES

Recovered Energy, Inc, BOSS 107 Separator System Operation & Maintenance Manual – YM Model3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep. The Contractor shall provide the services of an OEM authorized/ licensed Tech Rep for the Boss® Model 2.2T-107 YM OWS system 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.

3.1.2.1 Ensure the Tech Rep is an OEM Certified Representative for the system/equipment stated above.

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

3.1.3 Protective measures. The Contractor shall 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 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). Known interferences include, but are not limited to the following:

- Piping.
- Deckplates.
- Grating.
- Electrical fixtures.

3.1.5 Temporary access openings. With express permission of the KO via submission of a CFR and in accordance with SFLC Std Spec 8636, the Contractor may perform all work required to cut open and close temporary access openings to facilitate accomplishment of the work specified herein.

3.1.6 Electrical work. The Contractor shall 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.

3.2 Removals. The Contractor shall accomplish the following:

3.2.1 Disconnect the power cable (3-62-2-1L-M) from the OWS to the power panel (3-62-2, Circuit "M") and dispose.

3.2.2 Remove reference to the OWS on Circuit "M" of the 120 VAC lighting panel (3-62-2). Furnish and install a new nameplate label titled "SPARE".

3.2.3 Disconnect the MPCMS alarm cables (K-MPC-R414) and (K-MPC-R442) from the OWS. Tie back existing wires and properly tag/label in support of reconnection.

3.2.4 Cut and cap all existing piping connections to the existing seawater cooling, oily bilge water, OWS discharge, waste oil, and OWS recirculation piping. Refer to Coast Guard Drawing 175 WLM 593-013 for guidance.

3.2.5 Seal all pipe openings 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.

3.2.6 Remove the existing OWS unit and associated components located in the Engine Room (3-61-0-E). Drain all residual fluids from the OWS and associated piping.

3.2.7 Remove the existing OWS foundation and drip pan. Refer to Coast Guard Drawing 175 WLM 185-001 for guidance.

3.2.8 Dispose of the removed OWS system and associated components in accordance with all applicable Federal, state, and local regulations.

3.3 Inspections. The Contractor shall accomplish the following, submitting a CFR upon completion.

3.3.1 Inspect the exposed hull plating and structural members in the vicinity of the removed OWS for signs of deterioration.

3.3.2 Take a total of 25 UT measurements in accordance with SFLC Std Spec 0740, Appendix C in locations designated by the Coast Guard Inspector.

3.3.3 Inspect all system piping and flanges which interface with the removed OWS for signs of pitting and deterioration.

3.3.4 Inspect the disconnected MPCMS alarm cables for signs of chafing and deterioration.

3.4 Fabrication and installation. The Contractor shall accomplish the following in accordance with Coast Guard Drawings 175 WLM 185-001, 175 WLM 320-012, and 175 WLM 593-013.

3.4.1 Fabricate and install a new OWS foundation.

3.4.2 Fabricate and install a new drip pan.

3.4.3 Modify the grating as necessary to suit the new foundation and OWS.

3.4.4 Install the new government-furnished OWS and associated components.

3.4.5 Install new system piping for the following services:

- Oily water suction piping from the OWS unit inlet oily water connection to the existing oily bilge water system piping.
- Oily water recirculation piping from the OWS unit oily water recirculation connection to the existing oily water recirculation piping system.
- Waste oil piping from the OWS unit dirty oil discharge connection to the existing waste oil system piping.
- Seawater inlet piping from the OWS unit clean water inlet connection to the existing seawater cooling piping.
- Processed water piping from the OWS unit processed water connection to the new overboard discharge connection.
- Dirty oil drain piping from the new drain pan under the OWS unit to the existing waste oil system piping.

3.4.6 Install new LSTNW-4 cable from the 450 VAC power panel (3-62-1) - Circuit “G” existing 15 amp breaker to the OWS.

3.4.7 Locate the disconnected MPCMS cabling and reconnect as follows:

- Cable K-MPC-R414 to voltage free contact, PWR and COM.
- Cable K-MPC-R442 to voltage free contact, PPM ALRM and COM.

3.5 Testing. The Contractor shall accomplish the following:

3.5.1 Hydrostatic test. Hydrostatically test all new piping 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. Refer to Coast Guard Drawing 175 WLM 593-013 (Sheet 1 – Test Notes). Submit a CFR.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.5.2 Operational test, post installation. After completion of installations and in the presence of the Coast Guard Inspector, thoroughly test and demonstrate the OWS system to be in satisfactory operating condition. Submit a CFR.

- Ensure the OWS can satisfactory operate in recirculation mode.
- Underway testing.
- Ensure zero visible leakage from or deformation of mechanical parts by repairing all leaks and discrepancies.

NOTE

Operational testing will be performed under direction of the Tech Rep to ensure all system functions are satisfactory.

3.5.2.1 Drydock testing.

3.5.2.2 Underway testing.

3.6 Preservation tasks. The Contractor shall accomplish the following:

3.6.1 Foundation preservation, interior. Prepare and coat the interior foundation surfaces in accordance with SFLC Std Spec 6310, using the system specified for "Bulkheads (Bulkheads and Overheads, Un-insulated Metal)": The Contractor shall apply top/ finish coat color as follows: Black.

3.6.2 Piping. Prepare and coat all new and disturbed piping, as applicable, to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs).

3.7 Pipe labeling. The Contractor shall label affected piping as follows:

3.7.1 Stencil the following onto the pipe 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).

3.7.2 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.

3.8 Placards. The Contractor shall accomplish the following in accordance with Coast Guard Drawing 175 WLM 593-014.

3.8.1 OWS System Diagram and Operating Instructions. Fabricate and install OWS placards as follows:

- Material: Aluminum per ASTM B209 Alloy 1000 Photosensitive with black lettering
- Size: 8 ½" by 11"
- Quantity: Two placards (One for system diagram, one for operating instructions)
- Text: Refer to Coast Guard Drawing 175 WLM 593-014

- 1st Placard – Sheets 2, 3, & 4
- 2nd Placard – Sheet 5

- Location: Affix in vicinity of OWS using suitable adhesive, as directed by CG Inspector

3.8.2 Overboard Discharge. Fabricate and install an overboard discharge placard as follows (Refer to Figure 1):

- Material: ¼" poly metal (plastic core between two aluminum sheets), red background with 1/8" white lettering
- Size: 5" by 8"
- Quantity: One placard
- Text: Refer to Coast Guard Drawing 175 WLM 593-014, Sheet 2
- Location: Affix in vicinity of newly installed overboard discharge using suitable adhesive, as directed by CG Inspector

NOTE

Existing overboard discharge should have discharge placard installed previously. Notify the CG Inspector if existing placard is missing.

3.9 Redlined drawing deliverable(s). The Contractor shall "red-line" any Coast Guard drawings listed in Section 2 "References" to reflect any work or deviations specified in this work item in accordance SFLC Std Spec 0850.

3.9.1 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.

3.9.2 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

4. NOTES

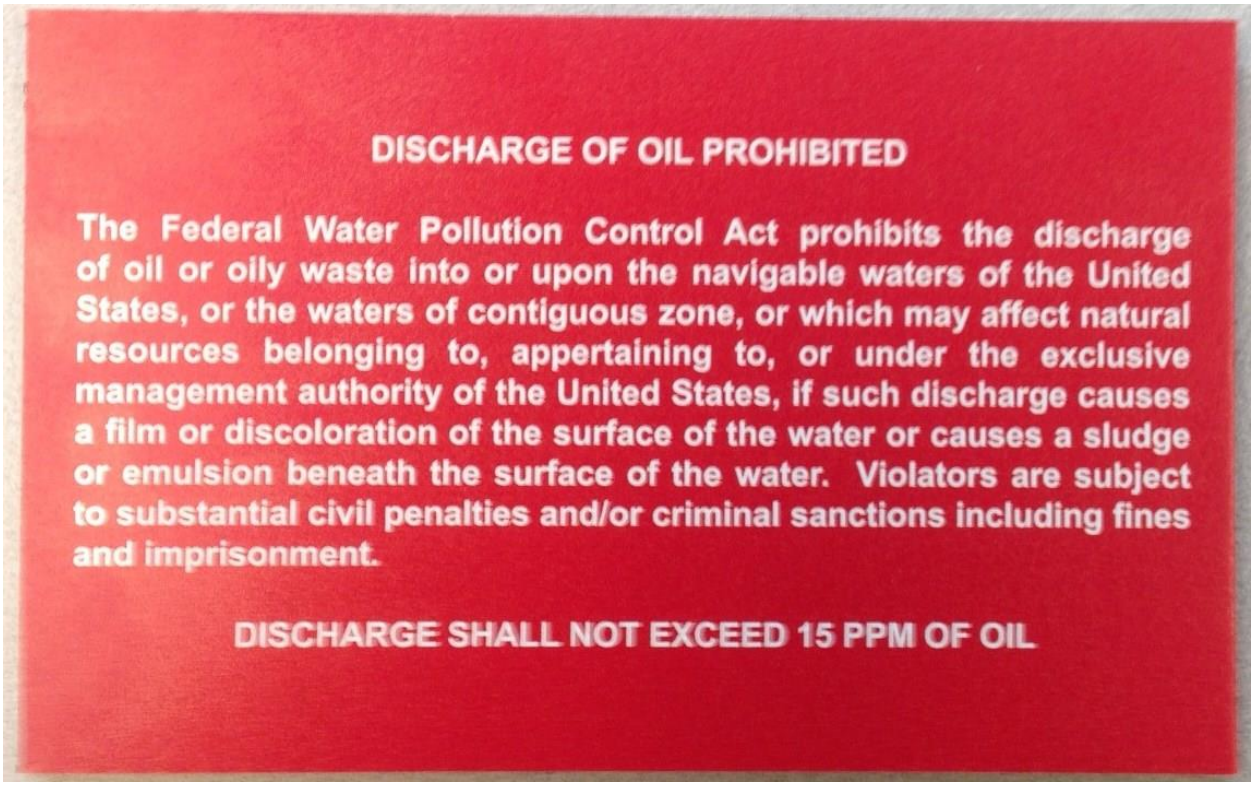


FIGURE 1: OVERBOARD DISCHARGE PLACARD

WORK ITEM 36: Single Point Davit Winch, Replace

1. SCOPE

1.1 Intent. The intent of this item is to replace Allied Single Point Davit (SPD) Winch P/N 42323 with Allied SPD winch PN 49396. The Allied SPD winch P/N 42323 has been declared obsolete.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
Y	Winch, Boat Davit	NSN: 2030-01-505-1581 PN: 49396	1 ea	$22,366.77
N	Wire Rope Assembly, 75', 5/8", 6x37, IWRC, EIPS	NSN: 4010-01-602-8365	1 ea	600.00

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

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM 549-1, Rev C, Onboard Lubrication Requirements

Coast Guard Drawing 175-WLM 601-1, Rev G, General Arrangement, Inboard and Outboard Profiles

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3632, 07-JAN-97, Manufacturers Instruction Book-SWBS Group(s) 582-583

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

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following locations:

- Table 1 Task 1

3.1.2 Tech Rep. The Contractor shall provide the services of a qualified Tech Rep who is familiar with the Allied SPD model D6000FCT to do the following, on site:

- Advise on manufacturer's proprietary information pertinent to the system.
- Assist with proper installation, calibration, and operation.
- Ensure compliance with manufacturer's procedures and standards during winch installation and operation.

3.1.2.2 Ensure the Tech Rep has a résumé of demonstrated experience with the system/equipment stated above.

3.1.2.3 Submit a copy of the Tech Rep's résumé and a list of references to the COR at the Arrival Conference.

3.1.3 Protective measures. The Contractor shall 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 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.

3.1.3.1 Protective measures – hydraulic system(s). The Contractor shall 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, the Contractor shall completely 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.

NOTE

Plastic bags may be used only when arrangement or configuration prevents the use of the other sealing methods specified above.

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 below-listed:

- Piping
- Electrical wiring
- Small Boat

3.2 Tasks to be accomplished. The Contractor shall perform the tasks designated in Table 1 below in accordance with SFLC Std Spec 5000, TP-3632, CG Dwgs 175-WLM 549-1, and 175-WLM 601-1.

TABLE 1- TASKS

#	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	SPD Assembly	3.2.1 (Operate and Inspect)	Submit a CIR.
2	Remove	1	Wire Rope Assembly 4010-01-602-8365		Remove wire rope and discard as scrap.
3	Remove	All	Winch Hard Piping		Remove all winch piping and discard as scrap.
4	Disconnect, remove, clean, and inspect	1	SPD Winch Assembly component		Remove the downstop control mechanism from the winch, clean and inspect for reuse. Submit CFR.
5	Unbolt, remove, and turn-in Installed Winch	1	SPD Winch PN 42323	3.1.6 (Turn-in)	Turn-in to the CG inspector for disposition.
6	Clean, and Inspect	1	SPD Winch foundation plate		Submit CFR.
7	Enlarge Holes	4	SPD Winch mounting holes/foundation		Drill mounting holes in the davit winch base plate to 0.810 inch to accept ¾ inch winch mounting bolts. Ensure that fleet angle will not change.
8	Check	1	SPD Winch P/N: 49396		Check Oil Levels
9	Partially preserve	1	SPD Winch foundation plate	3.2.4.2 (Partially Preserve)	
10	Install Replacement Winch	1	SPD Winch PN 49396		GFP. Provide all fasteners in accordance with TP 3632. Torque each mounting bolt to 340 ft-lb, dry.
11	Install	1	SPD Winch Assembly component		Downstop Control Mechanism
12	Renew	5	Hydraulic Hose Assembly	C2.2 (Hose assemblies)	Fabricate and install all hoses in accordance with Std Spec 5000.
13	Hydrostatic test	5	Hydraulic Hose Assembly		Hydrostatically test to 200% of working pressure.
14	Fabricate and Install	5	Hose Label Plate		Hose label plate in accordance with Std Spec 5000.
15	Partially preserve	1	SPD Assembly	3.2.4.2 (Partially Preserve)	Disturbed area.
16	Install Wire Rope	1	Wire Rope Assembly 4010-01-602-8365		GFP
17	Groom and Lubricate	1	SPD Assembly	3.2.6 (Groom and Lubricate)	
18	Operational test and Weight Test	1	SPD Assembly	B2.7 (Davit)	No-load operational test. Static Load Test Weight: 6,000 (+300, -0) pounds

#	TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
					Dynamic Load Test Weight: 5,000 (+250, -0) pounds Rated Load Test Weight: 4000 (+0, -200) pounds Submit CFR.)
19	Fabricate and Install	1	Label Plate	B2.9 (Label Plates)	
20	Weatherize	5	Hose fittings	C2.2.1.2.2 (Weatherization)	

4. NOTES

4.1 Retention of wire rope manufacturer's test certification and serial number. Ship's crew will retain the wire rope manufacturer's test certification and serial number. This certification MUST be produced during the BHS visits, in order to allow crane to be operated.

WORK ITEM 37: Heat Exchangers; Clean, Inspect And Hydro

1. SCOPE

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

TABLE 1 – HEAT EXCHANGERS

DESCRIPTION	LOCATION	QTY
MDE Jacket Water Coolers	Engine Room, 3-61-0-E	2
SSDG Jacket Water Coolers	Engine Room, 3-61-0-E	3
Main Hydraulic System Fluid Cooler	HPU Room, 3-15-0-E	1
Z-Drive Hyd. Fluid Cooler	Prop. Thrust Room, 3-88-0-E	2
Z-Drive Lube Oil Cooler *	Prop. Thrust Room, 3-88-0-E	2

* Gasket part numbers 5330-01-449-2451 and 5330-01-449-2479, 2 each. All other coolers, see Coast Guard drawings for gasket requirements.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
Y	Z-Drive Hyd. Fluid Cooler	NSN: 4420-01-505-9267	2 ea.	7,725.00
Y	Z-Drive Lube Oil Cooler	NSN: 4420-01-603-3557	2 ea.	3,910.00
N	Heat Exchanger, Gasket	NSN: 5330-01-449-2451	2 ea.	22.53
N	Heat Exchanger, Gasket	NSN: 5330-01-449-2479	2 ea.	18.66

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 201-001, Rev D, Machinery Spaces Arrangement

Coast Guard Drawing 175 WLM 256-001, Rev K, Seawater Cooling System Diagram

Coast Guard Drawing 175 WLM 256-003, Rev D, Seawater Cooling System FR 61 Forward

Coast Guard Drawing 175 WLM 256-004, Rev J, Seawater Cooling System Arrangements and Details

Coast Guard Drawing 175 WLM 256-005, Rev -, Z-Drive Lube Oil Heat Exchanger Tube Bundle, Replacement and Piping Mods

Coast Guard Drawing 175 WLM 256-012, Rev B, Auxiliary Seawater System Piping Mods

COAST GUARD PUBLICATIONS

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

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2020, Temporary Hull Accesses

OTHER REFERENCES

Commercial Item Description (CID) A-A-59588, 2013, Rubber Silicone

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall 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 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.

3.1.3.1 Install blanks on the open ends of piping to prevent any contamination or foreign debris from entering the affected systems. Ensure that all cleaning equipment or media used in the cleaning process do not cause any damage to cooler components.

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 below-listed:

Piping and hoses

Filters

Deck plating and associated framing

Electrical cables

Thermal insulation.

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.

3.2 Environmental compliance. The Contractor shall dispose of all waste fluids in accordance with all Federal, state and local regulations. 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.

3.3 Disassemble. The Contractor shall drain and disassemble the designated heat exchangers (see paragraph 1.1 (Intent)) to the extent necessary to perform all work specified herein. Refer to Coast Guard Drawings 175 WLM 201-001, 175 WLM 256-001, 175 WLM 256-003, 175 WLM 256-004, 175 WLM 256-005, and 175 WLM 256-012 for guidance.

3.3.1 Perform all disassembly and reassembly in accordance with manufacturer-recommended procedures using manufacturer-recommended tooling to ensure parts are reinstalled in proper sequence and configuration.

3.4 Inspection. Before cleaning is begun, the Contractor shall visually inspect all heat exchanger surfaces for excessive deterioration and any other defects. Submit a CFR.

3.5 Cleaning requirements. The Contractor shall clean all interior and exterior heat transfer surfaces to a state free of all debris, scale and surface contaminants in accordance with the heat exchanger manufacturer’s recommendations, and in compliance with all Federal, state, and local environmental regulations.

3.5.1 Ensure that chemical cleaners do not damage the environment, heat exchanger or the vessel.

NOTE

Historically, chemical cleaning has been necessary to thoroughly clean most heat exchanger tubes.

3.6 Reassembly. After authorized repairs, if any, the Contractor shall reassemble each heat exchanger.

3.6.1 Renew all software (seals, gaskets, O-rings, lantern rings).

3.6.2 Renew isolation fittings/mounts and fasteners if disturbed. Apply silicone rubber sealant conforming to CID A-A-59588 around all fasteners, nozzles or gaskets that penetrate the hull.

3.6.3 Renew all hoses, thermostats and anodes as applicable.

3.6.4 Refill all heat exchanger fluid levels in accordance with manufacturer and vessel specifications. Prior to recirculation through the engines, the Contractor shall test the jacket water for chloride and nitrite concentrations in accordance with manufacturer recommendations in the presence of the Coast Guard Inspector. Submit a CFR.

3.7 Reinstallation. After completion of testing and all authorized repairs, if any, the Contractor shall reinstall each cooler (if previously removed). Where applicable, renew all zinc electrode plates, gaskets, and recessed hex-head bolts in accordance with the manufacturer's specifications. Apply a copper-based anti-seize compound on all bolts, and torque in accordance with manufacturer's specifications.

3.8 Touch-up preservation, general. The Contractor shall 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.)

3.9 Cleanliness requirement. The Contractor shall ensure that all cleaned surfaces are one hundred percent free of debris and surface contaminants. Submit a CFR.

CAUTION

Extreme precaution must be taken to not exceed manufacturer's recommended test pressure during hydrostatic testing.

3.10 Pressure test. After all authorized work is complete and prior to reconnecting the heat exchanger(s), the Contractor shall pressure test each heat exchanger to the manufacturer's recommended test pressure in accordance with the applicable Coast Guard drawing listed under Section 2 (References). In the absence of a specified test pressure noted in the Coast Guard drawing, the Contractor shall pressure test each heat exchanger in accordance with paragraph C2.7 (Heat exchangers and fluid coolers) of SFLC Std Spec 5000. Ensure zero leakage from or permanent deformation of pressure-containing parts by repairing all leaks, deformations, and discrepancies. Submit a CFR.

3.11 Label plates. The Contractor shall attach an anodized aluminum test data plate to each heat exchanger using epoxy resin cement. Ensure that each plate is engraved with ¼-inch high letters, stating the following:

Test pressure.

Test date.

Testing facility.

NOTE

If the heat exchanger design makes mounting a test data plate impractical, the Government reserves the right to request written documentation of the above-listed testing data in lieu of a test data plate, at no additional cost to the Government.

3.12 Leak test. After reconnecting the heat exchanger(s) on the vessel (and post undocking, if applicable), the Contractor shall perform an operational test of the heat exchanger and associated system piping for

one hour 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.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 38: Handrails and Stanchions, Inspect, Repair or Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect then repair or renew all sections of handrail and stanchions as necessary and as identified in Table 1.

TABLE 1 - HANDRAIL/ STANCHION SECTIONS

COMPONENT	QUANTITY	DIAMETER (INCHES)	MATERIAL	LOCATION
Top Handrail	60 IN 96 IN 12 IN	1 ¾ IN	Steel, Schedule 40	01 Deck FR89 P, FOCSL' FR 1 P, 01 Deck FR68 S
Middle Handrails	12 IN, 64 IN 48 IN 24 IN 96 IN 18 IN 48 IN 30 IN 12 IN 12 IN 24 IN 12 IN 16 IN	1 ¼ IN	Steel, Schedule 40	01 Deck FR93 P, FOCSL' FR10 P, 01 Deck FR 89 P, 01 Deck FR93 P, 01 Deck FR93 C/L P, 01 Deck FR93 S I/B, 01 Deck FR93 S O/B, 01 Deck FR72 P, 01½ Deck FR48 P, FOCSL' FR1 P, FOCSL' FR12 P, FOCSL' FR17 P, FOCSL' FR21 P
Bottom Handrails	24 IN, 12 IN, 24 IN, 12 IN, 96 IN, 12 IN, 12 IN, 48 IN, 12 IN, 12 IN, 12 IN, 12 IN, 72 IN, 12 IN, 12 IN, 84 IN, 84 IN, 12 IN,	1 ¼ IN	Steel, Schedule 40	01 Deck FR89 P, 01 Deck FR91 P, 01 Deck FR100 P, 01 Deck FR100 P, 01 Deck FR100 P, 01 Deck FR100 S, 02 Deck FR80 S, 02 Deck FR80 P, 03 Deck FR76 P, FOCSL' FR12 P, 01 Deck FR72 P, 01 Deck FR79 P 02 Deck FR72 P, 02 Deck FR84 P, 02 Deck FR79 P, FOCSL' FR8 S, FOCSL' FR15 S, FOCSL' FR23 S, FOCSL' FR20 S,

	6 IN, 12 IN, 12 IN,			FOCSL' FR8 P, FOCSL' FR21 S FOCSL' FR23 S
Diagonal Stanchion Rail	12 IN, 12 IN, 12 IN, 12 IN, 36 IN, 12 IN, 12 IN, 12 IN	1 ¾ IN	Steel, Schedule 40	02 Deck FR84 S, 03 Deck FR69 P, 03 Deck FR66 P, 01 Deck FR58 S, FOCSL' FR1 S, FOCSL' FR4 S, FOCSL' FR1 P, FOCSL' FR21 P
Stanchions	12 IN, 12 IN, 12 IN, 12 IN, 12 IN, 12 IN, 12 IN, 12 IN, 36 IN, 48 IN, 48 IN, 12 IN, 20 IN, 60 IN, 12 IN, 24 IN, 8 IN, 8 IN, 8 IN, 16 IN, 18 IN, 12 IN, 12 IN, 12 IN, 12 IN, 24 IN, 12 IN	2 ½ IN	Steel, Schedule 40	02 Deck FR67 P, 02 Deck FR74 S, 02 Deck FR76 S, 02 Deck FR80 P, 03 Deck FR68 P, 03 Deck FR69 P, 03 Deck FR70 S, 03 Deck FR72 P, FOCSL'FR5 P, FOCSL'FR13 P 01 Deck FR89 P, 01 Deck FR70 S, 01 Deck FR79 P, 02 Deck FR86 P, 02 Deck FR65 P, 02 Deck FR87 C/L 02 Deck FR86 S, 02 Deck FR67 S, 02 Deck FR83 S, 03 Deck FR80 C/L, 03 Deck FR80 P, 03 Deck FR76 P, 03 Deck FR67 P, 02½ Deck FR60 S, 01½ Deck FR48 P, 01 Deck FR58 S, FOCSL' FR23 P

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM-612-001, Rev G, Lifelines/Rails & Stanchions

Coast Guard Drawing 175-WLM-601-003, Rev N, Booklet of General Plans

COAST GUARD PUBLICATIONS

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

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Requirements for Welding and Allied Processes

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.

Not applicable.

3.1.3 Protective measures. The Contractor shall 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 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). Known interferences include, but are not limited to the following:

- Hull insulation
- Handrail attachments
- Mounting plates
- Caps
- Gooseneck vents
- Deck covering
- Proximity to edge of deck

- Cleats
- Cofferdams
- Life Ring Brackets
- Weather Deck Piping
- Mooring chock
- Electrical Receptacles and Mounting Plate
- Gas Can Shelving
- Small Boat Davit Controlling Station
- Buoy Lighting Charging Rack
- Sound Powered Phone Storage Box
- Deck Flood Lighting
- Gun Mounts
- Exterior Ventilation Ducting
- Weather Deck Lighting Fixtures
- Wiring Stud Mounts
- FWD Mast and Braces
- Antenna Mounts
- Pyrotechnics Storage Containers
- Adjacent compartment internal bulkhead/Overhead insulation

3.2 Inspect repair renewal. The Contractor shall inspect and repair or crop out, scrap, and renew designated handrails and/or stanchions as identified in Table 1, using the Coast Guard drawings listed in Section 2 (References) for guidance. Retain all mounting brackets and/or fixtures for re -use, if applicable. Submit a CFR.

3.3 Ultrasonic thickness (UT) measurement. The Contractor shall take a total of 03UT measurements of the plating adjacent to the rails/stanchions designated for renewal (after removing the stanchions, and prior to installation of new stanchions), in locations designated by the Coast Guard Inspector, in accordance with SFLC Std Spec 0740, Appendix C. Use Coast Guard drawing (s) listed in Section 2 (References) as guidance. Submit a CFR.

3.4 Boundary test, generic. The Contractor shall verify the integrity of all boundaries affected by this work item using one of the methods described in SFLC Std Spec 0740, Appendix C. Submit a CFR.

3.5 Touch-up preservation. The Contractor shall 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 39: Deck Drains, Inspect, Service & Repair

1.1 Intent. This work item describes the requirements for the Contractor to inspect, service and repair deck drains on the cutter to include all associated piping for the drains in the following locations:

03 WEATHER DECK (03-61-0-X):

03-68-1, 03-70-0, 03-76-0 & 03-76-2

FLY BRIDGE (03½-48-0-X):

03½-57-1, 03½-57-2, 03½-59-1, 03½-59-2

BRIDGE WINGS (02½-58-1-X & 02½-58-2-X):

02½-59-1, 02½-59-2

02 WEATHER DECK (02-61-3-X & 02-61-4-X & 02-80-0-X):

02-63-1, 02-65-2, 02-80-1 & 02-80-2

CAT WALKS (01-50-1-X & 01-50-2-X):

(See 01 Weather Deck)

01 WEATHER DECK:

(01-50-1-X & 01-50-2-X, 01-52-1-X, 01-52-2-X, 01-69-1-X & 01-69-2-X):

CHANGE OUT ROOM (1-52-3-Q):

1-57-1

MESSDECK (1-61-0-L):

1-67-1

GALLEY (1-61-2-Q):

1-65-2, 1-66-2, 1-72-2 & 1-73-4

SCULLERY (1-76-2-Q):

1-77-2

MAIN WEATHER DECK:

1-48-1, 1-48-2

1.2 Government-furnished property.

None

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM -528-001, Rev F, Plumbing and Interior Deck Drains Diagram

Coast Guard Drawing 175-WLM -528-002, Rev M, Weather Deck Drains Diagram

Coast Guard Drawing 175-WLM-528-009, Rev H, Weather Deck Drains A/D Hull Block 910,920,930,940,960,970

COAST GUARD PUBLICATIONS

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

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

OTHER REFERENCES

The Society for Protective Coatings (SSPC)/NACE Joint Surface Preparation Standard SSPC-SP 10/NACE No.2, 2004, Near-White Blast Cleaning

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.11 (SSPC-SP 11), 2004, Power Tool Cleaning to Bare Metal

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Protective measures. The Contractor shall furnish and install suitable covering to seal off and protect all non-affected surfaces/equipment and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, remove protective material and inspect for the presence of contamination. Clean all equipment and spaces, contaminated due to improper protection, to original condition of cleanliness.

3.1.3 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 below-listed:

- Ventilation ducting.
- Piping.

- Deck drains.
- Electrical wiring.

3.2 Drains and Associated Piping, Inspect, Service and Repair. The Contractor shall perform all tasks specified in SFLC Std Spec 0740 and, as necessary, herein, to inspect, service and repair the drains and associated piping in the locations specified as in Section 1.1 using Coast Guard Drawings 175-WLM -528-001, 175-WLM -528-002 and 175-WLM -528-009 as reference.

3.2.1 Where possible, cut all edges along existing seams. Corners shall intersect plating seams at 90 degree angles. Corners that are not formed by designed plating seams shall have a minimum radius of, three inches, or one-eighth of the transverse dimension of the cut, whichever is greater.

3.2.2 Ensure that welding does not warp or cause any distortion to adjacent plating.

3.3 Crop out, as necessary, and retain the drain for use as templates in accordance SFLC Std Spec 0740. Submit a CFR,

3.4 Crop out, scrap and renew, as necessary, deck drains in accordance with SFLC Std Spec 0740 and Coast Guard Drawing 175-WLM-528-002 and 175-WLM-528-009. Submit a CFR.

3.5 Fabricate, as necessary, the missing grating cover in according with Coast Guard Drawing 175-WLM- 528-002 and 175-WLM-528-009. Submit a CFR,

3.6 Weld Joint Inspections

3.6.1 In the presence of the Coast Guard Inspector, visually inspect and perform a magnetic particle test on 10% all new welds in accordance with AWS D1.1. Test acceptance standards shall be in accordance with AWS D1.1. Repair all weld deficiencies and retest.

3.6.2 Upon completion of all welding, perform a liquid film bubble emission test on all water tight boundaries (hull plating welds) in accordance with SFLC Std Spec 0000.

3.7 Provide a written report of all nondestructive test findings to the Coast Guard Inspector.

3.8 Surface Preparation – Upon completion of successful nondestructive testing, prepare all new and disturbed exterior areas in accordance with SSPC-SP 10. Prepare all new and disturbed interior areas in accordance with SSPC-SP 11. Feather the surrounding surfaces to obtain a 3-inch wide smoothly tapered boundary from the existing paint to the prepared surface.

3.8.1 Prior to applying any paint, remove all dust, grease, oil, or other contaminants from all prepared areas in accordance with applicable local, state, and federal laws and regulations.

3.8.2 The Coast Guard Inspector will verify all surface preparation.

3.8.3 Upon verification from the Coast Guard Inspector on all surface preparation, prime and coat all prepared surfaces to match existing adjacent surfaces in accordance with the applicable sections of General Requirements. For surfaces to be covered with insulation, apply primer coats only.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 40: Watertight Door (External), Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew the external watertight door identified in Table 1.

TABLE 1 - WATERTIGHT DOOR LOCATION

DESCRIPTION	LOCATION	DRAWING
26 IN x 66 IN QA Watertight Door 1-15-2, Steel, LH Swing	1-10-0-Q	NAVSEA 803-6397268

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	26 IN x 66 IN QA Watertight Door, Steel, LH Swing; W/O Fixed Light	NIIN: 014863599	1	5894.27

***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 Service Center.**

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM-601-001, Rev T, General Arrangement Inboard and Outboard Profiles

Coast Guard Drawing 175-WLM-167-001, Rev L, Structural Closures

COAST GUARD PUBLICATIONS

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

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

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

OTHER REFERENCES

Commercial Item Description (CID) A-A-59316, 2003, Abrasive Materials for Blasting

The Society for Protective Coatings (SSPC)/NACE International (NACE) 2006, Joint Surface Preparation Standard SSPC-SP 10/NACE No.2, Near-White Blast Cleaning

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.11 (SSPC-SP 11), 2012, Power Tool Cleaning to Bare Metal

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall 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 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).

NOTE

Geometric dimensioning and tolerance variances and minor hardware differences are to be expected with the Government-furnished closures. These variances and differences are not limited to the following: location and physical size of the hinge assemblies; location, physical size, and number of flush mounted pockets; location, size, and orientation of securing devices.

3.2 Renewal. The Contractor shall crop, remove, and dispose of the door identified in Table 1 of this work item, in accordance with SFLC Std Spec 0740.

3.2.1 Install GFP door in place of that removed. When GFP door is not provided, the Contractor shall fabricate and install new door.

3.2.2 Perform all necessary modifications not limited to relocation, fabrication and installation of a new securing device, and modifications to ensure all renewed items properly fit and function.

3.2.3 At the direction of the Coast Guard Inspector, perform all necessary relocation and modification of securing latches.

3.2.4 Provide and install new gaskets and fasteners for each new installation identified in Table 1.

3.3 Testing. Upon complete renewal of each structural closure, the Contractor shall perform the following boundary tests and submit a CFR:

- chalk test
- water hose test

NOTE

Do not paint knife-edges, gaskets, or any moving parts; including dogs, nuts, wedges, spindles, yokes, packing, connecting rods and hinge pins.

3.4 Preservation. The Contractor shall prepare and coat the surfaces of all installed items identified in Table 1 of this work item, and all disturbed surfaces to match existing adjacent area, in accordance with Table 2 and as determined by the surface material to be preserved.

TABLE 2 – SURFACE PREPARATION AND COATING

	PREPARATION		**COATING**	
SURFACE	**STEEL**	**ALUMINUM**	**STEEL**	**ALUMINUM**
DOOR EXTERIOR/ SCUTTLE TOP	SSPC-SP10/NACE No. 2, using grit conforming to MIL-A-22262 (1.5 to 2.5 mil anchor profile) -Or- SSPC-SP 11 (1.0 mil anchor profile)	Brush blast to bare metal with clean, fine aluminum oxide, garnet or equivalent inert material conforming CID A-A-59316, Type I & IV (1.0-1.5 mil anchor profile). -Or- Power tool clean, using non-metallic abrasive padding, to remove all coatings and contamination.	SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems)	
DOOR INTERIOR/ SCUTTLE BOTTOM	SSPC-SP 11 (1.0 mil anchor profile)	Power tool clean, using non-metallic abrasive padding, to remove all coatings and contamination.	SFLC Std Spec 6310 , Appendix B (Cutter and Boat Interior Painting Systems) “Door, Joiner, Option I”	

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 as defined in the following; submit a CFR.

- Closures are properly secured, to prevent accidental or unintentional movement.
- Securing latches adequately engage closures and positively lock into place without excessive force or manipulation by the operator.

4. NOTES

4.1 Damage control decals. Ship's force will apply damage control decals.

WORK ITEM 41: Stuffing Tubes, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements to replace and renew for kickpipe stuffing tubes of cables on CGC MARIA BRAY (WLM562).

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM 320-1, Rev AJ, Electrical One-Line diagram

Coast Guard Drawing 175-WLM-422-1, Rev G, Navigation, signal & Searchlight Block, Isometric and Arrangement

Coast Guard Drawing 175-WLM-422-2, Rev F, Navigation, signal & Searchlight Elementary Wiring Diagram

COAST GUARD PUBLICATIONS

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

Surface Forces Logistics Center Standard Specification (SFLC Std Spec) 0740, 2020, Welding and Allied Processes

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

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

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

OTHER REFERENCES

MIL-STD-2003-3A, Sep 2009, Electric Plant Installation Standard Methods for Surface Ships & Submarines (Penetrations)

Mil-S-24235/9E, 1992, Stuffing Tubes, Metal, And Packing Assemblies For Electric Cables, Brass and Steel, for Decks and Bulkhead With Pipe Protection.

MIL-I-3064, Mar 1991, Insulation, Electrical, Plastic-Sealer

Mil-DTL-24643/15, Power and Lighting, Watertight, Circuit Integrity

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall 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 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). Known interferences include, but are not limited to the following:

- Compartment overhead insulation
- Cables listed in Table I below.

3.1.5 Welding. The Contractor shall perform all welding and nondestructive inspections in accordance with SFLC Std Spec 0740. The patched welding plate shall be the same material and thickness of the deck.

3.2 Cable removal. The Contractor shall remove cables all cables identified in Table 1 of this Work Item.

3.2.1 Disconnect the cables at connection points as listed in Table 1 below per Section 3.3 of SFLC Std Spec 3042. The affected circuits are shown in the referenced Coast Guard Drawings.

3.2.2 Pull each disconnected cable listed in Table 1 and coil out of the way. Protect exposed cable ends, jacks, receptacles, and connectors from water and foreign material intrusion.

3.3 Stuffing tubes. The Contractor shall renew all affected stuffing tubes identified in Table 1 of this Work Item.

3.3.1 Crop out the stuffing tubes and replace with the new kickpipe or swage tube of standard or extra heavy wall thickness with like material.

3.3.2 Select, space, and install tubes in accordance with MIL-STD-2003-3.

3.3.3 Use the installation method of Figure 3D1 (kickpipe and stuffing tube) or 3D2 (swage tube) in Appendix D, welding both sides of the deck plating.

NOTES

A-Team/APM: Make sure to check with the Cutter for the cable sizes as listed on TABLES 1 and 2 are correct to comply with the proper stuffing tube and Packing Assembly on TABLE 3 in according with MIL-2003-3A and Mil-S-24235/9E.

3.4 Cable reinstallation. The Contractor shall reinstall and reconnect the cables listed below in Table 1 per Section 3.3 of SFLC Std Spec 3042. All stuffing tube packing materials shall be new and not older than manufacturer's recommended shelf life. Defer any installation of plastic sealer until after testing of Section 3.8 below is completed.

3.5 Testing. The Contractor shall perform the following tests for each stuffing tube and associated circuit:

3.5.1 The cable insulation resistance test of SFLC Std Spec 3041, as directed by SFLC Std Spec 3042, paragraph 3.3.9.

3.5.2 The water hose test of Appendix C of SFLC Std Spec 0740, as directed by SFLC Std Spec 3042, paragraph 3.3.10, to verify that the plating patch or cable packing and stuffing tube welds are watertight.

3.5.3 The post installation operational test, as directed by SFLC Std Spec 0000, paragraph 3.3.5.1.

3.6 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 SFLC Std Spec 6310.

3.7 Plastic sealer. The Contractor shall apply plastic sealer electrical insulation (MIL-I-3064, Type HF) if required by the installation method of MIL-STD-2003-3 used to install the stuffing tube After satisfactory completion of testing.

TABLE 1 –9-INCH-KICKPIPE AND STUFFING TUBE INSTALLATION LIST

CIRCUIT IDENTIFIER	FUNCTION	DISCONNECTION POINT	CABLE TYPE	SWAGE TUBE SIZE	DECK	FRAME	SIDE
175-WLM-320-1/ -422-1	FWD MSTHEAD LIGHT (N24)	CONENCTION BOX (CB) N-3	LS3SJ14	A (.370)	01	03	STBD
175-WLM-320-1/ -422-1	FWD CENTER TOWING LIGHT/ (RECEPTACLE) (N25)	CONENCTION BOX (CB) N3	LS3SJ-14	A (.370)	01	03	STBD
175-WLM-320-1/ -422-1	FWD LOWER TOWING LIGHT (N21)	CONENCTION BOX (CB) N3	LS2SJ-14	A (.350)	01	03	STBD
175-WLM-320-1/ -422-1	FWD ANCHOR LIGHT (N23)	CONENCTION BOX (CB) N3	LS2SJ-14	A (.350)	01	03	STBD
175-WLM-320-1/ -422-1,-2	AFT ANCHOR LTS (N-17)	RCPT, CONENCTION BOX (CB) N-9, TYPE E,	LS2SJ-14	A (.350)	01	93	CL, AFT
175-WLM-320-1/ -422-1/-2	FANTAIL STERN ANCHOR LTS (N-46)	RCPT, CONENCTION BOX (CB) N-9, TYPE E	LS3SJ-14	A (.370)	01	93	CL, AFT
175-WLM-320-1	FLOOD LTS/ BOAT DECK	(02-63-1)-1L-0, CHART RM PWR PNL (L7)	LSDNW-4	A (0.350”)	01	93	STBD
175-WLM-320-1	HEATER RECEPTACLE	(1-79-3)-IP-J, MN DK PWR PNL (P9)	LSTSGU-4	B (0.449”)	01	93	PORT

4. NOTES

4.1 The following stuffing and swage tube data is provided for information:

TABLE 2 – STUFFING TUBE DATA

CABLE		KICKPIPE SIZE	MILITARY PART NUMBER		
TYPE	MAX DIAMETER (MILS)		STEEL STUFFING TUBE ASSEMBLY*	STEEL DECK [BULKHEAD] SWAGE TUBE ASSEMBLY*	PREFORMED PACKING ASSEMBLY
LS3SJ14	370	3/8– 18 NPT	M24235/9-121	M24235/17-061 [M24235/17-001	M16685-2IA
LS2SJ-14	350	3/8– 18 NPT	M24235/9-121	M24235/17-061 [M24235/17-001	M16685-2IA
LSDNW-4/(D4)	092	3/8– 18 NPT	M24235/9-121	M24235/17-061 [M24235/17-001	M16685-2IA
LSTSGU-4	449	1/2-14 NPT	M24235/9-122	M24235/17-062	M16685-2IB

* A tube assembly consists of the tube body, gland nut, and gland ring. Order packing separately.

WORK ITEM 42: U/W Body, Preserve (100%)

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to preserve U/W body surfaces.

NOTES

1. The purpose of the preservation tasks covered by this item is to completely remove all existing coatings and recoat the U/W body surfaces with a new coating system.

2. U/W body surfaces are as defined in 4.1 (Definitions) and exclude areas covered by docking blocks, unless the vessel is fleeted for the express purpose of preserving blocked areas.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 601-1, Rev N, Arrangement, Inboard And Outboard Profiles

COAST GUARD PUBLICATIONS

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

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.1 (SSPC-SP 1), 2016, Solvent Cleaning

3. REQUIREMENTS

3.1 General.

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

-
- 3.2.3 Post-surface preparation cleaning and inspection

3.1.2 Tech Rep. The Contractor must refer to SFLC Std Spec 0000, paragraphs 3.2.4.2.1 (Painting contractor certification program requirement) and 3.2.4.2.2 (Coating Tech Rep), for applicable requirements.

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) to the following components, spaces and equipment:

- All scuppers and overboard discharges.
- Waterline area where U/W body coating system interfaces with freeboard coating system (unless freeboard surfaces are also being preserved).
- Fathometer transducer surfaces.
- Sea valve openings.
- Propeller shaft bearings and seals.
- Z-drive seals.
- Propellers.
- Bow thruster propellers and thruster bearings.
- Zinc anodes (unless anodes are being renewed).

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:

- Sea chest grating.

3.1.5 Initial inspection. Prior to removing the existing coating system, the Contractor must inspect and verify whether all draft marks have permanent markings (weld beads or impressions), showing their location on the hull. Submit a CFR.

3.1.6 Water used in preparation and washing procedures. The Contractor must ensure that water used in all surface preparation tasks, including pre-surface preparation wash and water jetting, is of sufficient purity and quality that it does not prevent the surface being cleaned from achieving the required degree of surface cleanliness or non-visible contamination criteria.

3.1.6.1 Ensure that surface preparation water does not contain sediments or other impurities that are destructive to the proper functioning of the cleaning equipment.

3.1.6.2 Ensure that all water used in any surface preparation or cleaning procedures is captured, contained, and all spent water disposed of in accordance with all Federal, state and local regulations.

3.1.7 Surface preparation optional methods. The Contractor has the option of using either high/ultrahigh pressure water jetting or abrasive blasting to achieve the required surface preparation, prior to application of the coating system specified in 3.2 (Preservation requirements). The Contractor may add abrasives to the water jet stream, for one or both of the following reasons:

- Achieving greater productivity.

- Achieving the required surface profile.

NOTES

1. Existing coating system on the U/W body surfaces may have a nominal thickness in excess of that which was originally installed, because of "patch-coats" applied during past drydock availabilities.

2. Water jetting without abrasive addition does not provide any additional anchor profile to the surface, beyond what was present after the previous surface preparation.

3.2 Preservation requirements. The Contractor must accomplish the following tasks:

3.2.1 Pre-surface preparation wash. Accomplish low-pressure (less than 5,000 psi) fresh water wash of all affected surfaces, to remove soluble chlorides and other surface contaminants. Refer to SSPC-SP 1, for guidance.

3.2.2 Surface preparation and coating application.

The Contractor must accomplish the following tasks:

3.2.2.1 The Contractor must prepare and coat the U/W hull surfaces with the system specified for "Underwater (U/W) Body and Boot-Top (U/W Body and Boot-Top, Icebreaker <235', in Salt Water)", in SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems).

3.2.2.2 The Contractor must coordinate U/W Body preservation with side scan/ultrasonic testing if side scan work item is included in availability. If included, the following paragraphs must be applicable:

3.2.2.2.1 The contractor may elect to apply the anti-abrasion icebreaking coating in two coats rather than one to facilitate side scan procedure if approved by the COR. If selecting this option, the contractor must provide a written statement from the coating manufacturer approving the application of the icebreaking coating in two coats to the COR for approval during the Arrival Conference. Include details of incorporation of side scan procedure in the "Preservation Plan," required by SFLC Std Spec 6310, paragraph 3.2.

3.2.2.2.2 If the two-coat option is approved by the COR, the side scan must be performed over first coat. Second coat application must follow completion of side scan. Total DFT of both coats must meet listed DFT of single coat anti-abrasion icebreaker DFT in SFLC Std Spec 6310, Appendix A. Application of coats must be in accordance with manufacturer's overcoating intervals.

3.2.2.3 Ensure that the first AF coat is applied over the AC undercoating, while it is still tacky.

3.2.3 Post-surface preparation cleaning and inspection. After completion of surface preparation and prior to coating application, accomplish the following tasks and submit a CIR.

3.2.3.1 Perform a visual inspection of the prepared U/W body steel substrate.

3.2.3.2 Perform solvent cleaning of all prepared surfaces, in accordance with SSPC-SP 1. Capture, contain, and dispose of all wastes from solvent cleaning, in accordance with all Federal, state and local regulations..

NOTE

Lists of all authorized coating materials and suppliers are listed in SFLC Std Spec 6310, Appendix C (Cutter and Boat Authorized Coatings).

3.2.3.2 .

3.3 Draft mark painting. The Contractor must paint all draft marks with two coats of a “Polysiloxane” or “Silicone Alkyd Enamel” coating, at 2.0-3.0 mils DFT, white (17925).

3.4 In-process quality control. 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”.

3.5 AF system protective measures – in the event of prolong atmospheric exposure. If the vessel will not be refloated within the immersion time as recommended by the coating system manufacturer, the Contractor must employ suitable measures - including but not limited to keeping the coating system wet and away from direct sun light, to avoid film damage that may reduce or impact the final performance of the AF coating system when placed into service.

4. NOTES

4.1 Definitions.

4.1.1 U/W Body. The underwater body is defined as the areas from the bottom of the keel to the upper edge of the boot-topping, as shown on Coast Guard Drawing 175 WLM 601-1, including z-drive structural wells, z-drive nozzles, z-drive lower units, thruster tunnels and associated gratings, sea chests (including the sea chest inlet up to the final connection with the flange face at the sea chest isolation valve(s)) and sea chest-to-sea bay piping, skegs, and gratings.

WORK ITEM 43: Sea Strainers, All Sizes, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew the following sea strainer(s):

TABLE 1 – STRAINERS

SERVICE	SIZE (inches)	TYPE (Duplex/Simplex)	QTY	MANUFACTURER
Between Sea Chest and Sea Bay P-3-3-69-4 and S-3-69-3	8	Simplex Model: BF-150B Bronze w/T-Bolt hinged Cover; Connection Type: 150# Flange)	2	Sureflowl
ASW Pump Suction	3	Duplex (Model: 792FB Bronze w/Yoke Cover; Connection Type: 150# Flange)	1	Mueller

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	**8" Simplex Strainer	BF-150B, with T-bolt hinged cover)	2 ea.	20,000.00
N	**3" Duplex Strainer	NSN: 4730-01-643-2221 PN: 3-792FB (Mueller)	1 ea.	10,400.00

*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 175-WLM 256-001, Rev K, Seawater Cooling System Diagram

Coast Guard Drawing 175-WLM 256-003, Rev D, Seawater Cooling System, Fr 61 Fwd Blocks 910, 920, 930

Coast Guard Drawing 175-WLM 256-004, Rev J, Seawater Cooling System A & D, Hull Blks 940-970

Coast Guard Drawing 175-WLM 256-012, Rev B, ASW System Piping Modifications

COAST GUARD PUBLICATIONS

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

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

OTHER REFERENCES

ASTM International (ASTM) D1330, 2010, Standard Specification for Rubber Sheet Gaskets

Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) G-6032, 2014, Grease, Plug Valve, Gasoline and Oil Resistant, NATO Code Number G-363, Metric

3. REQUIREMENTS

3.1 General.

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

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 below:

- Deck plates and grating
- Associated sea valve and waster pieces.

3.2 Renewal. The Contractor must renew and test the designated strainers (see paragraph 1.1 (Intent)), shown on Coast Guard Drawings 175-WLM 256-001, 175-WLM 256-003, 175-WLM 256-004, and 175-WLM 256-012. The Contractor must accomplish the following for each sea strainer in accordance with manufacturer's recommendations:

3.2.1 Removal. Secure, isolate, tag-out, and remove the designated sea strainers. Install blank flanges and gaskets over the piping system openings and secure with at least two bolts 180-degrees apart to provide a watertight seal. Ensure that the blank flanges are installed immediately after the sea strainers are removed and remain in-place until new strainers are installed. Turn over the removed strainers to the Coast Guard Property Administrator for disposition.

3.2.2 Plug valve testing. Where applicable, lubricate the valves with plug valve grease conforming to AMS-G-6032. Hydrostatically test the plug valves of all duplex strainers for each strainer chamber, at a test pressure of 15 psig. To determine leakage rate, the strainer must have the outlet blanked and the unpressurized side top cover removed (two tests per duplex strainer). While maintaining the test pressure at the inlet side, the non-pressurized side must not fill within twenty minutes. Provide a CFR which must include, but is not limited to, the following information:

- Grease type, including batch number and manufacturer.
- Time elapsed for chamber to fill, if less than twenty minutes.

CAUTION

Ensure that the drain valve for each chamber is closed.

3.3 Installation. After completion and acceptance by the Coast Guard Inspector, the Contractor must install all new strainers to the original locations, as shown on Coast Guard Drawings 175-WLM 256-001, 175-WLM 256-003, 175-WLM 256-004, and 175-WLM 256-012. Renew all gaskets with material conforming to ASTM D1330 of the same size and configuration as those gaskets removed. Renew all hardware with nickel-copper alloy (Monel) fasteners.

3.4 Notification. The Contractor must notify the Coast Guard Inspector at least 24 hours prior to installing sea strainers.

3.5 Leak test. After completing all authorized mechanical (i.e. threaded, bolted, etc.) joint repairs, the Contractor must test the seawater 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.

3.6 Surface preservation. The Contractor must perform 100% preservation in accordance with SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems) on the following interior surfaces:

- Sea strainer surfaces

3.6.1 Preparation method. The Contractor must prepare interior surfaces using system specified for “Bilges, Cofferdams and Forepeaks, Steel, Option II”

3.6.2 Coating method. The Contractor must apply finish/top coat color to interior surfaces as follows: match existing adjacent surfaces. Do not paint packing glands, valve stems, threads, and similar working surfaces.

4. NOTES

4.1 Definition. The terms ‘duplex’ and ‘simplex’ as used in this work item refer to the generic strainer type, not a manufacturer’s brand name.

WORK ITEM 44: Anchors, Preserve

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to preserve the Port and starboard anchors.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 581-001, Rev F, Anchor Handling System Arrangement

COAST GUARD PUBLICATIONS

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

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

OTHER REFERENCES

Federal Specification (Fed Spec) RR-C-271, Rev E, Dec 2010, Chain and Attachments, Welded and Weldless

The Society for Protective Coatings (SSPC) Surface Preparation Specification No. 1 (SSPC-SP 1), 2004, Solvent Cleaning

3. REQUIREMENTS

3.1 General.

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

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 below-listed:

- anchor chain assemblies (port and starboard).

3.2 Required work particulars. The Contractor must use the description (see 4.1 (Component characteristics)) and Coast Guard Drawing 175 WLM 581-001 for guidance, for accomplishing the tasks specified below for Port and starboard anchors.

3.2.1 Removal. The Contractor must disconnect and remove the anchor from anchor chain assembly and transport from the vessel to a suitable location, to facilitate the performance of the tasks specified herein.

NOTE

The use of Coast Guard equipment (e.g. anchor windlass) for off-loading and on-loading of anchors and anchor chain is authorized. Coast Guard personnel will operate all Government equipment.

3.2.2 Anchor preservation. The Contractor must prepare and coat the anchor surfaces with the system specified for "Anchor/Anchor Chain" in SFLC Std Spec 6310, Appendix A (Cutters and Boats Exterior Painting Systems). Select color coat in accordance with paragraph 11.B.1 (Anchors, Anchor Chains) in SFLC Std Spec 6310, Appendix A (Cutters and Boats Exterior Painting Systems).

4. NOTES

4.1 Component characteristics. Each anchor weighs 2,250 pounds and each chain is 1-1/8 inch Stud link, with a length of 7 shots. All shots of anchor chain include the corresponding detachable link(s).

WORK ITEM 45: Hawse Pipes, Preserve

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to preserve the hawse pipes.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 581-001, Rev F, Anchor Handling System Arrangement

COAST GUARD PUBLICATIONS

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

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

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2020, Temporary Hull Accesses

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):

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 below-listed:

- anchor chain assemblies (port and starboard)

3.2 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 Std Spec 8636_STD.

3.3 Surface preservation. The Contractor must prepare and coat all the port and starboard hawse pipes and chain pipes using the system specified for “Chain Lockers”, in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). Use Coast Guard Drawing Coast Guard Drawing 175 WLM 581-001 for guidance.

3.4 Inspection. After surface preparation and before paint application, the Contractor must perform a visual inspection of all prepared surfaces. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 46: 02 Level Deck, Repair

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and repair the 02 Level deck and insulation in the PFD/Survival Suit Locker (02-61-1- Q).

1.2 Government-furnished property. None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM 601-001, Rev N, General Arr, Inboard & Outboard Profiles

Coast Guard Drawing 175-WLM 801-015, Rev C, Scantlings, Decks & Platforms

Coast Guard Drawing 175-WLM 970-001, Rev K, Hull Block 970 Panels

Coast Guard Drawing 175-WLM 970-004, Rev G, Hull Block 970 - Transverse Frames

Coast Guard Drawing 175-WLM 635-001, Rev B, Hull Thermal & Acoustic Insulation Schedule

COAST GUARD PUBLICATIONS

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

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

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes.

OTHER REFERENCES

NAVSEA Drawing 804-5773931, Rev A, Acoustic & Thermal Insulation For Compartments Installation Details

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.11 (SSPC-SP 11), 2012, Power Tool Cleaning to Bare Metal

3. REQUIREMENTS.

3.1 General.

3.1.1 CIR. None.

3.1.2 Tech Rep. Not applicable.

3.1.3 Protective measures. The Contractor shall 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 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). Known interferences include, but are not limited to the following:

- Piping and electrical wiring.
- Insulation, sheathing.

3.1.5 Prior to performing work the Contractor shall open, ventilate, and clean all spaces and components necessary to accomplish this work item as required to certify them as "SAFE FOR PERSONNEL" and/or "SAFE FOR HOT WORK."

3.2 Work Location. The Contractor shall accomplish the following task in order to inspect and repair the bulkhead insulation, deck plating and deck coaming in the PFD/Survival Suit Locker (02-61-1- Q) using the Coast Guard drawings referenced above for details and guidance:

3.2.1 Insulation repair particulars. Inspect the lower 2-feet of insulation and cite the damaged insulation. Upon completion of surface preparation and prior to application of primer coat, perform a visual inspection of the prepared surfaces; submit a CFR.

3.2.1.1 Renew and install new insulation material (approximately 60 SQFT) over the coated surfaces, as shown on Coast Guard Drawing 175-WLM 635-001. Coat the newly installed insulation, using the system specified for “Insulation Surfaces, Fiberglass Sheet/Closed Cell PVC Foam” in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems) and NAVSEA Drawing 804-5773931.

3.2.2 Plate Inspection. The Contractor shall visually inspect the deck plate and coaming for corrosion and prepare the cited deck plating in accordance with SSPC-SP 11. Take a total of 25 UT measurements of plating, in locations designated by the Coast Guard Inspector, in accordance with SFLC Std Spec 0740, Appendix C. Use Coast Guard Drawings 175-WLM 801-15 and 175-WLM 635-001 as guidance. Chalk out the boundary of the corroded plating where the remaining thicknesses are less than 75% of the original thickness. Submit a CFR of all nondestructive test findings.

3.2.3 Before removing any plating, obtain verification from the Coast Guard Inspector of the chalked out boundary. Provide a CFR with a sketch of the intended cut.

3.2.4 Plate Renewal. Renew approximately 20-square feet of coaming and deck plating in the area described in paragraph 3.2, as per Coast Guard Drawing 175-WLM 801-15 and 175-WLM 635-001; and SFLC Std Spec 0740.

3.2.5 New deck and coaming plating shall be of similar material and mechanical properties as the adjacent material. Submit a Condition Found Report to the Coast Guard Inspector if additional repairs are required.

3.3 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 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.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 47: Exhaust Stack Plating, Renew

1. SCOPE

1.1. Intent. This work item describes the requirements for the Contractor to renew Exhaust Stack plating.

1.2. Government-furnished property.

None

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM 162-001, Rev E, Stack A & D 1 & 2 Panels

Coast Guard Drawing 175-WLM 601-001, Rev N, General Arr Inboard and Outboard Profiles

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes

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

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2020, Preserve Ship Structures

OTHER REFERENCES

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.11 (SSPC-SP 11), 2012, Power Tool Cleaning to Bare Metal

3. REQUIREMENTS

3.1. General.

3.1.1 CIR. None.

3.1.2 Technical Representative. Not applicable.

3.1.3. Protective measures. The Contractor shall furnish and install suitable covering to seal off and protect all non-affected surfaces/equipment and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, remove protective material

and inspect for the presence of contamination. Clean all equipment and spaces, contaminated due to improper protection, 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). Known interferences include, but are not limited to the following:

- Exhaust piping.
- Intake grate and louver.
- Insulation.

3.1.5 Hot work. Prior to commencing work the Contractor shall open, ventilate, and clean all spaces and components necessary to accomplish this work item as required to certify them as "SAFE FOR PERSONNEL" and/or "SAFE FOR HOT WORK" in accordance with SFLC Std Spec 0000.

3.2. Staging. The Contractor shall, in accordance with 29 CFR 1915, Subpart E (Scaffolds, Ladders and Other Working Surfaces), erect suitable staging or scaffolding around the exhaust stack to facilitate plate renewal.

3.2.1. When erecting the staging, place substantial wooden pads where each part of the staging contacts the vessel's decks, in order to distribute the weight of the staging over at least a 4-square foot area, and to protect the deck.

3.2.2. Disassemble and remove the staging, upon completion of work, or when designated by the Coast Guard Inspector.

3.3 Work particulars. The Contractor shall accomplish the following tasks to inspect and repair the plating on the top of the exhaust stack (03-70-0-Q) using the Coast Guard Drawings above for guidance and details;

3.3.1 Visual inspect the exhaust stack top, aft section, for corrosion damage in the areas shown in the PHOTOs below,

3.3.2 NDI. The Contractor shall prepare the cited areas of corrosion in accordance with SSPC-SP 11 and take a total of 20 UT measurements of plating, in locations designated by the Coast Guard Inspector, in accordance with SFLC Std Spec 0740, Appendix C. Use Coast Guard Drawing 175-WLM 162-001 as guidance. Chalk out the boundary of the corroded plating where the remaining thicknesses are less than 75% of the original thickness. Submit a CFR.

3.3.3 Prior to removing any plating obtain verification from the Coast Guard Inspector of the chalked out boundary. Provide a sketch of the intended cut and a written report of all nondestructive test findings to the Coast Guard Inspector.

3.3.4 Upon verification from the Coast Guard Inspector, crop and renew the chalked out boundary, approximately 8-square feet of plating in accordance with SFLC Std Spec 0740, use Coast Guard Drawing 175-WLM 162-001 as guidance.

3.3.5 New plating shall be of similar material and mechanical properties as the adjacent material. Submit a Condition Found Report (CFR) to the Coast Guard Inspector if additional repairs are required.

3.4 The Contractor shall perform NDI of the repair welds in accordance with SFLC Std Spec 0740, Appendix C. Submit a CFR.

3.5 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 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.

4. NOTES

This section is not applicable to this work item.

PHOTO 1. EXHAUST STACK WORK AREA

PHOTO 2. EXHAUST STACK WORK AREA

WORK ITEM 48: 01 Level Deck, Repair

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to repair the 01 Level Deck coaming along the walkway at Frame-50, port and starboard, approaching the Buoy Deck Control Room (01½-50-0- C).

1.2 Government-furnished property. None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM 601-001, Rev N, General Arr, Inboard & Outboard Profiles

Coast Guard Drawing 175-WLM 960-001, Rev M, Hull Block 960 Panels

Coast Guard Drawing 175-WLM 960-003, Rev B, Hull Block 960 Assembly

COAST GUARD PUBLICATIONS

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

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

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2020, Welding and Allied Processes.

OTHER REFERENCES

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.11 (SSPC-SP 11), 2012, Power Tool Cleaning to Bare Metal

3. REQUIREMENTS.

3.1 General.

3.1.1 CIR. None.

3.1.2 Tech Rep. Not applicable.

3.1.3 Protective measures. The Contractor shall 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 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). Known interferences include, but are not limited to the following:

- Inclined ladders and landings.

3.1.5 Prior to performing work the Contractor shall open, ventilate, and clean all spaces and components necessary to accomplish this work item as required to certify them as "SAFE FOR PERSONNEL" and/or "SAFE FOR HOT WORK."

3.2 Work particulars . The Contractor shall accomplish the following tasks to inspect and repair the 01 Level deck coaming along frame-50 approaching the Buoy Deck Control Room (01½-50-0- C) port and starboard, using the References listed above and PHOTO below for details and guidance;

PHOTO 1. O1 LEVEL WALKWAY, STBD

3.2.1 Plate Inspection. Visually inspect the deck coaming for corrosion and damage, and prepare the cited coaming plating in accordance with SSPC-SP 11. The Contractor shall take a total of 25 UT measurements of plating, in locations designated by the Coast Guard Inspector, in accordance with SFLC Std Spec 0740, Appendix C. Use Coast Guard Drawing 175-WLM 960-001 as guidance. Chalk out the boundary of the corroded plating where the remaining thicknesses are less than 75% of the original thickness. Submit a CFR of all nondestructive test findings.

3.2.2 Before removing any plating, obtain verification from the Coast Guard Inspector of the chalked out boundary. Provide a CFR with a sketch of the intended cut.

3.2.3 Plate Renewal. Renew approximately 50-linear feet of coaming and deck plating within the chalked out boundary, as per Coast Guard Drawing 175-WLM 960-001; and SFLC Std Spec 0740.

3.2.4 New deck coaming plating shall be of similar material and mechanical properties as the adjacent material. Submit a Condition Found Report to the Coast Guard Inspector if additional repairs are required.

3.3 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 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.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 49: Hull Fittings (Weight Handling Rigging Hardware), Inspect and Test

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and test designated hull fittings, listed in Table 1.

TABLE 1 - DESIGNATED ATON HULL FITTINGS

(Hulls 560 to 564)

QTY	DESCRIPTION	LOCATION
8	Pad Eye and D-Ring, Flush Deck (CGDR50T01)	Buoy Deck, 171" Off CL, P/S
2	D-Ring w/ Flush Ring (PH-F654)	Buoy Deck, 30-1/2" Off Deck Edge, P/S
16	Pad Eye and D-Ring, Flush Deck (CGDR50T01)	Buoy Deck, 111" Off CL, P/S
16	Pad Eye and D-Ring, Flush Deck (CGDR50T01)	Buoy Deck, 51" Off CL, P/S
2	Pad Eye and D-Ring, Flush Deck (CGDR50T01)	Buoy Deck, CL between Frames 45 and 50
4	Pad Eye, Flush Deck (S-A S299)	Cargo Hold, Frame 28, P/S
6	Pad Eye, Flush Deck (S-A S299)	Cargo Hold, Frame 30, P/S
6	Pad Eye, Flush Deck (S-A S299)	Cargo Hold, Frame 32, P/S
6	Pad Eye, Flush Deck (S-A S299)	Cargo Hold, Frame 34, P/S

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 573-8, Rev C, ATON Tie Downs

COAST GUARD PUBLICATIONS

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

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 shall 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 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).

3.2 Inspection and test particulars. The Contractor shall accomplish the following for each hull fitting designated in paragraph 1.1, using Coast Guard Drawing 175 WLM 573-8 as guidance, and submit a CFR:

3.2.1 Visual inspection. Visually inspect all fittings for excessive damage, wear, corrosion, distortion, elongation of holes, gouges, pits, and cracks.

3.2.2 Measurements. Perform below measurement tasks and record percent wastage. Be aware that a 10% reduction in the original dimensions shall be cause for removal from service.

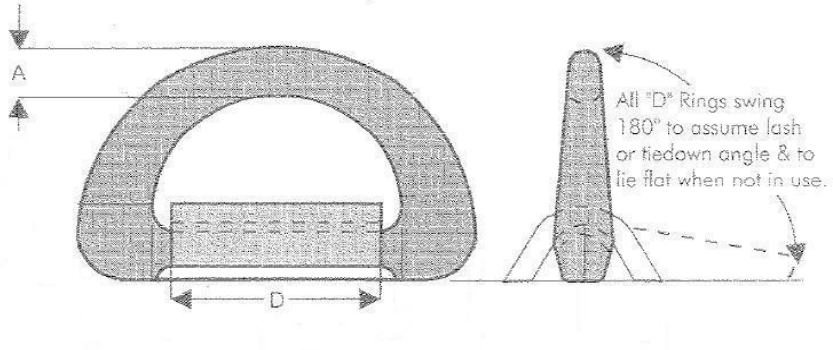
3.2.2.1 D-Ring. Using a suitable micrometer, measure the diameter (measurement A) at 90-degrees to the horizontal (top dead center). See Table 2 and the sketches provided in this work item as guidance, as applicable.

3.2.2.2 Flush deck tie-downs. Using a suitable micrometer, measure the diameter (measurement A) at center of bar of the S301, and S299 fittings. See Table 2 and the sketches provided in this work item as guidance, as applicable.

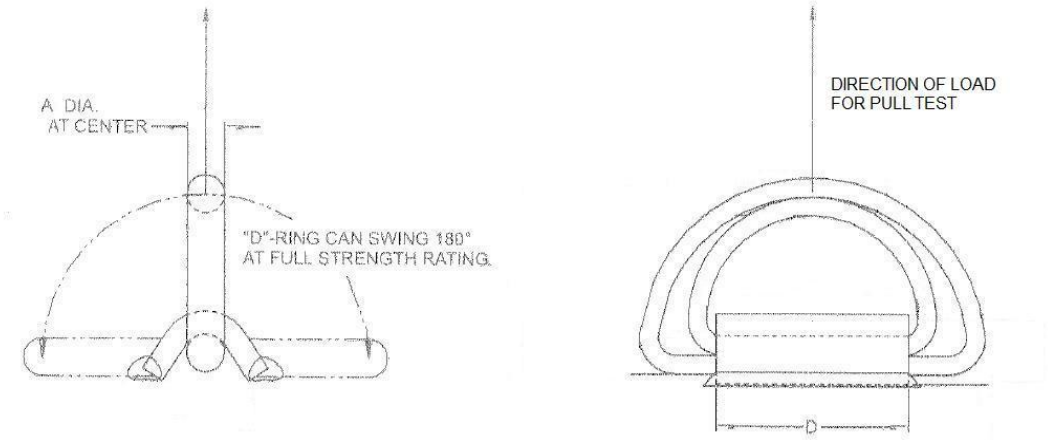
TABLE 2 - HULL FITTING MEASUREMENTS

MANUFACTURER	MODEL/MANUFAC. PART NUMBER		RING/BAR DIAMETER (MEASUREMENT A) (INCHES)
	DESIGNATOR	STRAP LENGTH (MEASUREMENT D) (INCHES)	
US Coast Guard	CGDR50T01	5.13	1.00
Schoellhorn-Albrecht	S113-50 (Generation 1)	5.0	1.00*
	S113-50 (Generation 2)	4.00	1.08
	S113-50 (Generation 3)	5.13	1.00
	S301		1.5
	S299		1.0
Peck and Hale	F654		0.91
Austin Hardware and Supply	982-0046		1.0

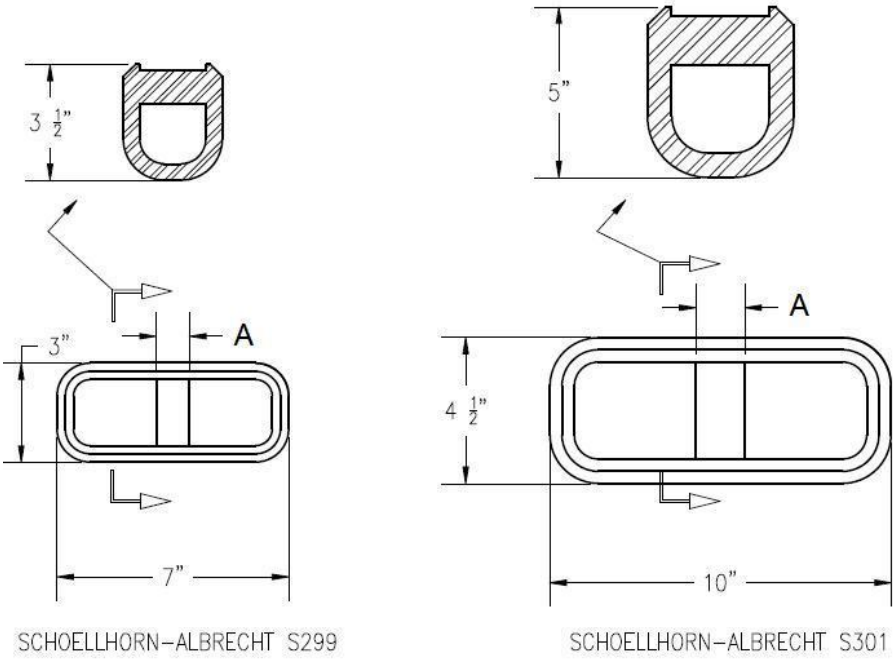
***D-Ring has a tapered cross section. Measurement is only valid in the vertical. See Sketch 1.**



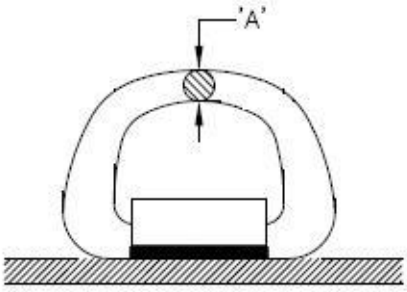
Sketch 1. Schoellhorn-Albrecht S113-50 (Generation 1) D-Ring and Strap.



Sketch 2. Schoellhorn-Albrecht S113-50 (Generation 2 and 3) and Coast Guard CGDR50T01 D-Ring and Strap.



Sketch 3. Schoellhorn-Albrecht S299 and S301 Flush Deck Tie Downs.



Sketch 4. Peck and Hale F564 D-Ring and Strap.

Sketch 5. Austin Hardware and Supply 982-0046 Heavy Duty Tie Down Rings with Clip.

3.2.3 Pull-test. Pull test all pad eyes and tie-downs in accordance with paragraph 3.2.7 (Pull test) of SFLC Std Spec 5000 , using Coast Guard Drawing 175 WLM 573-8 as guidance.

3.3 Touch-up preservation, general. The Contractor shall 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 50: Thruster Unit (General), Overhaul

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform overhaul of the Bow Thruster Unit..

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	Seal Kit, Thruster	NSN: 2010-01-555-9048	1 ea.	4376.00
N	Anode, Zinc	NSN: 5365-01-495-5350	9 ea.	113.75
N	**Seal Spacer (B125SM44178)	NSN: 2010-01-495-6823	1 ea.	700.00
N	**Shaft Sleeve	NSN: 2010-01-495-2638	1 ea	5702.40

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

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM 568-001, Rev B, Bow Thruster Arrangement & Detail

Coast Guard Drawing 175-WLM 568-002, Rev N, Bow Thruster Detail

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3628, Mar 2017; Vol 4 of 9, Instruction Manual, Bow Thruster

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

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep. The Contractor must provide the services of qualified Tech Rep, who is familiar with the Rolls Royce (formerly Bird Johnson) equipment/system, 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.

3.1.1.1 The Contractor must ensure that the Tech Rep is a certified representative of Rolls Royce.

3.1.1.2 The Contractor must 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).

3.1.3.1 Hydraulic system. The Contractor must 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.

NOTE

Be aware that plastic bags may be used only when arrangement or configuration prevents the use of the other sealing methods specified above.

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:

- Grid Cover on port thruster tube.
- Grid Cover on starboard thruster tube.

3.2 Operational test - initial. Prior to commencement of work, the Contractor must witness Coast Guard Personnel perform an initial operational test of the thruster units, to demonstrate existing operational condition. Submit a CFR.

3.3 Hydraulic fluid sampling and testing. The Contractor must sample and test the system hydraulic fluid in accordance with SFLC Std Spec 5000, Appendix C, Paragraph C2.1 (Fluids).

3.4 Fluid disposal. The Contractor must drain and dispose of all oil from the gear case, approximately 60 gallons, in accordance with all applicable Federal, state and local regulations.

3.5 Maintenance. The Contractor must perform the following maintenance requirements to the thruster units in accordance with TP 3628 and as shown on CG Dwgs 175-WLM 568-001 and 175-WLM 568-002.

3.5.1 Polish each propeller to a 63 RMS surface finish. Visually inspect each propeller for pitting, erosion, and bending. Submit a CFR. Include in the report the condition of the blade roots and tips and any recommendations for repair.

3.5.2 Visually inspect the magnetic plug to the gear box for the presence of any metal particles. Remove all metal particles from the plug. Thoroughly clean each lubrication oil head tank and gear box free of sludge and any other foreign particles. Submit a CFR.

3.5.3 In the presence of the Coast Guard Inspector, renew the system oil in accordance with TP 3628, and SFLC Std Spec 5000, Appendix C, Paragraph C2.1 (Fluids).

3.5.4 Remove and dispose of each existing propeller shaft seal. Clean and visually inspect each shaft surface for excessive wear.

3.5.5 Reassemble and reinstall all removed components, with new Contractor-furnished propeller shaft seal and associated O-rings.

3.5.6 Visually check for any excessive wear or damage to the teeth of the gears. Check the wear pattern on the spiral bevel gears to diagnose any problems. Submit a CFR.

3.5.7 Measure the shaft runout to inspect for bends. Take gear backlash readings on each gear set and compare results with the number etched on the back of the gear. Submit a CFR.

3.5.8 Renew the pinion gear seal in accordance with TP 3628.

3.6 Zinc renewal. The Contractor must renew zincs located on the thruster gearbox with Government-furnished zinc anodes..

3.7 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.)

3.8 Operational test – post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the Thruster Systems to be in satisfactory operating condition. Submit a CFR.

3.8.1 Test the Thruster at dockside and at sea trials.

3.8.2 Operate thrusters over entire range of RPM in both directions.

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

4. NOTES

This section is not applicable to this work item.