USCGC MORRO BAY (WTGB 106)

SPECIFICATION FOR DOCKSIDE REPAIRS

FY2020

Developed By: Johnny B Thomas

(Rev-0, 29 January 2020)

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REVISIONS RECORD

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

DATE	REV#	WORK ITEM#	CHANGES MADE

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

CONSOLIDATED LIST OF REFERENCES

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

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

COAST GUARD DRAWINGS

Coast Guard Drawing 101 WTGB 259-001, Rev L, Diesel Exhausts & Steam Generator Exhausts System A & D

Coast Guard Drawing 101 WTGB 514-002, Rev X, Ventilation & A/C Arrangements & Details

Coast Guard Drawing 101 WTGB 528-001, Rev L, Sanitary & Deck Drain System Diagram

Coast Guard Drawing 101 WTGB 528-003, Rev C, Grey Water Mods & Tank Transitions

Coast Guard Drawing 101 WTGB 581-001, Rev T, Anchor Handling A & D

Coast Guard Drawing 101 WTGB 582-001, Rev J, Bitts, Chocks and Cleats

Coast Guard Drawing 140 WTGB 150-001, Rev -, Deckhouse Plating and Framing

Coast Guard Drawing 140 WTGB 162-001, Rev -, Stack Pl & Fr & Misc Stack Foundations

Coast Guard Drawing 140 WTGB 259-001, Rev -, Diesel Exhaust Systems, Arrangements & Details

Coast Guard Drawing 140 WTGB 259-002, Rev B, Exhaust Modifications to Suit Bubbler Installation

Coast Guard Drawing 140 WTGB 505-002, Rev -, Piping Penetration Details

Coast Guard Drawing 140 WTGB 514-001, Rev A, HVAC Diagram Incidental to Chill Water Install

Coast Guard Drawing 140 WTGB 514-010, Rev -, Heating, Ventilation, and Air Conditioning Arrangement & Details

Coast Guard Drawing 140 WTGB 521-002, Rev -, Firemain System Arrangements & Details

Coast Guard Drawing 140 WTGB 521-003, Rev A, Firemain System Diagram

Coast Guard Drawing 140 WTGB 533-002, Rev -, Potable Water System A & D

Coast Guard Drawing 140 WTGB 533-003, Rev A, Potable Water System Diagram

Coast Guard Drawing 140 WTGB 541-001, Rev -, Diagram - Fuel Oil Fill & Transfer System

Coast Guard Drawing 140 WTGB 541-003, Rev -, Fuel Oil Transfer System, A&D

Coast Guard Drawing 140 WTGB 551-001, Rev -, Compressed Air System Diagram

Coast Guard Drawing 140-WTGB 123-2, Rev B, Structural Mods Incidental to Water Mist Tank 4-24-1-W

Coast Guard Drawing 140-WTGB 514-001, Rev A, HVAC Diagram Incidental to Chill Water Install

Coast Guard Drawing 140-WTGB 528-002, Rev -, Sanitary & Deck Drains Diag

Coast Guard Drawing 140-WTGB 528-003, Rev -, Sanitary & Deck Drains A&D

Coast Guard Drawing 140-WTGB 528-004, Rev -, Grey Water Mods & Tank Transition

Coast Guard Drawing 140-WTGB 555-2, Rev C, Water Mist System Installation A&D

Coast Guard Drawing 140-WTGB 555-4, Rev C, Water Mist System Diagram

Coast Guard Drawing 140-WTGB 801-003, Rev A, Booklet of General Plans

Coast Guard Drawing 140-WTGB 801-3, Rev -, Booklet of General Plans

Coast Guard Drawing 140-WTGB-551, Rev-. Compressed Air System A&D

Coast Guard Drawing 140-WTGB-634-001, Rev-, Deck Covering Schedule

Coast Guard Drawing 140-WTGB-644-001, Rev B, Sanitary Spaces A&D

Coast Guard Drawing 140-WTGB-801-005, Rev -, General Arrangement Main Deck and Above

Coast Guard Drawing 140-WTGB-801-022, Rev-, Inboard Profile

Coast Guard Drawing FL 3801-67, Rev B, Sheets 1 through 10 of 50 (General Notes – Ductwork) and Sheet 39 (Handholes for W.T. and N.W.T. Ducts)

COAST GUARD PUBLICATIONS

Coast Guard Commandant Instruction (COMDTINS) M10360.3 (series), Coatings and Color Manual

Coast Guard Technical Publication (TP) 10000, May 2015, Manufacturer's Instruction Book - SWBS Group(s) 583, Single Point Davit, – Model PLA-2000

Coast Guard Technical Publication (TP) 3456, 2001, Ship Information Book, Section B

Coast Guard Technical Publication (TP) 3468, SWBS 512, April 2012, Ventilation and Air Conditioning Systems, 140’ WTGB Class Cutters

Coast Guard Technical Publication (TP) 3483, Feb 2012, SWBS Groups 580-583, Anchor Windlass

Coast Guard Technical Publication (TP) 3483, SWBS Groups 580-583, Feb 2012, Vertical Capstan

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2018, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 3020 (SFLC Std Spec 3020), 2018, Overhaul AC Electrical Motors

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2018, Auxiliary Machine Systems

Surface Forces Logistics Center Standard Specification 5100 (SFLC Std Spec 5100), 2018, Clean Shipboard Ventilation Systems

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2018, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 6341 (SFLC Std Spec 6341), 2018, Install Interior Deck Covering Systems

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, 2002, Disinfection of Water-Storage Facilities

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 Testing and Materials (ASTM) International F1508, 2016, Standard Specification for Angle Style, Pressure Relief Valves for Steam, Gas, and Liquid Services

American Society of Mechanical Engineers (ASME) B16.34, 2013, Valves-Flanged, Threaded, and Welding End

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

ASTM International (ASTM) F992, 2006, Standard Specification for Valve Label Plates

CEU Cleveland Memo 11410 Waterfront Load Limit

CEU Cleveland Memo 11410 Waterfront Load Limits

Code of Federal Regulations (CFR) Title 29, Part 1915, 2014, Occupational Safety and Health Standards for Shipyard Employment

Code of Federal Regulations (CFR) Title 29, Part 1915, Jul 2014, Occupational Safety and Health Standards for Shipyard Employment

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-61, 2013 Edition, Pressure Testing Of Valves

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-67, 2011 Edition, Butterfly Valves

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-72, 2010 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-80, 2013Edition, Bronze Gate, Globe, Angle and Check Valves

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

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

MIL-G-24716, Apr 1993, Gaskets, Metallic-Flexible Graphite, Spiral Wound

Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) C6183, 2013, Cork and Rubber Composition Sheet; For Aromatic Fuel and Oil Resistant Gaskets

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

The Society for Protective Coatings (SSPC)/NACE International (NACE) Joint Surface Preparation Standard SSPC-SP 6/NACE No. 3, 2007, Commercial 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)
24	N	Parts Kit, Boat Davit 5-Year Inspection/Overhaul	NSN: 2030-01-F18-5589 PN: 18379	1 ea	$16,325.00

***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 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
15	Anchor Windlass, Inspect and Service
16	Vertical Capstan, Inspect and Service
22	Deck Covering (Interior Wet/Dry), Renew
23	Anchor Chain(s) and Ground Tackle, Inspect and Repair
24	Single Point Davit, Inspect & Service
29	Fuel Manifold, Overhaul

PRINCIPAL CHARACTERISTICS - TUG, ICEBREAKING

140' WTGB (TUG, ICEBREAKING)	
PHYSICAL	
Length overall	140' 0"
Length between perpendiculars	130' 0"
Breadth, extreme	37' 7-1/4"
Depth, molded	18' 2-3/8"
Frame spacing	1' 6"
Full load (Winter) draft (at)	12' 1-1/2"
Full load (winter) displacement	687 Long tons (LT)
Full load (winter) center of gravity	
Above base (kg)	13' 1"
Full load trimming moment (forward)	75.6 Ft-LT
Min. operating condition draft (at)	11' 6-3/8"
Min. operating condition displacement	640 Long tons
Min. operating condition center of gravity	
Above base (kg)	13' 4-1/4"
Min. operating condition trimming moment	
Forward	76.8 Ft-LT
Height of vessel above DWL	Approx. 62' 0"
MACHINERY	
Main Propulsion	
Engine Type	Diesel-electric
Number of units:	2
Total shaft horsepower:	2500
Propeller	
Number of propellers	1
Number of blades	4
Diameter of propeller	8' 6"
Pitch	Fixed

NOTE

Stability values above are for representative tug. Draft and longitudinal lever values provided above are for tugs in fresh water. Longitudinal lever values are provided to adjust tug's design drag of 1.0 feet by the stern.

General Requirements

1. SCOPE

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

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

2. REFERENCES

COAST GUARD DRAWINGS

None

COAST GUARD PUBLICATIONS

Coast Guard Commandant Instruction (COMDTINS) M10360.3 (series), Coatings and Color Manual

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2018, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2018, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General. The Contractor shall 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 shall 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 shall 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 shall perform all welding and allied processes, and NDE in accordance with SFLC Std Spec 0740.

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

3.5.1 USCG facilities. The Contractor shall provide and maintain environmental protection as defined in SFLC Std Spec 0000 Appendix B, Requirements for Environmental Protection at USCG Facilities, during the performance of this availability. Contractor shall 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 shall 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 shall 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 medium.

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

3.5.3 Regulatory notifications. The Contractor shall 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 shall 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 shall 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 shall appoint in writing an Environmental Manager for the project, and shall be responsible for coordinating Contractor compliance with Federal, State, local, and station environmental requirements. The Environmental Manager shall 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 shall comply with SFLC Std Spec 0000 Appendix B, Requirements For Environmental Protection At USCG Facilities for HW disposal, and ensure that waste removals are conducted during normal business hours (0800-1600) on Monday through Friday (excluding holidays).

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

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

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

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

3.6 Local Policy. None.

3.7 SFLC standard specification approved changes. The Contractor shall be aware that the following are approved changes to published SFLC 2018 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 mfgr.
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 mfgr.
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

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QA-3a - QUALITY ASSURANCE INSPECTION FORM

(SURFACE PROFILE LOG FOR PROFILE MEASUREMENTS IAW ASTM D4417-METHOD-C)

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE
LOCATION OF WORK (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: Tanks (Hydraulic Oil Stowage And 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 – TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Hydraulic Oil	2-80-2	150 Gallons	N/A

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), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2018, Auxiliary Machine Systems

OTHER REFERENCES

Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) C6183, 2013, Cork and Rubber Composition Sheet; For Aromatic Fuel and Oil Resistant Gaskets

3. REQUIREMENTS

3.1 General. The Contractor shall accomplish the following for all designated tanks in paragraph 1.1 (Intent).

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

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test - initial. Prior to commencement of work, the Contractor shall witness Coast Guard Personnel perform an initial operational test of the TLI's for tanks listed in paragraph 1.1 (Intent), to demonstrate existing operational condition. Submit a CFR.

3.3 Tank contents.

3.3.1. The Contractor shall remove up to a total of 150 gallons of hydraulic oil. Document a complete chain of custody record of the removed tank contents from the vessel to the point of the final destination of delivery. Submit document to the COR upon completion of work.

3.3.2. The Contractor shall stow all fluids in suitable stowage facility, immediately after removal, and re-stow all tank contents, upon completion of work. Contractor shall ensure hydraulic oil quantity is maintained throughout all stages of the process.

NOTE

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

3.4 Plug log. The Contractor shall keep a written record of all plugs put in any tanks vents. A separate list shall 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.

3.5 Cleaning requirements. The Contractor shall 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). 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 shall dispose of residual 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 shall 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, as applicable.
- 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 shall ensure that the tank(s) remain open for approximately 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, and renew any damaged or missing fasteners. For purpose of bid, assume 10% of existing fasteners will require renewal.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.9 Operational test – post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all designated tank TLI's to be in satisfactory operating condition. Submit a CFR.

4. NOTES

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

WORK ITEM 2: 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	4-19-3-W, Tender	1,976	100
Potable Water	4-19-4-W, Tender	3,367	100

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), 2018, 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.

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:

- 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 shall witness Coast Guard Personnel perform an initial operational test of the TLI's for tanks listed in paragraph 1.1 (Intent), to demonstrate existing operational condition. Submit a CFR.

3.3 Plug log. The Contractor shall keep a written record of all plugs put in any tanks vents. A separate list shall 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 shall remove and dispose of all fluids and/or residues in accordance with all applicable Federal, state, and local regulations. The Contractor shall 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 shall ensure the following:

3.5 Tank cleaning. The Contractor shall 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 shall 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 shall 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 shall renew 100% 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 shall 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, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the designated tank TLI's to be in satisfactory operating condition. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 3: Tanks (Lube Oil), 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)
Lube Oil	2-41-2	265	20
Lube Oil	2-41-1	265	20

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), 2018, General Requirements

OTHER REFERENCES

Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) C6183, 2013, Cork and Rubber Composition Sheet; For Aromatic Fuel and Oil Resistant Gaskets

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 below-listed:

- Tank cover
- Piping
- Tank contents.

3.1.4.1 The Contractor shall remove up to a total of 100 gallons of lube oil. 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 The Contractor shall stow all fluids in suitable stowage facility, immediately after removal, and re-stow all tank contents, upon completion of work. Contractor shall ensure lube oil quality is maintained throughout all stages of the process.

NOTE

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

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Plug Log. The Contractor shall keep a written record of all plugs put in any tanks vents. A separate list shall 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 Ensure the plug log is available to the Coast Guard inspector when the inspector is performing his close-out inspection on each tank.

3.3 Cleaning requirements. The Contractor shall 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). 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.

3.4 Tank content and waste disposal. The Contractor shall dispose of residual 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.

3.5 Inspection. The Contractor shall 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 (if applicable), including measurements taken, percentage, location, and type of coating failure.
- Tank level indicator (TLI) and/or float switch condition (as applicable).
- Sounding tube and striker plate condition.
- Suction and discharge piping condition.
- Fastener material (stainless steel) and condition.

3.6 Tank closing. The Contractor shall ensure that the tank(s) remain open for at least 24 hours after completion of all 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.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

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.

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

WORK ITEM 4: 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)
Ballast	4-19-1-W	1,319	100
Ballast	4-19-2-W	1,319	100
Ballast	2-76-3-W	1,292	100
Ballast	4-76-4-W	1,292	100

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), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2018, Welding and Allied Processes

OTHER REFERENCES

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

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall 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 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

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test - initial. Prior to commencement of work, the Contractor shall witness Coast Guard Personnel perform an initial operational test of the TLI's for tanks listed in paragraph 1.1 (Intent), to demonstrate existing operational condition. Submit a CFR.

3.3 Plug log. The Contractor shall keep a written record of all plugs put in any tanks vents. A separate list shall 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 shall 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 shall 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 shall 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.

3.5 Inspection. The Contractor shall visually inspect all interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Submit a CFR 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 shall 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 shall renew 100% of nylon insert/nylock nuts and washers.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.7 Operational test – post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the designated tank TLI's to be in satisfactory operating condition. Submit a CFR.

3.8 Ultrasonic thickness (UT) measurement. The Contractor shall 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.

3.8.1 In addition to the UT measurements, take a total of 50 pit-depth measurements, using a suitable pit depth gauge

4. NOTES

This section is not applicable to this work item.

WORK ITEM 5: 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)
Dirty Lube Oil	4-32-0-F	450	20 Gallons
Oily Water	4-48-0-E	795	N/A

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 140-WTGB 801-003, Rev A, Booklet of General Plans

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

OTHER REFERENCES

Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) C6183, 2013, Cork and Rubber Composition Sheet; For Aromatic Fuel and Oil Resistant Gaskets

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 The Contractor shall 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 shall witness Coast Guard Personnel perform an initial operational test of the TLI's for tanks listed in paragraph 1.1 (Intent), to demonstrate existing operational condition. Submit a CFR.

3.4 Plug log. The Contractor shall keep a written record of all plugs put in any tanks vents. A separate list shall 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 shall 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). 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 shall 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 shall 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 shall 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, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the designated tank TLI's to be in satisfactory operating condition. Submit a CFR.

4. NOTES

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

WORK ITEM 6: Main Diesel Engine (MDE) Exhaust Piping, Commercial Clean

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean the Main Diesel Engine (MDE) exhaust piping system, including the associated stack uptakes.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 101 WTGB 259-001, Rev L, Diesel Exhausts & Steam Generator Exhausts System A & D

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2018, Requirements for Preservation of Ship Structures

OTHER REFERENCES

Code of Federal Regulations (CFR) Title 29, Part 1915, 2014, Occupational Safety and Health Standards for Shipyard Employment

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:

- Access covers
- Exhaust stack
- MDE
- Piping
- Pipe insulation
- Vent ducting
- Wiring
- Exhaust pipe expansion joints
- Exhaust insulation blankets

3.2 Staging or scaffolding, netting. The Contractor shall erect suitable staging or scaffolding in accordance with 29 CFR 1915, Subpart E (Scaffolds, Ladders and Other Working Surfaces) to facilitate work, as required.

3.2.1 Rig suitable safety netting, to protect workers during possible falls, and to protect the Engine Room and machinery from falling tools.

3.3 Work plan. The Contractor shall develop and submit, to the COR, a plan for collecting and disposing of waste extracted during cleaning process. Ensure that the proposed plan shall detail how and where exhaust piping will be disconnected, how entire length of exhaust piping will be divided/sectioned for cleaning, and precautions to protect the MDE. The Contractor shall perform this work upon receiving Coast Guard approval of the plan.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.4 Operational test, initial. Prior to commencement of work, the Contractor shall witness Coast Guard personnel perform an initial operational test of the exhaust stack system, to demonstrate existing operational condition. Submit a CFR.

3.5 Cleaning. The Contractor shall clean the interior surfaces of the exhaust piping and stack uptakes to the MDE, shown on Coast Guard Drawings 101 WTGB 259-001, to a condition free from soot, tar, and any other foreign matter as follows:

3.5.1 Disconnect the exhaust piping as necessary to facilitate cleaning.

3.5.2 Thoroughly sweep, mechanically clean, and vacuum the interior of each exhaust pipe system,

including the mufflers, from the exhaust outlet to the topmost location outside the vessel. Clean all adjacent stack uptake surfaces. Ensure that all tar deposits, soot deposits, and all other surface contaminants are removed.

3.5.3 Remove all debris from the pipe surfaces, stack deck, and Engine Room areas by vacuuming. Dispose of all cleaning materials and generated debris in accordance with all applicable Federal, state, and local regulations.

3.5.4 Reassemble exhaust piping; renew all disturbed flange connection gaskets with suitable high temperature, non-asbestos-containing gasket materials; and renew all disturbed fasteners.

3.6 Inspection and report. The Contractor shall perform a visual inspection of the following components; submit a CFR:

- Exhaust stack access hatches, including all associated studs and nuts.
- All cleaned exhaust stack surfaces.
- All exhaust expansion joints, including associated bolts.

3.6.1 Following cleaning of the interior of each exhaust pipe system, the Contractor shall demonstrate completeness of the cleaning process to the Coast Guard Inspector, showing that the entire length of exhaust piping cleaned according to the work plan.

3.7 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.)

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.8 Operational test, post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the exhaust stack system to be in satisfactory operating condition. Submit a CFR

4. NOTES

This section is not applicable to this work item.

WORK ITEM 7: Ship Service Diesel Generator (SSDG) Exhaust Piping, Commercial Clean

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean the Ship Service Diesel Generator (SSDG) exhaust piping.

1.2 Government-furnished equipment.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 101 WTGB 259-001, Rev L, Diesel Exhausts & Steam Generator Exhausts System A & D

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2018, Requirements for Preservation of Ship Structures

OTHER REFERENCES

Code of Federal Regulations (CFR) Title 29, Part 1915, Jul 2014, Occupational Safety and Health Standards for Shipyard Employment

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 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 be aware that interferences in way of work include, but are not limited to the below-listed. Handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences):

- Access covers.
- Exhaust stack.
- SSDG.
- Vent ducting.
- Wiring.
- Exhaust pipe expansion joints.
- Exhaust insulation blankets.

3.1.5 Safety precaution. The Contractor shall rig suitable safety netting, to protect workers during possible falls, and to protect the Engine Room and machinery from falling tools.

3.1.6 Access openings.

Not applicable.

3.2 Work plan. The Contractor shall develop and submit to the COTR, a plan for collecting and disposing of waste extracted during cleaning process. Ensure that the proposed plan shall detail how and where exhaust piping will be disconnected, how entire length of exhaust piping will be divided/sectioned for cleaning, and precautions to protect the SSDG. The Contractor shall perform this work upon receiving Coast Guard approval of the plan.

3.3 Operational test - initial. Prior to commencement of work, the Contractor shall witness an operational pre-test (by Coast Guard personnel) of the exhaust stack system, to demonstrate existing operational condition. Submit a CFR.

3.4 Cleaning. The Contractor shall clean the interior surfaces of the exhaust piping to the SSDG, shown on Coast Guard Drawing(s) 101 WTGB 259-001, to a condition free from soot, tar, and any other foreign matter as follows:

3.4.1 Disconnect the exhaust piping as necessary to facilitate cleaning.

3.4.2 Thoroughly sweep, mechanically clean, and vacuum the interior of each exhaust pipe system, including the mufflers, from the exhaust outlet to the topmost location outside the vessel. Ensure that all tar deposits, soot deposits, and all other surface contaminants are completely removed.

3.4.3 Upon completion of cleaning, do the following:

3.4.3.1 Remove all debris from the pipe surfaces, stack deck, and Engine Room areas by vacuuming. Dispose of all cleaning materials and generated debris in accordance with all applicable Federal, state, and local regulations.

3.4.3.2 Reassemble exhaust piping; renew all disturbed flange connection gaskets with suitable high temperature, non-asbestos-containing gasket materials; and renew all disturbed fasteners.

3.5 Inspection and report. The Contractor shall perform a visual inspection of the following components; submit a CFR:

- Exhaust stack access hatches, including all associated studs and nuts.
- All cleaned exhaust stack surfaces.
- All exhaust expansion joints, including associated bolts.

3.6 Touch-up preservation. The Contractor shall prepare and touch-up coat all disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems).

3.7 Operational test – post repairs. After completion of work, the Contractor shall witness an operational test (by Coast Guard personnel) of the exhaust stack system to prove satisfactory operating condition. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 8: Boiler Exhaust Stack Uptakes, Commercial Clean

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean the Boiler exhaust stack uptakes.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 101 WTGB 259-001, Rev L, Diesel Exhausts & Steam Generator Exhausts System A & D

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2018, 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 below-listed:

- Access covers.
- Exhaust stack.
- Boiler.
- Exhaust pipe expansion joints.
- Exhaust insulation blankets.
- Access ladder.

3.1.5 Safety precaution. The Contractor shall rig suitable safety netting, to protect workers during possible falls, and to protect the Engine Room and machinery from falling tools.

3.2 Operational test - initial. Prior to commencement of work, the Contractor shall witness Coast Guard Personnel perform an initial operational test of the exhaust stack system, to demonstrate existing operational condition. Submit a CFR.

3.3 Cleaning. The Contractor shall clean the interior surfaces of the exhaust piping to the Boiler, shown on Coast Guard Drawing(s) 101 WTGB 259-001, to a condition free from soot, tar, and any other foreign matter as follows:

3.3.1 Disconnect the exhaust piping as necessary to facilitate cleaning.

3.3.2 Thoroughly sweep, mechanically clean, and vacuum the interior of each exhaust pipe system, including the mufflers, from the exhaust outlet to the topmost location outside the vessel. Ensure that all tar deposits, soot deposits, and all other surface contaminants are completely removed.

3.3.3 Upon completion of cleaning, do the following:

3.3.3.1 Remove all debris from the pipe surfaces, stack deck, and Engine Room areas by vacuuming. Dispose of all cleaning materials and generated debris in accordance with all applicable Federal, state, and local regulations.

3.3.3.2 Reassemble exhaust piping; renew all disturbed flange connection gaskets with suitable high temperature, non-asbestos-containing gasket materials; and renew all disturbed fasteners.

3.4 Inspection and report. The Contractor shall perform a visual inspection of the following components; submit a CFR:

- Exhaust stack access hatches, including all associated studs and nuts.
- All cleaned exhaust stack surfaces.
- All exhaust expansion joints, including associated bolts.

3.4.1 Following cleaning of the interior of each uptake, the Contractor shall demonstrate completeness of the cleaning process to the Coast Guard Inspector, showing that the entire length of uptake has been satisfactorily cleaned according to the work plan.

3.5 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.)

3.6 Operational test – post repairs. After completion of work, the Contractor shall, in the presence of the Coast Guard Inspector, thoroughly test and prove of the exhaust stack system to be satisfactory operating condition. Submit a CFR.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 9: Bubbler Diesel Engine Exhaust Piping, Commercial Clean

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean the bubbler diesel engine exhaust piping system, including the associated stack uptakes.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 140 WTGB 259-001, Rev -, Diesel Exhaust Systems, Arrangements & Details

Coast Guard Drawing 140 WTGB 259-002, Rev B, Exhaust Modifications to Suit Bubbler Installation

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2018, Requirements for Preservation of Ship Structures

OTHER REFERENCES

Code of Federal Regulations (CFR) Title 29, Part 1915, Jul 2014, Occupational Safety and Health Standards for Shipyard Employment

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 below-listed:

- Access covers.
- Exhaust stack.
- Bubbler diesel engine.
- Exhaust pipe expansion joints.
- Exhaust insulation blankets.

3.1.5 Scaffolding. The Contractor shall, in accordance with 29 CFR 1915, Subpart E, erect suitable staging or scaffolding, as required, to facilitate work.

3.1.6 Safety precaution. The Contractor shall rig suitable safety netting, to protect workers during possible falls, and to protect the Engine Room and machinery from falling tools.

3.1.7 Work plan. The Contractor shall develop and submit, to the COR, a plan for collecting and disposing of waste extracted during cleaning process. Ensure that the proposed plan shall detail how and where exhaust piping will be disconnected, how entire length of exhaust piping will be divided/sectioned for cleaning, and precautions to protect the bubbler engine. The Contractor shall perform this work upon receiving Coast Guard approval of the plan.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test - initial. Prior to commencement of work, the Contractor shall witness Coast Guard Personnel perform an initial operational test of the exhaust stack system, to demonstrate existing operational condition. Submit a CFR.

3.3 Cleaning. The Contractor shall clean the interior surfaces of the exhaust piping to the bubbler diesel engine, shown on CG Drawings 140 WTGB 259-001 and 140 WTGB 259-002, to a condition free from soot, tar, and any other foreign matter as follows:

3.3.1 Disconnect the exhaust piping as necessary to facilitate cleaning.

3.3.2 Thoroughly sweep, mechanically clean, and vacuum the interior of each exhaust pipe system, including the mufflers, from the exhaust outlet to the topmost location outside the vessel. Ensure that all tar deposits, soot deposits, and all other surface contaminants are completely removed.

3.3.3 Remove all debris from the pipe surfaces, stack deck, and Engine Room areas by vacuuming. Dispose of all cleaning materials and generated debris in accordance with all applicable Federal, state, and local regulations.

3.3.4 Reassemble exhaust piping; renew all disturbed flange connection gaskets with suitable high temperature, non-asbestos-containing gasket materials; and renew all disturbed fasteners.

3.4 Inspection and report. The Contractor shall perform a visual inspection of the following components; submit a CFR:

- Exhaust stack access hatches, including all associated studs and nuts.
- All cleaned exhaust stack surfaces.
- All exhaust expansion joints, including associated bolts.

3.5 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.)

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.6 Operational test – post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the exhaust stack system to be in satisfactory operating condition. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 10: Vent Ducts (Engine And Motor Room All), Commercial Cleaning

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the designated shipboard ventilation systems.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 101 WTGB 514-002, Rev X, Ventilation & A/C Arrangements & Details

Coast Guard Drawing FL 3801-67, Rev B, Sheets 1 through 10 of 50 (General Notes – Ductwork) and Sheet 39 (Handholes for W.T. and N.W.T. Ducts)

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 5100 (SFLC Std Spec 5100), 2018, Clean Shipboard Ventilation Systems

Coast Guard Technical Publication (TP) 3456, 2001, Ship Information Book, Section B

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.

3.1.3.1 Install filter medium at the terminal ends of all supply vent ducting to prevent any residual foreign mater from blowing into the engine room spaces.

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:

- Ducting screens.
- Electric pre-heaters.
- Overhead sheathing/panels.
- Ventilation covers..

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor shall witness Coast Guard personnel perform an initial operational test of the ventilation systems included in this work item, to demonstrate existing operational condition. Submit a CFR.

3.3 Cleaning requirements. The Contractor shall clean and inspect the following ventilation systems, shown on Coast Guard Drawing 101 WTGB 514-002, FL 3801-67 and TP 3456, in accordance with SFLC Std Spec 5100. Submit a CFR.

TABLE 1 – ENGINE ROOM

SYSTEM LOCATION	TYPE
Engine Room (01-49-1)	Supply
Motor Room (1-49-1)	Supply
Motor Room (1-69-1)	Supply
Motor Room (2-70-1)	Supply

3.3.1 The Contractor shall clean the exhaust ventilation ducting up to and including the discharge of the engine room exhaust fans. The Contractor is not expected to clean the exhaust stack plenum area.

NOTE

Past experience has shown that the engine room exhaust ventilation systems have accumulated oils and greases and systems are coated with a very sticky and very thick sludge. Take this into consideration in the bid.

3.3.2 Disassemble the exhaust system as required to clean all sections of the exhaust system.

3.3.2.1 After cleaning, reassemble vent ducting using new gaskets and fasteners.

3.3.3 Prior to reassembling the vent systems, visually inspect the systems in the presence of the Coast Guard Inspector. Verify that the vent systems are clean and oil and build up free. The Contractor shall use video probe equipment to allow viewing the internal surfaces of all vent ducting.

3.4 Notification. The Contractor shall give written notification to the COR 48 hours before starting ventilation cleaning work.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.5 Operational test, post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the ventilation systems disturbed to be in satisfactory operating condition. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 11: Vent Ducts (Galley and Pantry Room All), Commercial Cleaning

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the designated shipboard ventilation systems.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 101 WTGB 514-002, Rev X, Ventilation & A/C Arrangements & Details

Coast Guard Drawing FL 3801-67, Rev B, Sheets 1 through 10 of 50 (General Notes – Ductwork) and Sheet 39 (Handholes for W.T. and N.W.T. Ducts)

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 5100 (SFLC Std Spec 5100), 2018, Clean Shipboard Ventilation Systems

Coast Guard Technical Publication (TP) 3456, 2001, Ship Information Book, Section B

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:

- Ducting screens.
- Electric pre-heaters.
- Overhead sheathing/panels.
- Ventilation covers.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor shall witness Coast Guard Personnel perform an initial operational test of the ventilation systems included in this work item, to demonstrate existing operational condition. Submit a CFR.

NOTE

It is recommended that the Contractor conduct a ship check to verify dimensions in the table below.

3.3 Cleaning requirements. The Contractor shall clean and inspect the following ventilation systems, shown on Coast Guard Drawing 101 WTGB 514-002, FL 3801-67 and TP 3456, in accordance with SFLC Std Spec 5100. Submit a CFR.

TABLE – 1 SYSTEM LOCATION

SYSTEM LOCATION	TYPE
Galley	Exhaust

3.4 Additional requirements. In addition to the above, the Contractor shall accomplish the following:

3.4.1 Notification. Give written notification to the COR, 48 hours before starting ventilation cleaning work.

3.4.2 Additional protective covering. In addition to providing protective covering as specified in SFLC Std Spec 5100, subsection 3.1.3 (Protective measures), provide additional protective covering for all food preparation and serving surfaces in the immediate work area, as applicable, to prevent contamination.

3.4.3 Avoidance of meal preparation and service. Cleaning of galley ventilation systems will be accomplished during normal working hours for availability. Cutter will develop an alternative meal plan to ensure availability of vent ducts for cleaning.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.5 Operational test, post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the ventilation systems included in this work item to be in satisfactory operating condition. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 12: Vent Ducts (Laundry Exhaust), Commercial Cleaning

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the designated shipboard ventilation systems.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 101 WTGB 514-002, Rev X, Ventilation & A/C Arrangements & Details

Coast Guard Drawing FL 3801-67, Rev B, Sheets 1 through 10 of 50 (General Notes – Ductwork) and Sheet 39 (Handholes for W.T. and N.W.T. Ducts)

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 5100 (SFLC Std Spec 5100), 2018, Clean Shipboard Ventilation Systems

Coast Guard Technical Publication (TP) 3456, 2001, Ship Information Book, Section B

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:

- Ducting screens.
- Electric pre-heaters.
- Overhead sheathing/panels.
- Ventilation covers.
- Washers and Dryers

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor shall witness Coast Guard Personnel perform an initial operational test of the ventilation systems included in this work item, to demonstrate existing operational condition. Submit a CFR.

3.3 Cleaning requirements. The Contractor shall clean and inspect the following ventilation systems, shown on Coast Guard Drawing 101 WTGB 514-002, FL 3801-67 and TP 3456, in accordance with SFLC Std Spec 5100. Submit a CFR.

TABLE 1 – SYSTEM LOCATIONS

SYSTEM LOCATION	TYPE
Laundry (2-25-2-Q)	Exhaust

3.4 Notification. The Contractor shall give written notification to the COR, 48 hours before starting ventilation cleaning work.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.5 Operational test, post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the ventilation systems included in this work item to be in satisfactory operating condition. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 13: Vent Ducts (All Other), Commercial Cleaning

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the designated shipboard ventilation systems.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 101 WTGB 514-002, Rev X, Ventilation & A/C Arrangements & Details

Coast Guard Drawing FL 3801-67, Rev B, Sheets 1 through 10 of 50 (General Notes – Ductwork) and Sheet 39 (Handholes for W.T. and N.W.T. Ducts)

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 5100 (SFLC Std Spec 5100), 2018, Clean Shipboard Ventilation Systems

Coast Guard Technical Publication (TP) 3456, 2001, Ship Information Book, Section B

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:

- Ducting screens.
- Electric pre-heaters.
- Overhead sheathing/panels.
- Ventilation covers.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor shall witness Coast Guard Personnel perform an initial operational test of the ventilation systems included in this work item, to demonstrate existing operational condition. Submit a CFR.

3.3 Cleaning requirements. The Contractor shall clean and inspect the following ventilation systems, shown on Coast Guard Drawing 101 WTGB 514-002, FL 3801-67 and TP 3456, in accordance with SFLC Std Spec 5100. Submit a CFR.

TABLE 1 – SYSTEM LOCATIONS

SYSTEM LOCATION	TYPE
Bos'n Hole (2-13-1)	Supply
Motor Room(to Aft Steering) (2-76-1)	Supply
Paint Locker (2-13-0-Q)	Natural

3.4 Notification. The Contractor shall give written notification to the COR, 48 hours before starting ventilation cleaning work.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.5 Operational test, post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the ventilation systems included in this work item to be in satisfactory operating condition. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 14: Compressed Air Receivers and System Valves (All), Clean, Inspect, Hydro and Lift

1. SCOPE

1.1 Intent. The work item describes the requirements for the Contractor to clean, inspect, lift test and hydrostatically test the below designated air receivers and system valves:

SERVICE	DESIGNATION	LOCATION	QTY	OPERATING PRESSURE (psi)
Starting Air		4-61-0-E-142	3	200
Ships Service		4-61-0-E	1	120
Ships Whistle		2-19-0-E	1	120

TYPE	SIZE	DESIGNATION	QTY	SET PRESSURE (psi)
Relief		Starting Air	3	265
Relief		Ship's Service	2	135
Relief		Ship's Whistle	1	135

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 140 WTGB 551-001, Rev -, Compressed Air System Diagram

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2018, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2018, Requirements for Preservation of Ship Structures

OTHER REFERENCES

American Society of Mechanical Engineers (ASME) B16.34, 2013, Valves-Flanged, Threaded, and Welding End

American Society for Testing and Materials (ASTM) International F1508, 2016, Standard Specification for Angle Style, Pressure Relief Valves for Steam, Gas, and Liquid Services

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

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-67, 2011 Edition, Butterfly Valves

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-72, 2010 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

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 system.

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

3.1.5 Operational test - initial. Prior to commencement of work, the Contractor shall witness Coast Guard personnel perform an initial operational test of the compressed air system, to demonstrate existing operational condition. Submit a CFR.

3.2 Air receiver cleaning and inspection. The Contractor shall clean and inspect each designated air receiver in paragraph 1.1 (Intent) as follows.

3.2.1 Blowdown the air receivers and collect the blowdown (condensate) into a separate container for inspection.

3.2.2 Visually inspect the blowdown (condensate) under a bright white light for oil or particulate contamination. Clean and visually inspect the internal and external surfaces of the air receiver for signs of corrosion, pitting, and other damage. Submit a CFR.

3.3 NDE. The Contractor shall perform NDE of the designated air receiver(s) in accordance with SFLC Std Spec 0740, Appendix C. If selected NDE method requires coating removal, perform subsequent touch-up preservation in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs). Refer to Coast Guard Drawing 140 WTGB 551-001 for guidance. Submit a CFR.

NOTE

Common NDE methods not requiring coating removal include, but are not limited to the following:

a. Radiographic Testing (RT).

b. Ultrasonic Testing (UT).

c. Eddy Current Testing (ET).

3.3.1 Test by ultrasonic (UT), magnetic particle (MT), or hydrostatic testing. The Contractor may select either method to satisfy testing requirements. Submit CFR.

3.3.2 To hydrostatic test, isolate the air receiver by disconnecting all piping, relief valves, and pressure switches. Install pipe plugs/caps, to prevent backflow into compressors and other system components.

3.3.2.1 After all authorized repairs, hydrostatically test the air receiver using clean fresh water in accordance with SFLC Std Spec 0740, Appendix C and manufacturer's recommended procedures. In the event a test pressure is not listed on the applicable drawing, test to 1½-times the nominal operating system pressure and hold for five minutes. Ensure zero leakage from or permanent deformation of pressure-containing parts by repairing all leaks, deformations, and discrepancies. Submit a CFR.

3.3.2.2 Instruments and equipment that might be damaged by clean fresh water shall be excluded from hydrostatic pressure test.

3.3.2.3 After testing, drain and thoroughly dry the air receivers with warm air. Dispose of testing fluids in accordance with all applicable Federal, state, and local regulations. Reconnect all disconnected piping and restore system. Renew any disturbed gaskets. Do not drain any fluids, including fresh water, into any space, bilge, or exterior location.

3.4 Contractor's option for valve renewal. The Contractor may, at no additional cost to the Government, opt to renew valves designated for inspection and testing if preferable for the Contractor. If the Contractor elects to renew valves, the Contractor shall ensure the following:

- New valves are commercial-standard type valves, conforming to the applicable standard listed in Table 1(Valve Standards).
- New valves shall be equivalent (including identical material) to the valve being renewed.

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
Angle Style. Pressure Relief Valves	ASTM F1508
All others	ASME B16.34

3.4.1 Visually inspect the piping and mounting arrangements; and submit a CFR detailing any required modifications to accommodate the new valve(s).

3.4.2 Provide original documentation to the COR certifying each valve has been satisfactorily shop-tested. Documentation shall include the set pressure, date of inspection / test, and testing facility.

3.5 Valve inspection and testing. The Contractor shall inspect and test each designated air system valve as follows. Refer to Coast Guard Drawing 140 WTGB 551-001 for guidance.

3.5.1 Relief valves. Disassemble as required, and visually inspect all parts for defects and deterioration. Submit a CFR.

3.5.1.1 Perform a lifting test on each relief valve in accordance with manufacturer's recommendations and ASME PTC 25. Ensure that each valve seats cleanly after pressure relief (without simmering), and with no allowable leakage.

3.5.1.2 Adjust the relief pressure on the designated relief valve as necessary to obtain the specified lifting pressure. After adjustment, perform a final check to confirm each relief valve's lifting pressure in the presence of the Coast Guard Inspector. After successful confirmation, install the relief valves. Renew all O-rings and gaskets. Submit a CFR.

3.5.2 Pressure reducing valves. Disassemble as required, and visually inspect all parts for defects and deterioration. Submit a CFR.

3.5.2.1 Adjust the setting on the designated reducing valve as necessary to obtain the specified pressure setting.

3.5.2.2 After adjustment, perform a final check to confirm each reducing valve's ability to maintain set pressure in the presence of the Coast Guard Inspector. After successful confirmation, install the pressure reducing valves. Renew all O-rings and gaskets. Submit a CFR.

3.6 Valve reinstallation/installation. Upon completion of all authorized work, the Contractor shall 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.

3.7 Touch-up preservation, general. 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.)

3.8 Data plates- valve. The Contractor shall affix an anodized aluminum test data plate with lock wire to each valve. The data plate shall be engraved with ¼-inch high letters, stating the following:

- Valve number / designation
- Set pressure (if applicable)
- Date of inspection / test.

3.9 Documentation. The Contractor shall provide documentation to the Coast Guard Inspector certifying each valve tested. Documentation shall include the valve number / designation, set pressure, date of inspection / test, and testing facility.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.10 Operational test – post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the compressed air system to be in satisfactory operating condition. Submit a CFR.

3.11 Surface preservation. The Contractor shall prepare and coat the receiver exterior surfaces, using the system specified for "Machinery, Operating Temperatures Under 200 ºF" in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). Select finish/top coat color to match previous paint scheme.

3.12 Data plates- air receiver. The Contractor shall affix an anodized aluminum test data plate with epoxy resin cement to each air receiver. The data plate shall be engraved with ¼-inch high letters, stating the following:

- Receiver name / number.
- Hydrostatic test pressure (if applicable).
- Date of inspection / test.
- Testing facility.

3.13 Documentation. The Contractor shall provide documentation to the Coast Guard Inspector certifying each air receiver tested. Documentation shall include the receiver name / number, method of testing, hydrostatic test pressure (if applicable), date of inspection / test, and testing facility.

4. NOTES

4.1 Air receiver definition. An air receiver is a pressure vessel for the storage of air at 600 psig and below.

WORK ITEM 15: Anchor Windlass, Inspect and Service

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and service the anchor windlass.

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), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 3020 (SFLC Std Spec 3020), 2018, Overhaul AC Electrical Motors

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2018, Auxiliary Machine Systems

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2018, Requirements for Preservation of Ship Structures

Coast Guard Technical Publication (TP) 3483, Feb 2012, SWBS Groups 580-583, Anchor Windlass

OTHER REFERENCES

CEU Cleveland Memo 11410 Waterfront Load Limit

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following Table I tasks:

- Task #1.

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:

- Anchor chain.

3.1.6 Set screws. All disturbed or renewed set screws shall be coated with a commercially available locking compound (LocTite or equivalent) at reinstallation.

3.2 Inspection and repair particulars.

WARNING

Based on structural evaluation, CEU Cleveland has established a working load limit of 150 pounds per square foot (psf) uniformly distributed within 20 feet of the waterfront bulkhead face. This means that stockpiling, parking and material handing is restricted to loads that fall below the 150 psf threshold.

				ADDITION REQUIREMENTS	
#	**TASK TYPE**	**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	Service and Inspect	1	Wildcat shaft assembly	3.2.2 (Service and inspect	Submit CFR.
3	Disassemble, Inspect, and Preserve	1	Main Reduction Gear assembly	3.2.3 (Disassemble and inspect) D2.4 (Open gearing and gear reducers) 3.2.4 (Preservation)	Submit a CIR.
4	Service and Inspect	1	Main Shaft Coupling Assembly	3.2.2 (Service and inspect	Submit CFR.
5	Disassemble and Inspect	1	Band Brake Assembly	3.2.3 (Disassemble and inspect) D2.3(Brakes and clutches	Submit a CIR.

				ADDITION REQUIREMENTS	
#	**TASK TYPE**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM SFLC STD SPEC 5000**	**OTHER**
6	Disassemble and Inspect	1	Band Brake Hand Wheel and Linkage Assembly	3.2.3 (Disassemble and inspect) D2.3(Brakes and clutches	Submit a CIR.
7	Disassemble and Inspect	1	Electric Brake Assembly	3.2.3 (Disassemble and inspect) D2.3(Brakes and clutches	Submit a CIR.
8	Overhaul and Preserve	1	Electric Motor	3.2.4 (Preservation)	Perform requirements in paragraphs 3.1 thru 3.4.3 of SFLC Std Spec 3020. Submit a CFR, for all inspections required in SFLC Std Spec 3020.
9	Disassemble and Inspect	1	Clutch Mechanism	3.2.3 (Disassemble and inspect) D2.3(Brakes and clutches	Submit a CIR.
10	Disassemble, Inspect, and Preserve	1	Control Stand	3.2.3 (Disassemble and inspect) 3.2.4 (Preservation)	Submit a CIR.
11	NDE	1	Anchor windlass assembly foundation	3.2.5 (NDE)	Weld joints to NDE: All joints attaching capstan foundations to deck.
12	Preserve	1	Anchor windlass assembly foundation	3.2.4 (Preservation)	Preservation to include: windlass assembly housing and foundation and the motor casing, and gear reducer, and all other previously painted associated components surfaces. Select the following top coat colors: + Spar (10371) for equipment surfaces. + Black (17038) for foundation surfaces.
13	Groom and Lubricate	1	Anchor Windlass Assembly	3.2.6 (Groom and lubrication)	
14	Op Test	1	Anchor Windlass Assembly	B2.5 (Windlass)	Submit CFR.

3.2.1 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 16: Vertical Capstan, Inspect and Service

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and service the Vertical Capstan.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

None.

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3483, SWBS Groups 580-583, Feb 2012, Vertical Capstan

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 3020 (SFLC Std Spec 3020), 2018, Overhaul AC Electrical Motors

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2018, Auxiliary Machine Systems

OTHER REFERENCES

CEU Cleveland Memo 11410 Waterfront Load Limits

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following Table I tasks:

- Task #1.
- Task #3.
- Task #5.

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).

3.2 Inspection and repair particulars. The Contractor shall perform the work described herein in accordance with SFLC Std Spec 5000 and TP-3483, SWBS 580-583.

WARNING

Based on structural evaluation, CEU Cleveland has established a working load limit of 150 pounds per square foot (psf) uniformly distributed within 20 feet of the waterfront bulkhead face. This means that stockpiling, parking and material handing is restricted to loads that fall below the 150 psf threshold.

				ADDITION REQUIREMENTS	
#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
1	Operate and Inspect	1	Capstan Assembly	3.2.1 (Operate and inspect	Submit a CIR
2	Service and Inspect	1	Capstan Head Shaft Assembly	3.2.2 (Service and inspect)	Remove capstan head and clean, inspect: shaft, bearing, coupling. Inspect keys and keyways for damage, cracks, and excessive wear. Renew seals and gaskets. Submit a CFR.
3	Disassemble and Inspect	1	Electric brake	D2.3(Brakes and clutches)	Submit a CFR.
4	Overhaul and Preserve	1	Electric Motor	3.2.4 (Preservation)	Perform requirements in paragraphs 3.1 thru 3.4.3 of SFLC Std Spec 3020. Submit a CFR, for all inspections required in SFLC Std Spec 3020.
5	Disassemble and Inspect	1	Gear Reducer	D2.4 (Open gearing and gear reducers)	Check runout of shaft (0.002” TIR max allowable). Inspect keys and keyways

				ADDITION REQUIREMENTS	
#	**TASK TYPE**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM SFLC STD SPEC 5000**	**OTHER**
					for damage, cracks, excessive wear. Inspect thrust and tapered roller bearings for excessive wear, deterioration. Inspect gear teeth for damage, cracks, excessive wear. Renew seals and gaskets. Submit a CFR.
6	NDE	1	Capstan Assembly And Foundation	3.235 (NDE)	Weld joints to NDE: All joints attaching capstan foundations to deck.
7	Preserve	1	Capstan Assembly And Foundation	3.2.4 (Preservation)	Preservation to include: windlass assembly housing and foundation and the motor casing, and gear reducer, and all other previously painted associated components surfaces. Select the following top coat colors: + Spar (10371) for equipment surfaces. + Black (17038) for foundation surfaces.
8	Groom and lubricate	1	Capstan Assembly	3.2.6 (Groom and lubrication)	
9	Operational Test	1	Capstan Assembly	B2.6 (Capstans)	Submit a CFR.

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

TABLE 1 – SPECIAL REQUIREMENTS

COMPONENT	APPENDIX & PARAGRAPH IN SFLC STD SPEC 5000
Fluids	C2.1
Hose assemblies	C2.2
Piping and tubing	C2.3
Valves and manifolds	C2.4
Gages	C2.5
Gas charged accumulators	C2.6

Heat exchangers and fluid coolers	C2.7
Systems	C2.8
Fastener assemblies	D2.1
Wire rope assemblies	D2.2
Brakes and clutches	D2.3
Open gearing and gear reducers	D2.4

4. NOTES

This section is not applicable for this work item.

WORK ITEM 17: Hull Fittings (Mooring and Towing), Inspect and Test - Tender

1. SCOPE

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

General Mooring and Tow Hull Fittings

QTY	DESCRIPTION	LOCATION	APPLICABLE INFORMATION
1	Chock	Bow	Amidship
2	Chock	Stbd / Port Bow	Frame 1-2
1	Bitts	Focsle /Amidship	Frame 3
2	Chock	Stbd / Port Bow	Frame 10-11
2	Bitts	Stbd / Port Bow	Frame 13-16
2	Chock	Stbd / Port Bow	Frame 19A – 19B
2	Single Bitt	Stbd / Port Bow	Frame 19 B,C, D
2	Chock	Stbd / Port Side	Frame 23-24
2	Bitts	Stbd / Port Side	Frame 27-29
2	Chock and Cleat	Stbd / Port Side	Frame 35-36
2	Cleat	Stbd / Port Side	Frame 40-41
2	Chock and Cleat	Stbd / Port Side	Frame 50-51
2	Cleat	Stbd / Port Side	Frame 56-57
2	Bitts	Stbd / Port Side	Frame 69-71
2	Single Bitt	Stbd / Port Side	Frame 75-77
1	Towing Bitt	Fantail	Amidship, Frame 76

2	Chock	Stbd / Port Qtr	Frame 77-79
2	Bitts	Stbd/Port Qtr	Frame 80 B, C, D
2	Chock	Stbd / Port Qtr	Frame 84-86
1	Chock	Fantail Amidship	Amidship

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 101 WTGB 582-001, Rev J, Bitts, Chocks and Cleats

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2018, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2018, 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 shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, the

Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

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

3.2 Inspection and test particulars. The Contractor shall 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 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 18: Grey Water Holding Tank(s), Clean and Inspect

1. SCOPE

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

TABLE 1 – TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (Gallons)	LOW SUCTION (Gallons)
Seal Water Tank	2-19-0-E	100	5
Grey Water	4-32-1-W	1776	100
Grey Water	4-32-2-W	1776	100

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 140-WTGB 528-002, Rev -, Sanitary & Deck Drains Diag

Coast Guard Drawing 140-WTGB 528-003, Rev -, Sanitary & Deck Drains A&D

Coast Guard Drawing 140-WTGB 528-004, Rev -, Grey Water Mods & Tank Transition

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

OTHER REFERENCES

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

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 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. Maintain a plug accountability log outside the tank to prevent any of the installed temporary plugs from being lost inside the tank or forgotten inside at tank closure. Submit this log to the Coast Guard Inspector after completion of work item.

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).

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

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

NOTE: Known inoperable TLI.

3.3 Service disruption. When grey water is disrupted due to contractor repairs, the Contractor shall refer to SFLC Standard Spec 0000 par 3.2.11 to provide required temporary facilities.

3.4 Cleaning. The Contractor shall accomplish the following for the tank(s) listed. The Contractor shall refer to all references in Section 2 for guidance.

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

3.4.2 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 Inspection. The Contractor shall visually inspect all interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Submit 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).

3.6 Control Panel Assembly. The Contractor shall 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

3.7 Closing. The Contractor shall 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.

3.7.1 Renew 100% of nylon insert/nylock nuts and washers.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

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

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

3.8.2 The Contractor shall 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.

3.8.3 Upon completion of testing and, in the presence of the Coast Guard Inspector, the Contractor shall 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 19: Sewage Holding Tank(s), Clean and Inspect

1. SCOPE

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

TABLE 1 – TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (Gallons)	LOW SUCTION (Gallons)
Sewage Vacuum Collection Tank	2-19-0-E	900	100

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 140-WTGB 528-002, Rev -, Sanitary & Deck Drains Diag

Coast Guard Drawing 140-WTGB 528-003, Rev -, Sanitary & Deck Drains A&D

Coast Guard Drawing 140-WTGB 528-004, Rev -, Grey Water Mods & Tank Transition

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

OTHER REFERENCES

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

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 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 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).

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

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

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

3.2 Operational test - initial. Prior to commencement of work, the Contractor shall witness Coast Guard personnel perform an operational pre-test to demonstrate all tank TLIs' existing operational condition. Submit a CFR.

NOTE: Known inoperable TLI.

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

3.4 Cleaning and inspection requirements. The Contractor shall accomplish the following for the tank(s) listed in paragraph 1.1 (Intent), referring to all references in Section 2 for guidance:

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

3.4.2 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.

3.4.3 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).

3.4.4 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

3.5 Closing. The Contractor shall 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.

3.5.1 The Contractor shall renew 100% of nylon insert/nylock nuts and washers.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

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

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

3.6.2 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.

3.6.3 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

This section is not applicable to this work item.

WORK ITEM 20: Grey Water Piping, Clean And Flush

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean the grey water piping system.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 101 WTGB 528-001, Rev L, Sanitary & Deck Drain System Diagram

Coast Guard Drawing 101 WTGB 528-003, Rev C, Grey Water Mods & Tank Transitions

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

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, 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:

- Grey water pumps

3.2 Contamination prevention. The Contractor shall take all precautions to prevent contamination of personnel and spaces in accordance with all applicable Federal, state, and local regulations.

3.3 Personnel qualification. The Contractor shall ensure that personnel accomplishing this work are qualified and experienced in operating the pressurized water system and handling the chemicals. For each operator/cleaning technician, submit documentation of applicable experience and training obtained within the last twelve months along with the Cleaning Plan (see paragraph 3.5.2 (Plan Submittal)).

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

3.5 Piping hydrojet cleaning. The Contractor shall perform the following work:

3.5.1 The Contractor shall clean and flush approximately 150 linear feet of grey water system piping, shown on Coast Guard Drawings 101 WTGB 528-001 and 101 WTGB 528-003.

3.5.2 Prior to commencing work, coordinate with the Coast Guard Inspector. Determine required down times for affected piping system. Determine the feasibility/need for the piping system to be split to minimize system down time.

3.5.3 With the aid of ship’s force, split the plumbing drain system fore and aft by closing isolation valves in the drainage system. Work on only one section of the plumbing drain system at a time to allow use of toilet and shower facilities in the other section of the system by the ship’s duty section.

3.5.4 Using the referenced Coast Guard drawings as guidance, hydro blast the internal surfaces of all of the plumbing drain piping. Hydro blast pressure shall be at least 2500 psig at the discharge nozzle in all piping to ensure removal of all salts and scale from piping internal surfaces.

3.5.4.1 Ship’s force will provide an assistant to the Contractor to show the Contractor the location of clean-out connections within the plumbing drain system.

3.5.4.2 Open each of the clean out connections as required to clean and hydro blast all of the internal piping within the system. Catch any fluid that drains from the clean out connections when it is opened and clean up any spills using bleach to disinfect the spill after cleaning.

3.5.4.3 It may be necessary for the Contractor to install additional clean-out connections to access all portions of the plumbing drain system. If additional clean-out connections are needed, a separate specification item in this specification package shall be authorized to install additional clean-out connections.

3.5.4.4 Hydro blast cleaning water may be collected in the ship's sewage system and disposed of via the ship's sewage shore tie connections.

3.5.5 Clean until all of the following conditions are met:

- All visible calcium carbonate deposits, solid deposits and build-up are removed from pipe walls.
- Discharge water from the piping being cleaned is free of all visible scale and deposits.

3.5.5.1 Inspect the piping interior using a borescope in the presence of the COR, to verify that all solid deposits visible to the unmagnified eye have been removed. Continue the cleaning process until all visible solid deposits are removed from the pipe walls.

3.5.6 In the event that hydroblasting alone does not clean piping to required conditions, Contractor shall use chemical cleaning methods.

3.5.6.1 Ensure that chemical cleaners do not damage the environment, heat exchanger or the vessel.

3.5.6.2 Submit the written plan for chemical cleaning to the COR for approval. The procedure shall include products to be used, safety precautions, disposal requirements, sequence of events, etc.

CAUTION

Submit a MSDS to the COR for all chemicals proposed for use.

3.5.6.3 Chemical cleaning waste water disposal. Dispose of all cleaning fluids and debris in accordance with all applicable Federal, state, and local regulations. Remove all unused chemicals from USCG property immediately upon completion of work item. Do not drain any fluids (including fresh water) into any space, bilge, or exterior location.

- Sequence of each location that ensures all piping sections will be cleaned and all foreign debris removed.

3.6 Pumps and valves. The Contractor shall replace system tank valve(s) with temporary spool piece(s). Visually inspect system pumps and valve(s); and submit a CFR. Upon completion of work, reinstall the removed tank valve(s) with new gaskets.

3.7 Gasket renewal. The Contractor shall reinstall all removed valves and fittings with new gasket material conforming to applicable referenced drawings.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

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

3.8.1 Leak test. After all system components are reinstalled, the Contractor shall test all disturbed piping for leaks, as follows, and submit a CFR:

- Plug all system openings (except the highest) and fill system with water to the point of overflow. Ensure that the water level does not go down (without adding any water) for sufficient time to inspect the entire system (no less than 15 minutes).

- Closely monitor the system for leaks. Repair all leaks detected.
- Repeat test and inspection until no leaks are detected.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 21: Sewage Piping, Clean And Flush

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean the sewage piping system.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 101 WTGB 528-001, Rev L, Sanitary & Deck Drain System Diagram

Coast Guard Drawing 101 WTGB 528-003, Rev C, Grey Water Mods & Tank Transitions

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

OTHER REFERENCES

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

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The 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, 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:

- Sewage pumps
- Toilets

3.2 Contamination prevention. The Contractor shall take all precautions to prevent contamination of personnel and spaces in accordance with all applicable Federal, state, and local regulations.

3.3 Personnel qualification. The Contractor shall ensure that personnel accomplishing this work are qualified and experienced in operating the pressurized water system and handling the chemicals. For each operator/cleaning technician, submit documentation of applicable experience and training obtained within the last twelve months along with the Cleaning Plan.

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

3.5 Cleaning plan. The Contractor shall establish a plan for cleaning the designated piping system, listing the step by step procedures necessary to ensure that all foreign debris is removed from the piping system.

CAUTION

Although the Coast Guard prefers pressurized water as the cleaning fluid, the Contractor may propose chemical cleaning as an alternative, providing that the proposed chemical cleaning agent is environmentally safe, suitable for use in marine sewage piping application, and pre-approved by the COR. The chemicals used in the cleaning (including cleaning chemicals, neutralizing compounds, and defoaming chemicals) shall not cause any significant detrimental effects to the sewage piping system or any other system components Due to the fact that system piping has historically been difficult to clean by pressure washing only, chemical cleaning is usually required to successfully complete the cleaning process.

Submit a MSDS to the COR for all chemicals proposed for use.

3.5.1 Procedure requirements. The Contractor shall ensure that the procedure includes the following:

- Methods of cleaning.
- All safety precautions required during cleaning operations.
- List of qualified personnel who will operate machinery or handle chemicals (see paragraph 3.3 (Personnel qualification) herein).
- Locations in the sewage piping where cleaning will take place, and any additional fittings necessary.
- Sequence of each location that ensures all piping sections will be cleaned and all foreign debris removed.

3.5.2 Plan submittal. The Contractor shall submit the written plan to the COR for approval at least 48 hours prior to commencing cleaning operations.

3.6 Clean and flush. The Contractor shall clean and flush approximately 350 linear feet of sewage system piping (Contractor shall be aware sections of sewage piping in the Engine Room are PVC), shown on Coast Guard Drawings 101 WTGB 528-001 and 101 WTGB 528-003.

3.6.1 Pumps and valves. Replace system tank valve(s) with temporary spool piece(s) before cleaning. Visually inspect system pumps and valve(s); and submit a CFR. Upon completion of work, reinstall the removed tank valve(s) with new gaskets.

3.6.2 Cleaning. Continue cleaning until all of the following conditions are met:

- All visible calcium carbonate deposits, solid deposits and build-up are removed from pipe walls.
- Discharge water from the piping being cleaned is free of all visible scale and deposits.

3.6.3 Inspect the piping interior using a borescope in the presence of the COR, to verify that all solid deposits visible to the unmagnified eye have been removed. Continue the cleaning process until all visible solid deposits are removed from the pipe walls.

3.7 Waste disposal. The Contractor shall dispose of all cleaning fluids and debris in accordance with all applicable Federal, state, and local regulations. Remove all unused chemicals from USCG property immediately upon completion of work item. Do not drain any fluids (including fresh water) into any space, bilge, or exterior location.

3.8 Gasket renewal. The Contractor shall reinstall all removed valves and fittings with new gasket material conforming to ASTM D1330.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

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

3.9.1 Leak test. After all system components are reinstalled, the Contractor shall test all disturbed piping for leaks, as follows, and submit a CFR:

- Plug all system openings (except the highest) and fill system with water to the point of overflow. Ensure that the water level does not go down (without adding any water) for sufficient time to inspect the entire system (no less than 15 minutes).
- Closely monitor the system for leaks. Repair all leaks detected.
- Repeat test and inspection until no leaks are detected.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 22: Deck Covering (Interior Wet/Dry), Renew

1. SCOPE

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

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 140-WTGB-634-001, Rev-, Deck Covering Schedule

Coast Guard Drawing 140-WTGB-801-022, Rev-, Inboard Profile

Coast Guard Drawing 140-WTGB-644-001, Rev B, Sanitary Spaces A&D

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2018, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 6341 (SFLC Std Spec 6341), 2018, Install Interior Deck Covering Systems

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2018, Welding and Allied Processes

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

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

- 3.3 Ultrasonic thickness (UT) measurements.

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 Protective measures, specific. Apply protective measures as specified in SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection) to the following components, spaces and equipment:

- Deck drains.
- Intake and exhaust (ventilation).

3.2 Deck covering installation particulars. The Contractor shall perform all tasks specified in SFLC Std Spec 6341 and herein, to install a new covering system in the location(s) specified in Table 1 below.

NOTES

1. The exposed deck surfaces are prepared and coated in accordance with SFLC Std Spec 6310. Refer to SFLC Std Spec 6341, Para 3.2.1.2 for additional information.

2. Ensure the final surface condition of the deck is made "slip resistant" in accordance with manufacturer's installation procedures and allows for proper drainage. Refer to SFLC Std Spec 6341, Para A2.1.2.2.

TABLE 1 - DECKING SYSTEM

LOCATION	AREA (*SQFT)	DECK MTL (A/S**)	SYSTEM/ APPENDIX (SFLC STD SPEC 6341)	COVE BASE	SYSTEM COLOR	UNDERLAYMENT REQUIREMENT
Crew Head 1-23-0-L (two showers)	6 SQFT	S	Cosmetic Polymeric Epoxy Resin, Type III (One-Step Epoxy System)/Appendix A	Y	See paragraph 3.4	Remove existing underlayment. Install new underlayment.

XO/EO Head (01-42-2)	13 SQFT	S	Cosmetic Polymeric Epoxy Resin, Type III (One-Step Epoxy System)/Appendix A	Y	See paragraph 3.4	Remove existing underlayment. Install new underlayment.
CO Head (1-42-3)	10 SQFT	S	Cosmetic Polymeric Epoxy Resin, Type III (One-Step Epoxy System)/Appendix A	Y	See paragraph 3.4	Remove existing underlayment. Install new underlayment
CPO Head (1-42-3-L)	11 SQFT	S	Cosmetic Polymeric Epoxy Resin, Type III (One-Step Epoxy System)/Appendix A	Y	See paragraph 3.4	Remove existing underlayment. Install new underlayment.
Paint Locker Deck and Bulkhead Combing (2-13-0-Q)	80 SQFT	S	Paint in accordance with SFLC Std Spec 6310, Appendix B	Y	See paragraph 3.4	None.

***Approximated.**
****Note: A = Aluminum; S = Steel.**
*****See SFLC Std Spec 6341 for definition of cove base.**

3.3 Ultrasonic thickness (UT) measurement. The Contractor shall take a total of 50 UT measurements of all listed decks, in locations designated by the Coast Guard Inspector, in accordance with SFLC Std Spec 0740, Appendix C. Use Coast Guard Drawing 140-WTGB-801-022, Rev-, Inboard Profile as guidance. Submit a CFR.

3.4 Deck covering color. The Contractor shall submit a deck covering color chart to Coast Guard Inspector, for the purpose of color selection.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 23: Anchor Chain(s) and Ground Tackle, Inspect and Repair

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform inspection and repairs to the anchor chain assembly, including associated ground tackle.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 101 WTGB 581-001, Rev T, Anchor Handling A & D

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2018, Requirements for Preservation of Ship Structures

Coast Guard Commandant Instruction (COMDTINS) M10360.3 (series), Coatings and Color Manual

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 shall 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 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:

Anchor.

3.2 Required work particulars. The Contractor shall use the chain description (see 4.1 (Component characteristics)) and Coast Guard Drawing 101 WTGB 581-001 for guidance, for accomplishing the tasks specified below for the anchor chain.

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 order as 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 shall 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 shall 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 Section 4.2 (Supply information) for a list of ABS approved chain manufacturers.

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 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 Install new stainless steel wiring on each of the detachable links.

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. Ensure that (1) 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; (2) the ground tackle is kept ready for use, (3) nothing interferes with a readiness to veer or slip the anchors, (4) 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, and (5) the anchor has a crown buoy attached, with sufficient length of rope to facilitate indicating the depths of water in which moored. In addition, do the following:

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.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.3 Operational test, post repairs. After completion of work, the Contractor shall, 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. Submit a CFR.

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

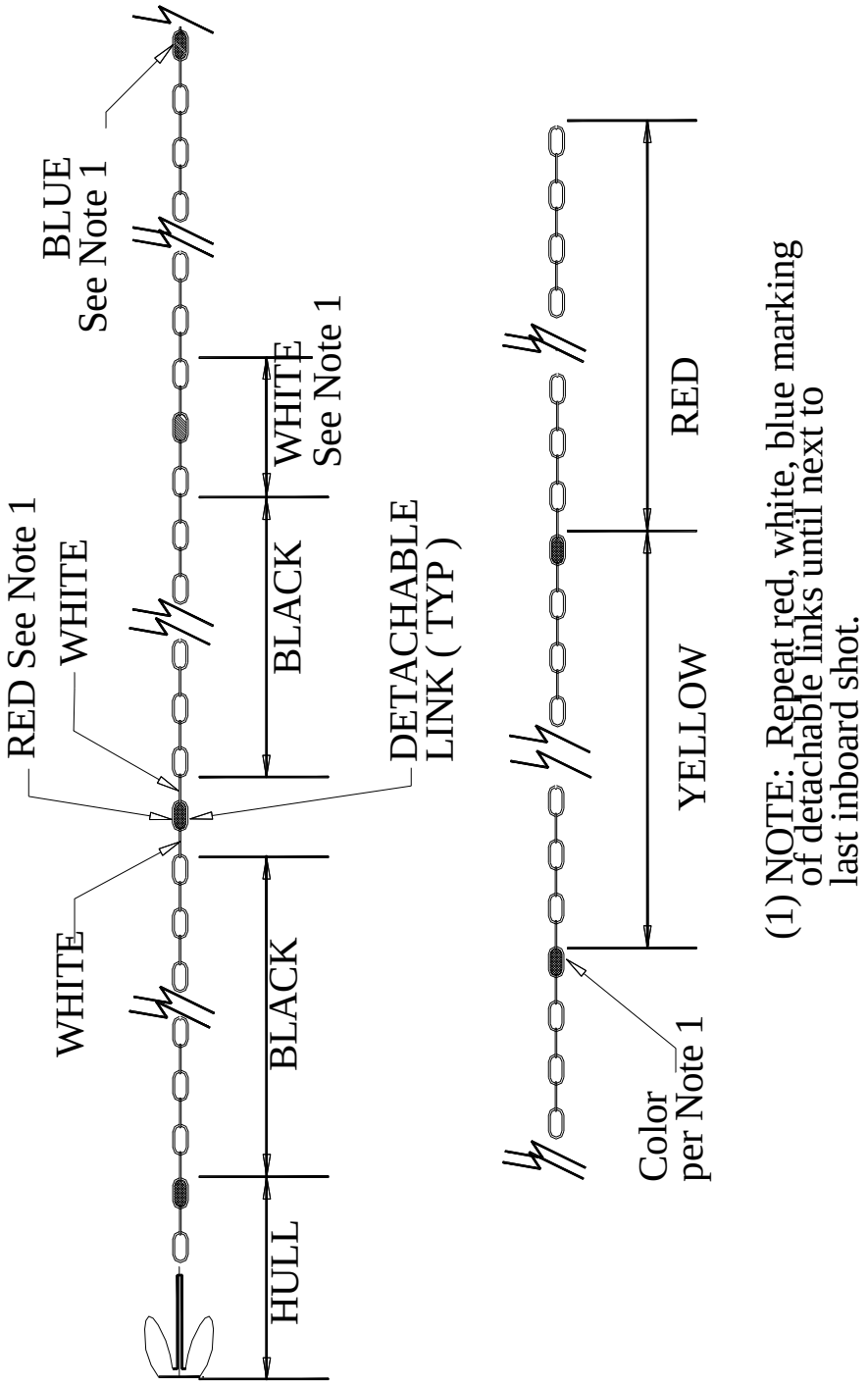
3.3.2 Submit a CFR.

3.4 Touch-up preservation. The Contractor 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

4.1 Component characteristics. Weight of each anchor and all other chain type, size, and length information are provided on Coast Guard Drawing 101 WTGB 581-001. 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 24: Single Point Davit, Inspect & Service

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and service the Single Point Davit (SPD) – Vest Model PLA-2000 identified in Table 1.

TABLE 1 – LOCATIONS

SIDE	LEVEL	FRAME
Starboard	01	55

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	Parts Kit, Boat Davit 5-Year Inspection/Overhaul	NSN: 2030-01-F18-5589 PN: 18379	1 ea	$16,325.00

***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

None.

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 10000, May 2015, Manufacturer's Instruction Book - SWBS Group(s) 583, Single Point Davit, – Model PLA-2000

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2018, Auxiliary Machine Systems

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2018, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

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

- Task #1.

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

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 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:

- Small Boat

3.2 Inspect and service task particulars. The Contractor shall refer to CG TP-10000, SWBS 583 as guidance during the performance of the tasks specified in Table 1. Perform all designated tasks in accordance with SFLC Std Spec 5000, as applicable.

TABLE I – RECURRING TASKS

				ADDITION REQUIREMENTS	
#	**TASK TYPE**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM 5000_STD**	**OTHER**
1	Operate and Inspect	1	SPD System	3.2.1 (Operate and Inspect)	Submit a CIR

				ADDITION REQUIREMENTS	
#	**TASK TYPE**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM 5000_STD**	**OTHER**
				Appendix A	
2	Renew	1	Wire puller Wheel 15963	3.2.3	GFP
3	Renew	1	Valve Set 10977	C2.4 (Valves and manifolds)	GFP
4	Renew	1	Valve Set 10980 Line Puller Type WS-1	C2.4 (Valves and manifolds)	GFP
5	Renew	1	Valve Set 15492 11 Refill Valves only	C2.4 (Valves and manifolds)	GFP
6	Renew	1	Pressure Gauge 10254	C2.5 (Gages)	GFP
7	Renew	1	Pressure Gauge 10255	C2.5 (Gages)	GFP
8	Renew	2	Pressure Gauge 10720	C2.5 (Gages)	GFP
9	Renew	1	HPU Filter Return 12887	C2.1.2 (Filtering)	GFP
10	Renew	1	HPU Filter Pressure 12888	C2.1.2 (Filtering)	GFP
11	Renew	1	Breather Filter 11961	C2.1.2 (Filtering)	GFP
12	Renew	4	Hydraulic Hose 12848	C2.2 (Hose assemblies)	GFP
13	Renew	3	Hydraulic Hose 12617	C2.2 (Hose assemblies)	GFP
14	Renew	1	Hydraulic Hose 12845	C2.2 (Hose assemblies)	GFP
15	Renew	1	Hydraulic Hose 17956	C2.2 (Hose assemblies)	GFP
16	Renew	2	Hydraulic Hose 17954	C2.2 (Hose assemblies)	GFP
17	Renew	4	Hydraulic Hose 14445	C2.2 (Hose assemblies)	GFP
18	Renew	2	Hydraulic Hose 17007	C2.2 (Hose assemblies)	GFP
19	Renew	2	Hydraulic Hose 17006	C2.2 (Hose assemblies)	GFP
20	Renew	1	Hydraulic Hose 17951	C2.2 (Hose assemblies)	GFP
21	Renew	1	Hydraulic Hose 17952	C2.2 (Hose assemblies)	GFP
22	Renew	1	Hydraulic Hose 17953	C2.2 (Hose assemblies)	GFP
23	Renew	1	Hydraulic Hose 13539	C2.2 (Hose assemblies)	GFP

				ADDITION REQUIREMENTS	
#	**TASK TYPE**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM 5000_STD**	**OTHER**
24	Renew	1	Hydraulic Hose 17955	C2.2 (Hose assemblies)	GFP
25	Renew	1	Hydraulic Hose 14490	C2.2 (Hose assemblies)	GFP
26	Renew	1	Wire Rope Assembly 15807	D2.2 (Wire rope assemblies)	GFP
27	Renew	1	Grease for Wire Rope 13921	D2.2 (Wire Rope assemblies)	GFP
28	Renew	1	Grease Tape 10174	C2.2.1.2.2 (Weatherization).	GFP
29	Renew	1	Breather Filler Plug 10539	C2.1.2 (Filtering)	GFP
30	Renew	1	Breather Filler Plug 10540	C2.1.2 (Filtering)	GFP
31	Renew	All	System Hydraulic Fluid	C2.1 (Fluids)	
32	Preserve	1	SPD System	3.2.4 (Preservation)	Preservation to include all previously-coated surfaces
33	Groom and Lubricate	1	SPD System	3.2.6 (Groom and Lubricate)	Perform all maintenance specified in TP-10000, Section B
34	Final Operational And/Or Weight Test	1	SPD System	B2.7 (Davits)	After completion of all other work, perform the operational and weight testing for this system. Main Hoist test weights are as follows: • Static: 6,615 (+0 -0) lbs • Dynamic: 5,513 (+0 -0) lbs • Rated: 4,410 (+0 -0) lbs Submit a CFR.
35	Fabricate and Install	1	Label plate	B2.9 (Label Plates)	
36	Weatherize	All	Hose fittings	C2.2.1.2.2 (Weatherization).	

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

TABLE II – SPECIAL REQUIREMENTS

COMPONENT	**APPENDIX & PARAGRAPH IN SFLC STD SPEC 5000**
Fluids	C2.1
Hose assemblies	C2.2
Piping and tubing	C2.3
Valves and manifolds	C2.4
Gages	C2.5

Gas charged accumulators	C2.6
Heat exchangers and fluid coolers	C2.7
Systems	C2.8
Fastener assemblies	D2.1
Wire rope assemblies	D2.2
Brakes and clutches	D2.3
Open gearing and gear reducers	D2.4

3.4 Removal. None.

3.5 Installation. None.

3.6 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.

S_63000_1117_SWIT
S19_015_63000_ACC_1219_106

WORK ITEM 25: Crew's Berthing, Partial Preserve

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform partial preservation of the area around the Fire Main Cut-Off Valve (labeled 1-31-3) in the Crew's Berthing (1-19-1-L), approximately 6 sqft.

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), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2018, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2018, 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).

NOTE

FMCOV is being removed for overhaul via another work item. It is recommended to coordinate the performance of these two work items for efficiency.

3.2 Substrate visual inspection. Upon completion of surface preparation and prior to application of primer coat (see 3.3 (Surface preservation)), the Contractor shall perform a visual inspection of the prepared surfaces; submit a CFR.

3.3 Surface preservation. The Contractor shall prepare and coat the deteriorated bulkhead and deck surfaces in Crew's Berthing (1-19-1-L) as designated by the Coast Guard Inspector, including all adjacent structural members and equipment foundations, using the applicable coating system in Table 1. Select finish/top coat color to match existing adjacent surfaces.

TABLE 1 - APPLICABLE COATING SYSTEM

SURFACES	*COATING SYSTEM
Bulkheads and Overheads	"Bulkheads (Bulkheads and Overheads, Un-insulated Metal), Option I or II", in accordance with SFLC Std Spec 6310, Appendix B ((Cutter and Boat Interior Painting System)
Decks (Interior)	"Decks, Metal Interior and Non-Skid Areas (Metal Decks –No application of deck coverings)", in accordance with SFLC Std Spec 6310, Appendix B ((Cutter and Boat Interior Painting System)

*Suppliers of CG-authorized coatings are listed in Appendix C of SFLC Std Spec 0000.3.3.1 Select power tool cleaning to "bare metal" (SSPC-SP 11) with a minimum 1.0 mil anchor profile as the method of surface preparation.

3.3.2 Attach a suitable vacuum to the power tool equipment, to capture and contain all dust and paint debris.

4. NOTES

This section is not applicable to this work item.

S_63000_1117_SWIT
S19_017_63000_ACC_1219_106

WORK ITEM 26: Auxiliary Machine Room #2, Partial Preserve

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform partial preservation of the deck below the Fuel Oil Transfer Manifold in the Auxiliary Machine Room #2 (3-19-0-E), approximately 20 square feet.

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), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2018, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2018, 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).

NOTE

F/O Xfer Manifold is being removed for overhaul via another work item. It is recommended to coordinate the performance of these two work items for efficiency.

3.2 Substrate visual inspection. Upon completion of surface preparation and prior to application of primer coat (see 3.3 (Surface preservation)), the Contractor shall perform a visual inspection of the prepared surfaces; submit a CFR.

3.3 Surface preservation. The Contractor shall prepare and coat the deteriorated deck surfaces in Auxiliary Machine Room #2 (3-19-0-E) as designated by the Coast Guard Inspector, including all adjacent structural members and equipment foundations, using the system specified for “Decks, Metal Interior and Non-Skid Areas (Metal Decks – No Application of Deck Coverings, Steel)” in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). Apply finish/top coat color as follows: match existing adjacent surfaces.3.3.1 Select power tool cleaning to “bare metal” (SSPC-SP 11) with a minimum 1.0 mil anchor profile as the method of surface preparation.

3.3.2 Attach a suitable vacuum to the power tool equipment, to capture and contain all dust and paint debris.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 27: Tank (Water Mist), 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 - 100% (GALLONS)	LOW SUCTION (GALLONS)
Water Mist	4-24-1-W	1,261	100

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 140-WTGB 123-2, Rev B, Structural Mods Incidental to Water Mist Tank 4-24-1-W

Coast Guard Drawing 140-WTGB 555-2, Rev C, Water Mist System Installation A&D

Coast Guard Drawing 140-WTGB 555-4, Rev C, Water Mist System Diagram

Coast Guard Drawing 140-WTGB 801-3, Rev -, Booklet of General Plans

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

OTHER REFERENCES

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

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 below-listed:

- Fluid contents.
- Piping.
- Deck grating.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.1.5 Operational test - initial. Prior to commencement of work, the Contractor shall witness Coast Guard Personnel perform an initial operational test of the TLI's for tanks listed in paragraph 1.1 (Intent), to demonstrate existing operational condition. Submit a CFR.

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

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

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

3.2 Content removal. The Contractor shall 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.

3.3 Cleaning. The Contractor shall 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.

3.4 Inspection. The Contractor shall visually inspect all interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Submit a CFR 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.

3.5 Closing. The Contractor shall 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).

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.6 Operational test – post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the designated tank TLI's to be in satisfactory operating condition. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 28: Potable Water System Valve, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew listed potable water system valve designated in Table 1 and to repair attached piping.

TABLE 1 - POTABLE WATER SYSTEM VALVES

DESCRIPTION SIZE/ TYPE/ VALVE #	LOCATION	MATERIAL	CONNECTION/ RATED PRESSURE CLASS #	INDUSTRY STANDARD	*O/ R
1-1/2 inch/ Globe Valve w/Navy Hose Connection	Main Weather Deck Port Side @ Frame 19	Bronze	Welded/ 50 PSI	MSS SP-80	R

*** "O" = Overhaul, "R"=Renew**

1.2 Government-furnished property. None

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 140 WTGB 505-002, Rev -, Piping Penetration Details

Coast Guard Drawing 140 WTGB 533-002, Rev -, Potable Water System A & D

Coast Guard Drawing 140 WTGB 533-003, Rev A, Potable Water System Diagram

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2018, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2018, Requirements for Preservation of Ship Structures

OTHER REFERENCES

American National Standards Institute/American Water Works Association (ANSI/AWWA) C652, 2002, Disinfection of Water-Storage Facilities

ASTM International (ASTM) F992, 2006, Standard Specification for Valve Label Plates

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

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:

- Deck plates
- Piping
- Hoses

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

3.3 Removal. The Contractor shall remove valve identified in Table 1 and immediately install blank flanges and gaskets over openings and secure each flange 180 degrees apart with at least two bolts.

NOTE

Damaged deck potable water fill connection is shown in Figure 1. Location is shown on CG Dwg excerpts in Figures 2 & 3.

3.4 Renewal. The Contractor shall renew all valves identified in Table 1 by an "R" in the "O/ R" column.

3.4.1 Equivalency. The Contractor shall ensure all renewed valves, including Mil-Std valves, are commercial-standard type valves conforming to the applicable standard listed in Table 1. The Contractor shall ensure each new valve is of identical material and equivalent to the valve it is replacing.

3.4.2 Inspection. The Contractor shall visually inspect the piping and mounting arrangements and submit a CFR detailing any required modifications to accommodate the new valve(s).

3.5 Removal. The Contractor shall remove deck valve and damaged piping and retain as template for fabricating new piping.

3.6 Installation. Upon completion of all authorized work, the Contractor shall install renewed valve in accordance with requirements contained in CG Dwgs 140 WTGB 505-002, 140 WTGB 533-002 and 140 WTGB 533-003 and the following:

3.6.1 Fabrication. Fabricate new piping assembly between deck penetration and new deck filling connection in accordance with referenced Paragraph 2 CG Dwgs and SFLC Std Spec 0740.

3.6.2 Disposal. The Contractor shall remove and dispose of all blank flanges and associated gaskets.

3.6.3 Piping assembly. Install new in-kind valve and piping, utilizing from removed piping assembly as template.

NOTE

Figure 4 is a CG Dwg excerpt representing configuration of deck penetration to which new piping assembly will attach. It is assumed that damaged piping will be un-sweat or cut above deck penetration. A coupling may be needed to connect new piping assembly to existing penetration piping.

3.6.4 Secure. The Contractor shall secure each valve installation with renewed bolting hardware as well as including new valve/piping assemble support pipe hanger mounted to cutter superstructure.

3.6.5 Labeling. The Contractor shall renew missing/damaged valve label plate, and install new valve label plate on new valves, in accordance with ASTM F992.

3.6.6 Hose Cap. The contractor shall install new hose cap and chain that is secured to new piping assembly.

3.7 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.)

3.8 Pipe flushing. After all authorized work is completed; the Contractor shall accomplish the following:

3.8.1 The Contractor shall flush all new and disturbed potable water system piping with clean fresh water for five minutes, or until all debris is removed, whichever occurs first.

3.8.2 The Contractor shall ensure that flushing fluid is directed to move scale and foreign debris away from installed machinery to prevent possible damage upon operational testing.

3.8.3 The Contractor shall submit a CFR documenting date and time of flushing process, and verification of piping cleanliness.

3.8.4 The Contractor shall dispose of flushing fluid in accordance with all applicable Federal, state, and local regulations.

NOTE

Do not drain any fluids, including fresh water, into any space, bilge, or exterior location.

3.9 Leak test. After completing all authorized mechanical (i.e. threaded, bolted, etc.) joint repairs, the Contractor shall test the disturbed potable water piping 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.

3.10 Hydrostatic test. After all authorized repairs, the Contractor shall hydrostatically test all new and disturbed piping and components of the potable water piping 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.

3.11 System disinfection. After all other work involving the potable water system is complete, the Contractor shall disinfect and treat the affected potable water valves and piping as necessary to meet or exceed the requirements of AWWA C652. After disinfection, remove and dispose of all treated water in accordance with all Federal, state and local regulations. Submit CFR.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

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

4. NOTES

This section is not applicable to this work item.

FIGURE 1. PHOTO OF DAMAGED DECK FILL VALVE & PIPING

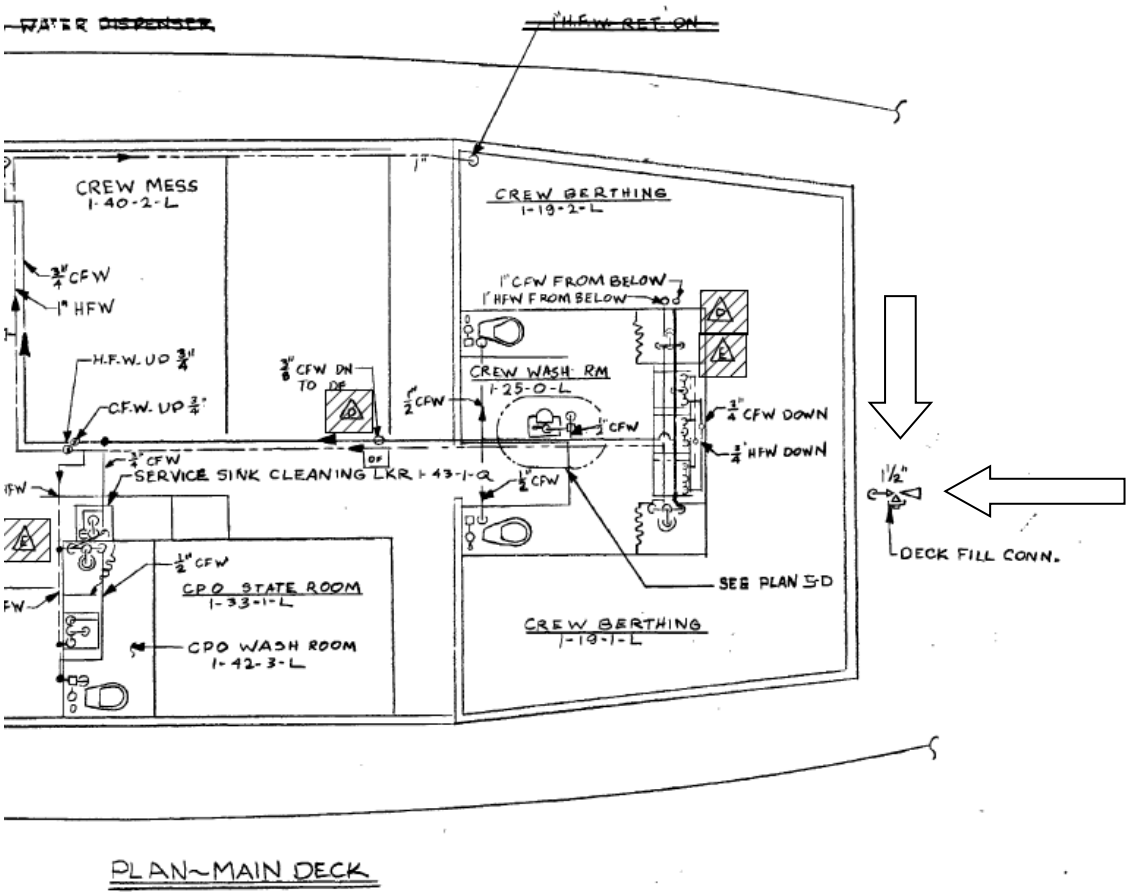


FIGURE 2. DECK FILL CONNECTION (CG DWG 140 WTGB 533-003 EXCERPT)

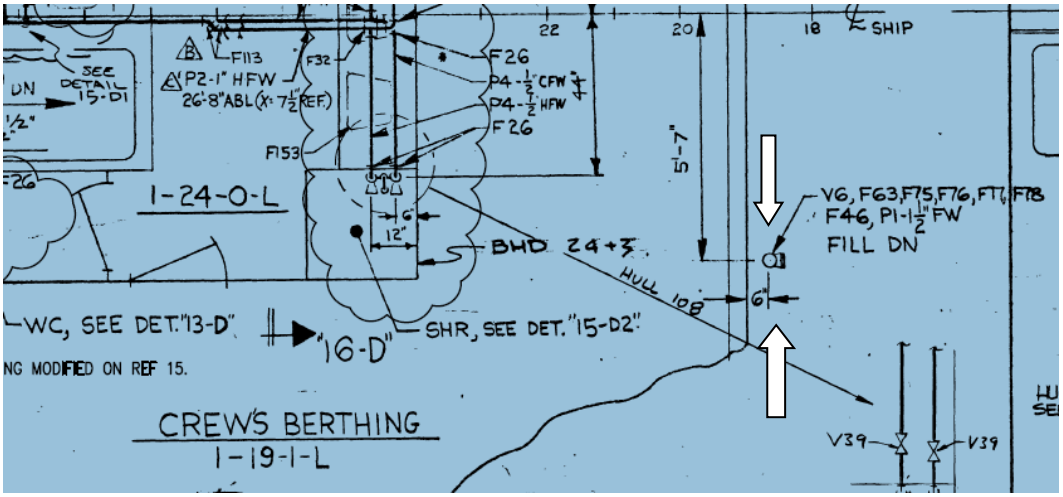


FIGURE 3. DECK FILL CONNECTION (CG DWG 140 WTGB 533-002 EXCERPT)

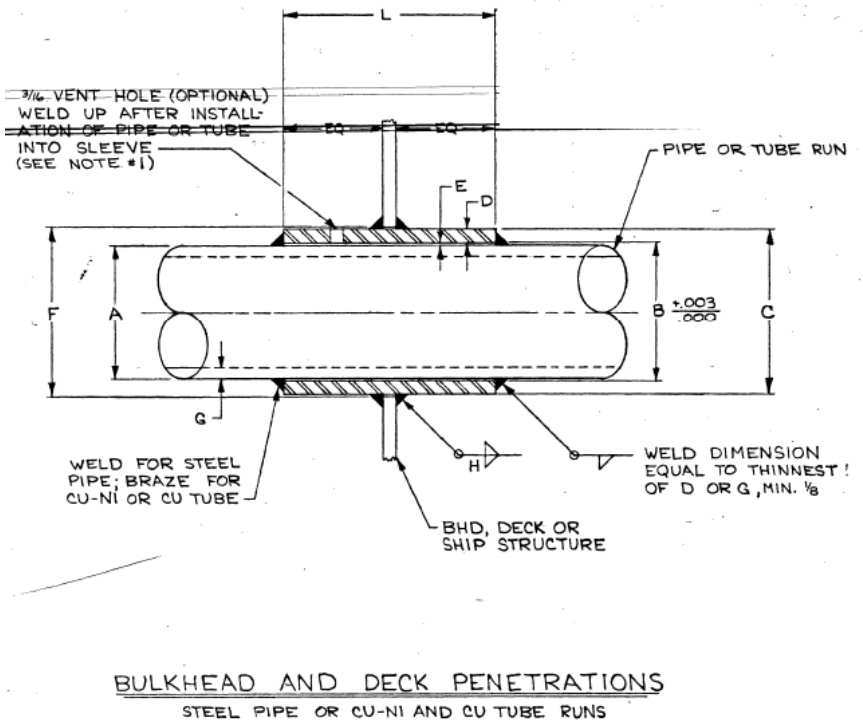


FIGURE 4. DECK PENETRATION (CG DWG 140 WTGB 505-002 EXCERPT)

WORK ITEM 29: Fuel Manifold, Overhaul

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to overhaul and test the following manifold(s):

Compartment Number	Manifold no.	Size (inches)	Valve Type	VALVE QUANTITY	Operating Pressure
3-103-0-E	No.1	2.0	Gate	14	60 psi

1.2 Government-furnished property.

None

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 140 WTGB 541-001, Rev -, Diagram - Fuel Oil Fill & Transfer System

Coast Guard Drawing 140 WTGB 541-003, Rev -, Fuel Oil Transfer System, A&D

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2018, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2018, Requirements for Preservation of Ship Structures

OTHER REFERENCES

American Society of Mechanical Engineers (ASME) B16.34, 2013, Valves-Flanged, Threaded, and Welding End

ASTM International (ASTM) F992, 2006, Standard Specification for Valve Label Plates

MIL-G-24716, Apr 1993, Gaskets, Metallic-Flexible Graphite, Spiral Wound

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

3. REQUIREMENTS

3.1 General.

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

- 3.3.1 Disassembly
- 3.3.2 Valve inspection and repair

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:

- Insulation.
- Fuel piping.
- Electrical wiring.
- Diesel Fuel Tank 4-28-0-F (2,060-gallon capacity).
- Diesel Fuel Tank 4-28-1-F (3,864-gallon capacity).
- Diesel Fuel Tank 4-28-1-F (3,864-gallon capacity).
- Diesel Fuel Tank 4-28-2-F (3,864-gallon capacity).
- Diesel Fuel Tank 4-38-0-F (2,737-gallon capacity).
- Diesel Fuel Tank 4-40-1-F (2,318-gallon capacity).
- Diesel Fuel Tank 4-40-2-F (2,318-gallon capacity).

3.2 Fluid handling. The Contractor shall remove up to 12,000 gallons of diesel fuel to facilitate tank gas-freeing.

3.2.1 The Contractor shall dispose of removed fluids in accordance with all applicable Federal, state, and local regulations.

3.3 Valve manifold overhaul particulars. The Contractor shall accomplish the following tasks for the designated manifold(s) (see paragraph 1.1 (Intent)), shown on CG Dwgs 140 WGTB 541-00, 140 WTGB 541-003 and Figure 1.

3.3.1 Disassembly. Disconnect the inlet and discharge connections to each of the affected manifold(s). Install 1/4" steel blanks with gaskets on the fuel transfer connections to ensure that no fuel leaks out of the fuel transfer system during work on the manifold(s). Ensure that all blank flanges are installed with bolts, washers, and nuts in all bolt holes.

3.3.1.1 Disassemble the valve bonnet assembly on each valve on the affected fuel manifold.

3.3.1.2 Disassemble each manifold valve to its elementary components. Match mark valve parts. Clean all metal-to-metal seated valves of foreign matter. Visually inspect the manifold body, valve components, bonnet studs and nuts for wear and defects. Submit a CIR.

3.3.1.3 Clean valve discs and manifold seats to bright metal without damaging parts.

3.3.2 Valve inspection and repair.

3.3.2.1 In the presence of the Coast Guard Inspector, verify proper valve seating by spotting-in with Prussian blue. Submit a CFR. If a Change Request has been authorized and released, lap in each valve disc to obtain 360-degree continuous contact between the valve disk and the manifold seat. After all authorized repairs are complete, verify proper valve seating by spotting-in with Prussian blue. Submit a CIR. Demonstrate a continuous 1/16 inch contact around the entire valve seat.

NOTE

If it is required to build up seats by welding to achieve continuous contact, this additional repair task shall be the subject of a contract change via submission of a CIR.

3.3.2.2 Clean and chase valve stem threads.

3.3.2.3 Check valve stems for trueness.

3.3.2.4 Remove raised metal and sharp edges from mating, sealing, fit and wearing surfaces.

3.3.2.5 Chase and tap exposed threads to restore original thread forms.

3.3.2.6 Clean, dress and true gasket mating surfaces.

3.3.3 Valve manifold reassembly. Reassemble the overhauled valves in the manifold assembly according to following steps:

3.3.3.1 Renew all gland studs and gland nuts. Clean and chase gland stud's threaded hole in valve bonnet.

3.3.3.2 Renew packing with the same size and type as that removed.

3.3.3.3 Renew all flange gaskets including bonnet gaskets. Clean, dress, and true all gasket mating surfaces.

3.3.3.4 Coat all fasteners with anti-seize compound during assembly.

3.3.4 Testing. Test the overhauled valves in accordance with the applicable standards listed in Table I (Valve Standards). Submit a CFR.

TABLE I - VALVE STANDARDS

VALVE TYPE	INDUSTRY STANDARD
Steel Valves	MSS SP-61
All others	ASME B16.34

3.3.5 Surface preservation. Prepare and coat the valve hand wheels and bonnets using the system specified for "Machinery, Interior (Machinery Operating Temperatures Under 200F, Unmachined Surfaces)" in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). Select finish/top coat color in accordance with SFLC Std Spec 6310 (Vessel coating systems – Interior).

3.3.6 Valve labeling. Fabricate and install a valve label plate for each overhauled valve in accordance with ASTM F992. Ensure that each new label is mated to the proper valve upon final installation.

3.3.7 Manifold reassembly. Remove the blank flanges from the inlet and discharge lines on each manifold assembly and reconnect the manifold assembly to the fuel transfer piping. Renew gaskets, conforming to MIL-G-24716, and renew flange bolting in each location.

3.3.8 Flange spray shields. Fabricate and install new flange spray shields on each of the valve bonnets and all affected manifold flanges.

3.3.9 Leak test. After completing all authorized mechanical (i.e. threaded, bolted, etc.) joint repairs, the Contractor shall test fuel oil piping 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.

3.3.10 Manifold flushing. After all authorized work is complete, the Contractor shall accomplish the following:

3.3.10.1 Flush the manifold piping with clean fresh water for five minutes. Ensure that flushing fluid is directed to move scale and foreign debris away from installed machinery to prevent possible damage upon operational testing. Submit a CFR documenting date and time of flushing process, and verification of piping cleanliness. Blow dry all flushed piping with dry low-pressure compressed air. Ensure that all water is removed to prevent contamination of fuel oil systems.

3.3.10.2 Dispose of flushing fluid in accordance with all applicable Federal, state, and local regulations.

NOTE

Do not drain ANY Fluids (including fresh water) into any space, bilge, or exterior location.

3.3.11 Hydrostatic test. After all authorized repairs, the Contractor shall hydrostatically test the fuel manifold piping in accordance with SFLC Std Spec 0740, Appendix C, "Hydrostatic Test". Be aware that no leakage or permanent deformation of pressure-containing parts is permissible. Repair all leaks and discrepancies found. Submit a CFR.

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

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

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.)

3.6 Contractor's option for valve renewal. The Contractor may elect to renew valves rather than overhaul at no additional cost to the government. Ensure that all new valves are the same material, size, and type as original. If the valves are an integral part of a one-piece manifold casting, renew the entire manifold assembly.

4. NOTES

4.1 Tank content restoration. The ship's forces will procure new fluids and refill all tanks.

FIGURE 1. PHOTO OF FUEL MANIFOLD ASSEMBLY

WORK ITEM 30: Firemain Valves, Overhaul or Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to overhaul or renew the listed firemain valve as designated in Table 1.

TABLE 1 - FIREMAIN VALVES

SIZE/ TYPE/ VALVE #	DESCRIPTION	MATERIAL	CONNECTION/ RATED PRESSURE CLASS #	INDUSTRY STANDARD	*O/ R
6"/ Butterfly/ 1-31-3	Fire Main Supply to Pilot House Fire Monitors	Ni-Al-Brz	Flanged/ 150	MSS SP-67	O

*** "O" = Overhaul "R"=Renew**

NOTE

Firemain Cuttout Valve (FMCOV) shown in Figure is identified on CG Dwg as a 6 inch IPS 150# Wafer type Butterfly Valve. OEM is KEYSTONE with part number 139-941. Attached label plate on the shipboard valve contains markings "LD512-BSJ-E".

1.2 Government-furnished property. None

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 140 WTGB 521-002, Rev -, Firemain System Arrangements & Details

Coast Guard Drawing 140 WTGB 521-003, Rev A, Firemain System Diagram

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2018, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2018, Requirements for Preservation of Ship Structures

OTHER REFERENCES

ASTM International (ASTM) F992, 2006, Standard Specification for Valve Label Plates

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-67, 2011 Edition, Butterfly Valves

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:

- Deck plates
- Piping
- Structure

3.2 Temporary firemain connections. The Contractor shall provide temporary connections for the firemain to ensure the firemain system remains operational during the performance of the tasks specified herein.

NOTE

Figures 2 thru x are Coast Guard Drawing excerpts that locate subject valve and show how it fits into shipboard configuration.

3.3 Removal. The Contractor shall remove each valve identified in Table 1 and immediately install blank flanges and gaskets over openings and secure each flange 180 degrees apart with at least two bolts.

NOTE

Decking below FMCOV will be undergoing preservation in accordance with another work item (Crews Berthing, Partial Preservation). It is recommended to coordinate the performance of these two work items for efficiency.

3.4 Renewal. The Contractor shall renew all valves identified in Table 1 by an "R" in the "O/ R" column. At no additional cost to the Government, the Contractor may opt to renew valves identified in Table 1 for overhaul by an "O" in the "O/ R" column as follows.

3.4.1 Equivalency. Ensure all renewed valves, including Mil-Std valves, are commercial-standard type valves conforming to the applicable standard listed in Table 1. The Contractor shall ensure each new valve is of identical material and equivalent to the valve it is replacing.

3.4.2 Inspection. Visually inspect the piping and mounting arrangements and submit a CFR detailing any required modifications to accommodate the new valve(s).

3.5 Overhaul. The Contractor shall accomplish the following as required for each valve identified for overhaul, not including valves the Contractor has opted to renew, to meet the specified valve testing standard:

3.5.1 Disassembly. Disassemble the valve to the extent necessary to perform the required work.

NOTE

Complete disassembly of some valves may not be necessary for overhaul.

3.5.2 Cleaning. Clean all internal surfaces.

3.5.3 Inspection. Visually inspect for defects in body and structural material, surface finish, and the condition of seats, disks, parting faces, plugs, and sealing surfaces.

3.5.4 Machining. As applicable, machine, grind, lap, and spot-in seat-to-disk to obtain an acceptable leakage rate at or below the valve's industry testing standards identified in Table 1.

3.5.5 Assembly. Assemble the valve using new hardware and software not limited to the following:

- Packing
- O-rings
- Gaskets
- Seal rings
- Non-metallic seats
- Pins
- Washers
- Inserts

3.5.6 Testing. Test each overhauled valve in accordance with the applicable standards listed in Table 1. Submit a CFR.

3.6 Installation. Upon completion of all authorized work, the Contractor shall install all overhauled and renewed valves with renewed gaskets as follows:

3.6.1 Disposal. Remove and dispose of all blank flanges and associated gaskets.

3.6.2 Secure. Secure each valve installation with renewed bolting hardware.

3.6.3 Labeling. Renew all missing and damaged valve label plates, and install new valve label plates on new valves, in accordance with ASTM F992.

3.7 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.)

3.8 Leak test. After completing all authorized mechanical (i.e. threaded, bolted, etc.) joint repairs, the Contractor shall test the disturbed firemain piping 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.

3.9 Hydrostatic test. After all authorized repairs, the Contractor shall hydrostatically test all new and disturbed piping and components of the disturbed firemain piping 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.

FIGURE 1. PHOTO OF AFFECTED FIREMAIN VALVE

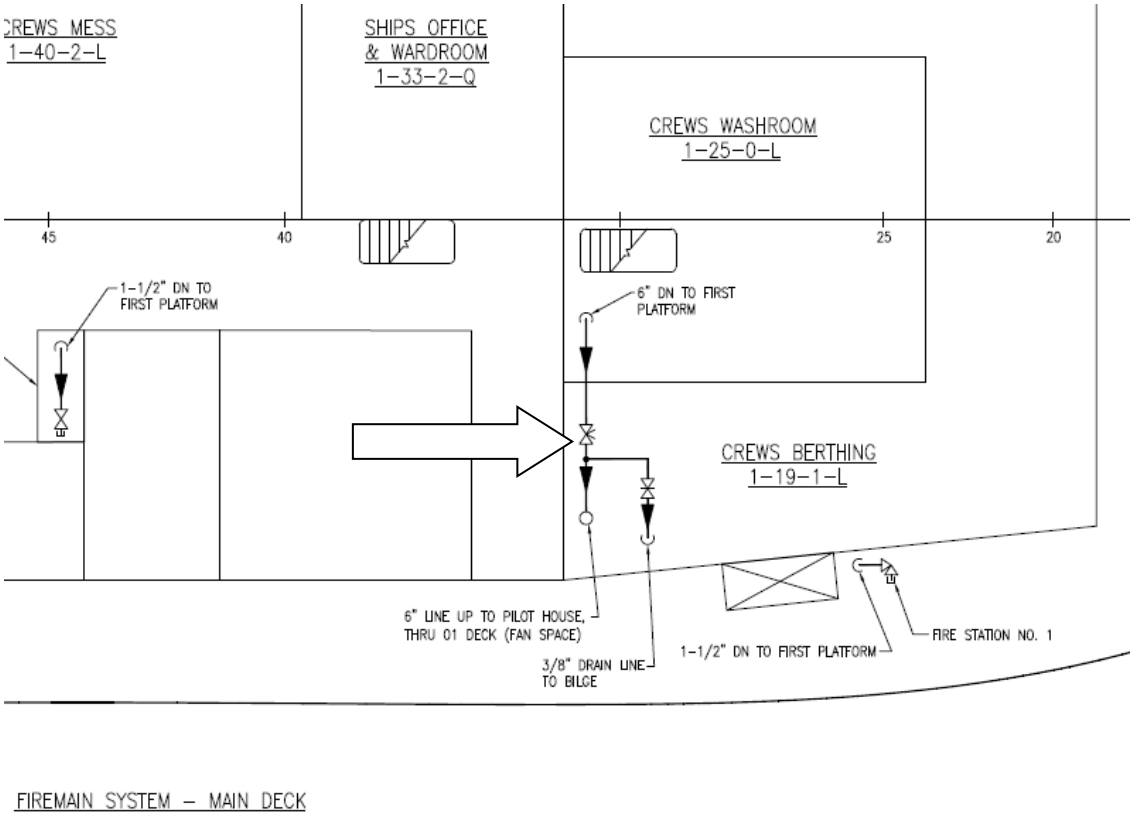


FIGURE 2. FMCOV LOCATION (EXCERPT FROM CG DWG 140 WTGB 521-003)

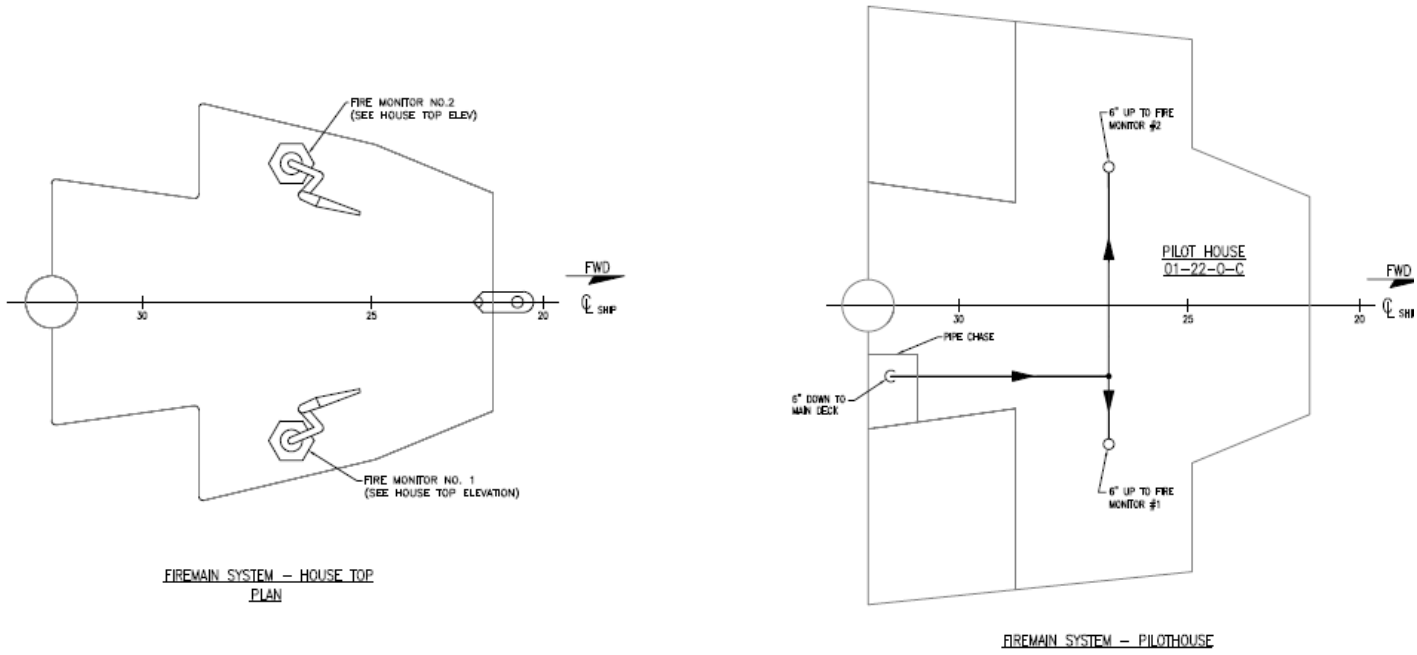


FIGURE 3. SERVICED FIRE MONITOR PIPING (EXCERPT FROM CG DWG 140 WTGB 521-003)

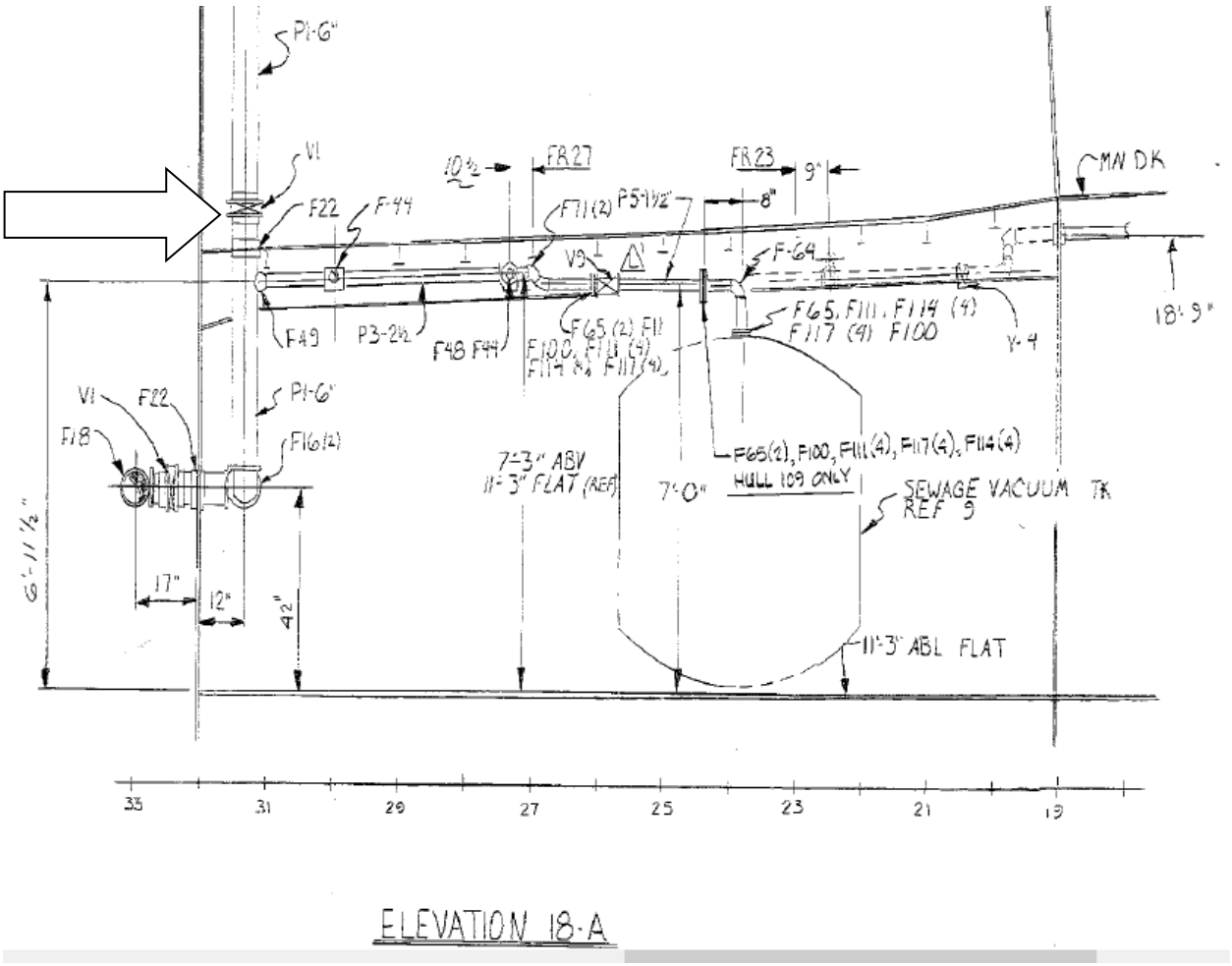


FIGURE 4. FMCOV LOC/CONFIG (EXCERPT FROM CG DWG 140 WTGB 521-002)

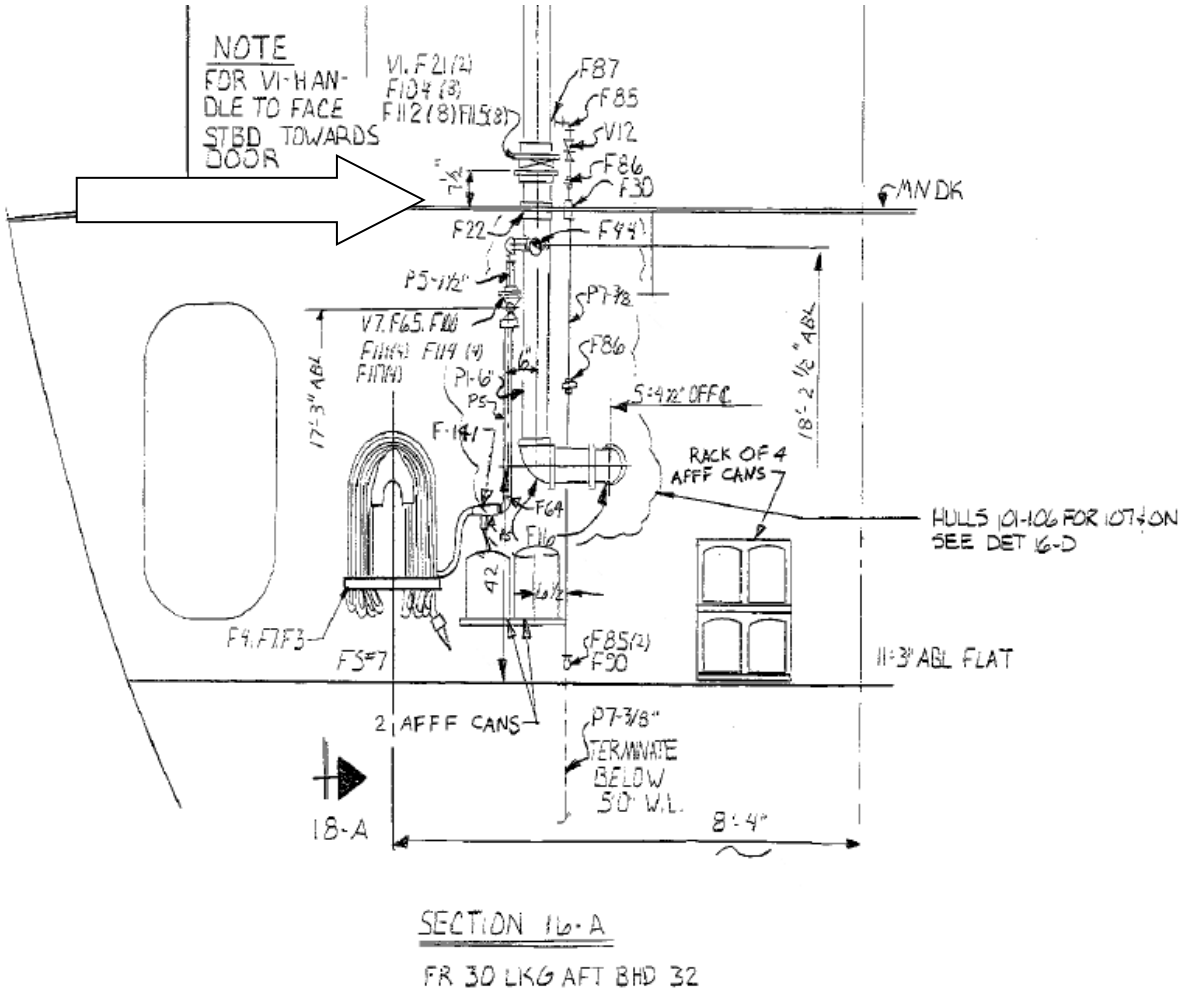


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FIGURE 5. FMCOV LOC/CONFIG (EXCERPT FROM CG DWG 140 WTGB 521-002)

WORK ITEM 31: Vent Ducts, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew the vent ducting sections identified in Table 1.

TABLE 1 - FAN COIL UNITS

DESCRIPTION TYPE/ SECTION	LOCATION	DRAWING
Supply/ ducting between vent trunk and fans, including flexible duct connections.	SS-01-49-1 in Fan Room (01-48-0-Q)	Coast Guard Drawing 140 WTGB 150-001 Coast Guard Drawing 140 WTGB 162-001 Coast Guard Drawing 140 WTGB 514-001 Coast Guard Drawing 140 WTGB 514-010
Supply/ all ducting from vent trunk to, and including, four terminals.	SS-01-49-1 in Engine Room (3-32-0-E)	Coast Guard Drawing 140 WTGB 514-001 Coast Guard Drawing 140 WTGB 514-010

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 140 WTGB 150-001, Rev -, Deckhouse Plating and Framing

Coast Guard Drawing 140 WTGB 162-001, Rev -, Stack Pl & Fr & Misc Stack Foundations

Coast Guard Drawing 140 WTGB 514-001, Rev A, HVAC Diagram Incidental to Chill Water Install

Coast Guard Drawing 140 WTGB 514-010, Rev -, Heating, Ventilation, and Air Conditioning Arrangement & Details

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2018, 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:

- Ducting screens.
- Ventilation covers.
- Piping.
- Insulation.
- Supply fans and motors (see paragraph 3.3.1).
- Fan base (see paragraph 3.3.1).

NOTE

Another work item will preserve this compartment, requiring many of the same interferences. It is recommended to coordinate these work items for efficiency.

3.2 Operational test, general - initial. Prior to commencement of work, the Contractor shall witness a test of existing operational condition by performing pre-operational tests of all items or shipboard devices to be disturbed, used, repaired, or altered, as listed. Submit a CFR.

3.3 Ventilation renewal. The Contractor shall renew the ventilation ducting in paragraph 1.1 (Intent), as designated by the Coast Guard Inspector, and using Coast Guard Drawing referenced as guidance.

3.3.1 Supply fan removal and mount renewal. The Contractor shall remove supply fans and fan base as interferences. Remove and scrap corroded mounts between the fan base and foundations as directed by the Coast Guard Inspector. Upon reinstallation, renew mounts with Contractor-furnished vibration isolation mounts in accordance with Coast Guard Drawing 140 WTGB 162-001. Refer to Figures 1 – 3.

FIGURES 1 & 2: EXISTING MOUNT CONFIGURATION ON CGC MORRO BAY

FIGURE 3: VIBRATION ISOLATING MOUNTS ON CGC STURGEON BAY

3.3.2 Hanger brackets renewal. The Contractor shall renew the ventilation ducting hanger mounts and brackets on decks and bulkheads and renew associated hardware.

3.3.3 Vent Components. The Contractor shall renew and install all duct screens, covers, closures, gaskets, pins, chains, hardware and labels on all ducting IAW referenced drawings.

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

3.5 Touch-up preservation. The Contractor 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 32: Fan Room, Preserve

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to preserve all surfaces of the fan space, 01-48-0-Q.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 140-WTGB 801-003, Rev A, Booklet of General Plans

Coast Guard Drawing 140-WTGB 514-001, Rev A, HVAC Diagram Incidental to Chill Water Install

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2018, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2018, 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:

- Vent louvers.
- Supply fans.
- Ducting.

NOTE

Another work item will renew vent ducting in this compartment. It is recommended to coordinate these work items for efficiency.

3.2 Substrate visual inspection. Upon completion of surface preparation and prior to application of primer coat (see 3.3 (Surface preservation)), the contractor shall perform a visual inspection of the prepared surfaces; submit a CFR.

3.3 SURFACE PRESERVATION**. THE CONTRACTOR SHALL PREPARE AND COAT THE FAN SPACE (01-48-0-Q) SURFACES INCLUDING ALL ADJACENT STRUCTURAL MEMBERS AND EQUIPMENT FOUNDATIONS, USING THE APPLICABLE COATING SYSTEM IN TABLE 1. SELECT FINISH/TOP COAT COLOR TO MATCH EXISTING ADJACENT SURFACES.TABLE 1 - APPLICABLE COATING SYSTEM**

SURFACES	*COATING SYSTEM
Bulkheads and Overheads	"Bulkheads (Bulkheads and Overheads, Un-insulated Metal), Option I or II", in accordance with SFLC Std Spec 6310, Appendix B ((Cutter and Boat Interior Painting System)
Decks (Interior)	"Decks, Metal Interior and Non-Skid Areas (Metal Decks –No application of deck coverings)", in accordance with SFLC Std Spec 6310, Appendix B ((Cutter and Boat Interior Painting System)

***Suppliers of CG-authorized coatings are listed in Appendix C of SFLC Std Spec 0000.**

4. NOTES

This section is not applicable to this work item.

WORK ITEM 33: SS Air Piping/Valve, Replace

1. SCOPE

1.1 Intent. This work item describes the requirements for the contractor to replace and renew a section of Ship Service Air piping its associated valve.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 140-WTGB-551, Rev-. Compressed Air System A&D

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3468, SWBS 512, April 2012, Ventilation and Air Conditioning Systems, 140' WTGB Class Cutters

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2018, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2018, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall 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 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:

- Ventilation ducting
- Piping
- Deck drains
- Electrical wiring

3.2 Ship Service Air piping and valve replacement. The Contractor shall replace damaged section of Ship Service Air Piping and associated ¾" ball valve in the location specified in Coast Guard Drawing 140-WTGB-551-004.

3.2.1 Ship Service Air Pipe removal. The Contractor shall cut the section of bent Ship Service Air piping and retain cut section to be used as a template for replacement Ship Service Air piping upon reinstallation. The Contractor shall submit a CFR.

WARNING

Don appropriate personal protective equipment (PPE) to safely perform grinding and/or hot work operations in the course of removal and renewal of damaged section of Ship Service Air piping.

FIGURE 1. BENT SECTION OF SHIP SERVICE AIR PIPING AND VALVE TO BE REPLACED

3.2.2 The contractor shall use the cut section of bent Ship Service Air piping as a template to create the replacement section of Ship Service Air piping.

3.2.3 The contractor shall replace the ¾" ball valve associated with this assembly in accordance with Coast Guard drawing 140-WTGB-551-004 and renew the section of Ship Service Air piping which replaces the formerly broken section.

3.3 The contractor shall renew watertight penetration sleeve fitting, furnish and install steel deck sleeve in accordance with Coast Guard drawing 140-WTGB-551-004.

TABLE 1 – SHIP SERVICE AIR PIPING REPLACE/RENEWAL

SYSTEM	SIZE	LOCATION/NAME
Ship Service Air/Valve	¾" Copper	Bow, weatherdeck

3.4 The contractor shall install new pipe and valve with similar material type and size to that removed in accordance with Coast Guard Drawing 140-WTGB-551-004. The contractor shall submit a CFR.

3.5 Testing. Upon completion of work, the contractor shall, in the presence of the Coast Guard inspector, accomplish the following tasks, and submit a CFR.

3.5.1 Leak Testing. After completing all authorized mechanical (i.e. threaded, bolted, etc.) joint repairs, the contractor shall test the piping 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.

3.5.2 Boundary test, Valve. 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.

3.6 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.)

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

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

4. NOTES

None.