USCGC IDA LEWIS (WLM 551)

SPECIFICATION FOR DOCKSIDE REPAIRS

FY2017

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(Rev-0, 16 February 2017)

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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 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 – as follows:

- MIL/DOD/CID Specifications: http://www.assistdocs.com/search/search_basic.cfm
- Commandant Instruction Manuals: http://www.uscg.mil/directives/default.asp
- Public Laws, Code of Federal Regulations, U.S Codes, and other Federal Government laws:: www.gpoaccess.gov

The Government is aware of the following internet web links where contractors may procure commercial specifications:

- American Welding Society (AWS): http://www.awspubs.com/index.php
- ANSI, ASTM, IEEEE, NFPA, ASME, SAE Standards: http://www.techstreet.com/
- NFPA: http://www.nfpa.org
- SSPC Standards and pictorial guides: http://shopping.netsuite.com/sspcmarketplace

COAST GUARD DRAWINGS

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

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

Coast Guard Drawing 175 WLM 201-001, Rev C, Machinery Spaces Arrangement

Coast Guard Drawing 175 WLM 201-001, Rev C, Machinery Spaces Arrangement

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

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

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

Coast Guard Drawing 175 WLM 256-005, Rev -, Z-Drive Lube Oil Heat Exchanger Tube Bundle, Replacmnt & Piping Mods

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

Coast Guard Drawing 175 WLM 259-001, Rev A, Combustion Exhaust Diagram

Coast Guard Drawing 175 WLM 259-005, Rev C, Combustion Exhaust A&D, Hull Block 970

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

Coast Guard Drawing 175 WLM 433-001, Rev J, Announcing System Blk, ISO & EWD

Coast Guard Drawing 175 WLM 437-007, Rev P, Buoy Dk Control Sys Block, Iso & Elem Wrg Diag

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

Coast Guard Drawing 175 WLM 512-001, Rev E, HVAC Diagram

Coast Guard Drawing 175 WLM 516-001, Rev F, HVAC Refrigeration System Piping Diagram

Coast Guard Drawing 175 WLM 516-003, Rev D, HVAC Refrigeration System Piping A & D

Coast Guard Drawing 175 WLM 516-004, Rev A, HVAC Refrigeration Piping Arr & Details

Coast Guard Drawing 175 WLM 521-001, Rev K, Firemain System Diagram

Coast Guard Drawing 175 WLM 521-050, Rev B, Firemain Piping Mods

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

Coast Guard Drawing 175 WLM 528-005, Rev -, Modifications to Garbage Grinder Drain Piping

Coast Guard Drawing 175 WLM 528-008, Rev E, Plumbing & Deck Drains A & D, Hull Block 970

Coast Guard Drawing 175 WLM 533-001, Rev G, Potable Water System Diagram

Coast Guard Drawing 175 WLM 533-005, Rev D, Potable Water System A/D Hull Block 970

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

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

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

Coast Guard Drawing 175 WLM 549-001, Rev F, Onboard Lubrication Requirements

Coast Guard Drawing 175 WLM 551-001, Rev J, Compressed Air System Diagram

Coast Guard Drawing 175 WLM 551-001, Rev J, Compressed Air System Diagram

Coast Guard Drawing 175 WLM 551-005, Rev E, Compressed Air System A/D Hull Block 940, 950

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

Coast Guard Drawing 175 WLM 573-050, Rev A, Hydraulic Piping Installation for Chain Stopper

Coast Guard Drawing 175 WLM 573-051, Rev B, Chain Stopper Structural Mods for Hydraulic Roller Assembly

Coast Guard Drawing 175 WLM 573-008, Rev A, Aton Tie Downs

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

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

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

Coast Guard Drawing 175 WLM 601-002, Rev H, Booklet of General Plans

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

Coast Guard Drawing 175 WLM 631-001, Rev D, Painting Schedule (551)

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

Coast Guard Drawing 175 WLM 634-001, Rev G, Deck Covering Schedule

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

Coast Guard Drawing 175 WLM 644-001, Rev G, Sanitary Facilities & Laundry Space Arrangement & Details

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

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

Coast Guard Fleet Drawing FL 2605-029, Rev H, Chain Stopper System Rising Sheave Assembly

Coast Guard Drawing FL 2605-031, Rev D, Mechanical Chain Stopper, 1-7/8” Buoy Chain

Coast Guard Drawing FL 2605-034, Rev C, Mechanical Chain Stopper Repair Kit: 1-7/8”, 1-5/8” & 1-1/4”

Coast Guard Drawing FL 7101-573, Rev L, Buoy Chain Winch Assy Model CW1

COAST GUARD PUBLICATIONS

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

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

Coast Guard Technical Publication (TP) 3610, Section 167-A, Nov 2005, Hydraulic Cargo Hatch - Model No. D-WK-787

Coast Guard Technical Publication (TP) 3619, 13-AUG-98, Manufacturers Instruction Book-SWBS Group(s) 324

Coast Guard Technical Publication (TP) 3626, 12/16/1996; Manufacturers Instruction Book-SWBS Group(s) 516-533

Coast Guard Technical Publication (TP) 3630, SWBS 573, Section A (573A), Jun 2015, Manufacturer's Instruction Book-SWBS Group 573, Buoy Crane

Coast Guard Technical Publication (TP) 3631, Mar 2007, Manufacturer’s Instruction Book-SWBS Group(s) 573-581, Section B, Cross Deck Winch – Appleton Marine Model BMD-463

Coast Guard Technical Publication (TP) 3632, March 2014, Chapter 583, Section C, Technical Manual for Slewing Arm Davit Model D6000CT

Coast Guard Technical Publication (TP) 3632, Section 582-A, March 2014, Manufacturer's Instruction Book-SWBS Groups 582-583, Aft Capstan

Coast Guard Technical Publication (TP) 3633, Section A, June 1999, Sewage System

Coast Guard Technical Publication (TP) 3939, SWBS 573-A, Apr 2007, Rising Sheave Chain Stopper

General Requirements

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 3020 (SFLC Std Spec 3020), 2014, Overhaul AC Electrical Motors

Surface Forces Logistics Center Standard Specification 3041 (SFLC Std Spec 3041), 2014, Shipboard Electrical Cable Test

Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2014, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2014, Inspect, Repair, And Test Auxiliary Machine Systems

Surface Forces Logistics Center Standard Specification 5100 (SFLC Std Spec 5100), 2014, Clean Shipboard Ventilation Systems

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 6341 (SFLC Std Spec 6341), 2014, Install Interior Deck Covering Systems

Surface Forces Logistics Center Standard Specification 8635 (SFLC Std Spec 8635), 2014, Temporary Services

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2014, Temporary Hull Accesses

OTHER REFERENCES

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, 2008, Drinking Water System Components - Health Effects

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, 2010, Standard Specification for Rubber Sheet Gaskets

ASTM International (ASTM) D5363, 2008, Standard Specification for Anaerobic Single Component Adhesives (AN)

ASTM International (ASTM) F683, 2003, Standard Practice for Selection and Application of Thermal Insulation for Piping and Machinery

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

Commercial Item Description (CID) A-A-59588, 2013, Rubber Silicone

DOD-STD-2187, Aug 1987, Chemical Cleaning of Salt Water Piping Systems

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

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

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

MIL-PRF-24176 , Oct 2004, Cement, Epoxy, Metal Repair And Hull Smoothing (Metric)

MIL-PRF-24613, Dec 1990, Deck Covering Materials, Interior, Cosmetic Polymeric

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

MIL-STD-1622, Nov 2006, Cleaning of Shipboard Compressed Air Systems

MIL-STD-2003-4A, Sep 2009, Electric Plant Installation Standard Methods for Surface Ships & Submarines (Cableways)

National Electrical Manufacturers Association (NEMA) Stds, Pub. No. AB4, 2003, Guidelines for Inspection and Preventive Maintenance of Molded Case Circuit Breakers Used in Commercial and Industrial Applications

NAVSEA Drawing 804-5959214, Rev-, Piping Insulation - Installation Details

Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) C6183, 2007, Cork and Rubber Composition Sheet; For Aromatic Fuel And Oil Resistant Gaskets

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

Surface Forces Logistics Center Time Compliant Technical Order (TCTO) TP2030.1, Buoy Crane Main Winch, CT Function, Remove

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.11 (SSPC-SP 11), 2004, Power Tool Cleaning to Bare Metal

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.3 (SSPC-SP 3), 2004, Power Tool Cleaning

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

Underwriters Laboratories Inc. (UL) 489, May 2002, Molded Case Circuit Breaker

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)
8	Y	**Z-Drive Lube Oil Cooler	NSN: 4420-01-505-9267	2 ea.	7,725.00
8	N	**Main HPU Cooler	NSN: 4420-01-561-2970	1 ea.	21,518.33
8	N	Heat Exchanger, Gasket	NSN: 5330-01-449-2451	2 ea.	22.53
8	N	Heat Exchanger, Gasket	NSN: 5330-01-449-2479	2 ea.	18.66
18	N	Repair Kit Assembly	NSN: 2040-01-496-9418	2 ea.	1,968.67
18	N	Rod Seal Repair Kit (FL-2605-29 PC#37)	NSN: 2040-01-496-9422	2 ea.	3,030.07
18	N	Repair Kit, Cable Chain (Includes Pads) (FL-2605-29 PC#36)	NSN: 3020-01-538-0684	16 ea.	257.99
18	N	Cylinder Assembly Actuating, Linear	NSN: 3040-01-496-9424	2 ea.	1,969.24
19	Y	Hydraulic Brake Assembly	NSN: 2530-01-550-7474	4 ea.	399.00
19	N	Winch Gear Box Assembly	NSN: 3010-01-F16-4570 PN: SK9052AZ-SAEB-31.4-H1 (Nord Gear Corp) or YMD-7914 (Appleton Marine Inc)	4 ea.	1,000.00
19	Y	Hydraulic Motor	NSN: 4320-01-470-8467	4 ea.	900.00
19	N	Wire Rope	NSN: 4010-01-620-9604	4 ea.	577.95
19	N	Counter Balance Valve	NSN: 4820-01-324-4269	8 ea.	107.50
19	N	Shuttle Valve	NSN: 4820-01-317-2748	8 ea.	34.78
19	N	Needle Valve	NSN: 4820-01-329-0051	4 ea.	38.00
19	Y	**Directional Control Valve	NSN: 4810-01-543-3252	4 ea.	3,465.17
19	N	Electrical Connector, Hirshmann	NSN: 5935-01-640-6747	2 ea.	32.00
20	N	Roller bearing Unit	NSN: 3130-01-504-4363	2 ea.	4,012.00
20	N	Grease seal	NSN: 5330-01-462-5544	4 ea.	79.25
20	N	Level wind pivot bushing	NSN: 3120-01-621-2293	1 ea.	1,139.00
20	N	Level wind thrust bearing	NSN: 3120-01-621-2300	2 ea.	483.30
20	N	Rexroth DCV	NSN: 4810-01-507-0037	1 ea.	208.29
20	N	Rexroth Sandwich Flow Control	NSN: 4810-01-505-9289	1 ea.	250.00
20	N	Sun Sandwich Relief Valves	NSN: 4820-01-439-2451	2 ea.	900.00
20	N	Rexroth Tandem Center Proportional	NSN: 4810-01-506-3841	1 ea.	300.00

		Directional Valve			
20	Y	Level Wind Hydraulic Cylinder	NSN: 3040-01-441-3721	1 ea.	7,423.00
20	N	3:1 Pilot Ratio, Vented Counterbalance Valve Assembly	NSN: 4820-01-563-5841	1 ea	98.70
20	N	Fully Adjustable Needle Valve	NSN: 4820-01-416-0579	1 ea	48.75
20	N	Wire Rope Assembly	NSN: 4010-01-646-6972	1 ea.	500.00
20	Y	**Hydraulic Motor	NSN: 4320-01-445-2248	1 ea	23,998
20	N	**Pump, Hydraulic Ram, Hand Driven	NSN: 4320-01-286-4065	1 ea.	419.77
20	N	**Cylinder Pin	NSN: 5315-01-515-9847	1 ea	500.00
20	N	**Cylinder Pin	NSN: 5315-01-515-9912	1 ea	520.00
21	N	Hardware Kit	NSN: 5430-01-494-2479	2 ea.	618.54
21	N	Hardware Kit, Mechanical	NSN: 2030-01-485-7215	2 ea.	784.35
22	N	Swing Brake Seal Kit	NSN: 2030-01-351-2820	2 ea	138.80
22	N	Swing Brake Disc & Bearing Kit	NSN: 2030-01-349-9486	2 ea	937.70
22	N	Wire Rope Assembly, Single Leg	NSN: 4010-01-602-8365	1 ea.	234.00
22	Y	Winch Assembly	NSN: 2030-01-505-1581	1 ea.	17,454.50
22	N	Reciprocating Pump	NSN: 4320-00-684-7192	1 ea.	436.50
22	N	Console Assy	PN: 40238	1 ea	23,779.18
23	N	Wire Rope, Crane Aux Fall	NSN: 3950-01-617-1692	1 ea	629.00
23	N	Wire Rope, Crane Main Fall	NSN: 3950-01-617-1700	1 ea	1,425.00
23	N	Luff Cylinder Seal kit	NSN: 5330-01-433-6307	1 ea	380.00
23	N	Holding Valve	NSN: 4810-01-353-0586	2 ea	84.88
23	N	Shuttle Valve	NSN: 4820-01-317-2748	2 ea	18.97
23	N	Needle Valve	NSN: 4820-01-329-0051	1 ea	36.17
23	Y	Luff Cylinder Control Valve	NSN: 4820-01-602-7668	1 ea	5,259.00
23	N	Bushing, Heel	NSN: 5365-01-F12-2920	4 ea	81.00
23	N	Snap ring	NSN: 5325-00-005-5768	4 ea	274.99
23	N	Hydraulic swivel seal kit	NSN: 4730-01-566-2864	1 ea	1,125.00
23	N	**Pin, Heel	NSN: 5315-01-500-6931	2 ea	1006.60
23	N	**Hand pump w/ Stainless Steel Option, P18	NSN: 4320-01-517-1444	1 ea	473.00
23	N	**Plate, Backing, Brake (Item 231)	NSN: 3040-00-119-9848	1 ea	1,575.00
23	N	**Plate, Brake (Item 232)	NSN: 3040-01-068-7647	1 ea.	377.00
23	N	**Driver Plate (Item 233)	NSN: 3040-01-F14-3994	1 ea.	197.00
23	N	**Plate, Backing, Brake (Item 234)	NSN: 3040-00-119-9848	1 ea	1,575.00
23	N	**Packing Assortment, Preformed	NSN: 5330-01-191-2622	1 ea.	10.94
23	N	**GH30 seal kit	NSN: 2590-01-398-5741	1 ea.	165.23
23	N	**Disc-Friction, Brake	NSN: 3040-01-051-3606	1 ea.	24.42

23	N	**Spring, Helical, Comp	NSN: 5360-01-268-0044	12 ea	13.13
23	N	**PD12C Seal kit	NSN: 2590-01-398-5741	1 ea	60.73
23	N	**Disc, Steel	NSN: 2530-01-066-9585	1 ea	
23	Y	**Master brake rebuild kit	NSN: 5330-01-F16-4572 PN: 98-015-3001 (Eskridge Inc)	3 ea	1,758.00
23	Y	**Hydraulic Control Valve Assembly (winch)	NSN: 4810-01-566-2663	1 ea.	9,222.00
23	N	**Hydraulic Control Valve Assembly (Swing/Luff)	NSN: 4820-01-602-7668	1 ea.	5.259.00
23	Y	**Aux Hoist Hook (Overhaul Ball)	NSN: 4030-01-572-3945	1 ea	629.31
23	N	Block, Tackle	NSN: 3940-01-566-2929	1 ea	1,425.45
23	N	**Relief Valve Cartridge	NSN: 4820-01-481-7116 PN: RPIC-LAN (Sun Hydraulics Inc)	1 ea	425.00
23	N	**Control Stand Selector Valve Assembly	NSN: 4730-01-507-3516	1 ea	1,145.21
23	N	**Bushing, Luff Cylinder	NSN: 3120-01-363-7629	4 ea	105.91
23	N	**Pin, Luff Cylinder	NSN: 5315-01-F12-2922 PN: MMD-2232	2 ea	1,576.00
34	Y	Main CT Winch	NSN: 3950-01-419-1845	1 ea.	26,000.00
34	N	Joystick Controller, Winch	NSN: 3950-01-603-1550	1 ea	500.00
37	N	Refrigerated Air Filter-Dryer	Ingersoll-Rand model D72IN	1	$1000.00
38	N	21” Diameter Quick-Acting Watertight Raised Scuttle, Steel, 3-Dog, Fwd Hinge (including associated 12”coaming)	PN: N/A	1 ea.	4,500.00
40	N	Blue Insulating Floor Matting	NSN: 7220-00-267-4630	11 ro.	530.18
46	N	Oemga Products Inc Model S Shower 32” x 32” x 80” Type 304 18 ga SS w/ 14 gal tub Including hardware and light hole	PN: Model S	3 ea.	2,249.00
46	N	Speakman Company Shower Pressure Balancing valve with shower head	PN: 1160514	3 ea.	511.92
47	Y	Heat Pump #5	Model HP5SC	1 ea.	29,000.00
47	Y	Heat Pump # 6	Model HP6SC	1 ea.	29,000.00
47	N	Relief Valves	Sherwood Valve P/N 3014-300	1 ea.	500.00

***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
1	Tanks (MP Fuel Stowage And Overflow), Clean And Inspect
2	Tanks (MP Fuel Service), Clean and Inspect
4	Tanks (Potable Water), Clean and Inspect
7	Hydraulically Operated Cargo Hatch, Inspect and Service
18	Hydraulic Chain Stoppers, Inspect And Service
19	Hydraulic Crossdeck Winches, Inspect And Service
20	Hydraulic Inhaul Winch, Inspect And Service
21	Mechanical Chain Stoppers, Inspect and Service
22	Single Point Davit, Disassemble and Inspect
23	Buoy Crane, Inspect and Service
24	Grey Water Holding and Collection Tanks, Clean and Inspect
25	Sewage Holding and Vacuum Collection Tanks, Clean and Inspect
34	Buoy Crane Main Winch, CT Function, Remove
39	Warping Capstan (Aft), Inspect and Service
40	Deck Covering, Electrical Matting, Renew

PRINCIPAL CHARACTERISTICS - TENDER

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

General Requirements

1. SCOPE

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

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

2. REFERENCES

COAST GUARD DRAWINGS

None

COAST GUARD PUBLICATIONS

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

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, 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 NDI in accordance with Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes.

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 “Large Quantity Generator. “

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 2014 Edition Standard Specifications and supersede published content:

3.7.1 SFLC Standard Specification 6310, Requirements for Preservation of Ship Structures.

3.7.1.1 SFLC Std Spec 6310, page C-2, Section C1.5.1. Change from "lead-containing paint as 0.06%" to "lead-containing paint as 0.009%".

3.7.1.2 SFLC Std Spec 6310, page 4, Section 2 References, Group- Other References. Add “The Society for Protective Coatings (SSPC) Paint Application Guide No. 11, 2008, Protecting Edges, Crevices, and Irregular Steel Surfaces by Stripe Coating”

3.7.1.3 SFLC Std Spec 6310, page Appendix C-6, add "Hempel Hempadur Multi-Strength GF 35870" with FED-STD-595 color "Black/Red" under ANTI-ABRASION COATING, ICE BREAKING CAPABLE VESSELS, <235’.

3.7.1.4 Standard Spec 6310, page Appendix A-7, Under "UNDERWATER (U/W) BODY/BOOT-TOP", Add line Column 1: Option for U/W Body and Boot-Top, Steel Hulls, <154', in Salt Water. Column 2: Blank. Column 3: SSPC-SP 10/NACE NO. 2 using grit conforming to MIL-A-22262 / (1.5-3.5) - or - SSPC-SP WJ-2(M)/NACE WJ-2(M). Columns 4 and 5: Same as "U/W Body and Boot-Top, Aluminum Hull, High Speed (>30 knots)".

3.7.2 SFLC Standard Specification 0000 General Requirements.

3.7.2.1 SFLC Std Spec 0000, paragraph 1.3 ‘Acronyms and term definitions’, page 5, “PCL (Paint Containing Lead)” definition replaced by, “Any paint or coating containing lead in excess of 0.009 percent by weight (1.0 mg/cm2 or 90 ppm). Lead Based Paint (LBP) is an interchangeable term with PCL.”

3.7.2.2 Change Std Spec 0000 paragraph 3.2.4.2.3(QP 1 inspector or tech rep duties) bullet, “Determine when applied coats have sufficiently cured for overcoating or for system service resumption (see paragraph 3.1.19 of SFLC Std Spec 6310 (Critical drying time requirements)).” to “Determine when applied coats have sufficiently cured for overcoating or for system service resumption (see paragraph 3.1.17 of SFLC Std Spec 6310 (Critical drying time requirements)).”

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

USCGC IDA LEWIS (WLM-175) DOCKSIDE AVAILABILITY FY2017

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 (MP Fuel Stowage And Overflow), Clean And Inspect

1. SCOPE

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

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Diesel Storage	3-24-1-F	6,247	200
Diesel Storage	3-24-2-F	6,247	200
Diesel Overflow	3-35-2-F	696	50

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

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

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

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

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes

OTHER REFERENCES

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

Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) C6183, 2007, Cork and Rubber Composition Sheet; For Aromatic Fuel And Oil Resistant 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):

- 3.7 (Ultrasonic thickness (UT) measurement).

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:

- Fuel
- Piping
- Tank access cover

3.1.4.1 The Contractor shall remove up to a total of 14,000 gallons of diesel fuel. Document a complete chain of custody record of the removed tank contents from the vessel to the point of final destination or delivery. Submit document to the COR upon completion of work.

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

NOTE

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

NOTE

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

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 test TLIs for tanks listed in paragraph 1.1 (Intent) and Table 1 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 tank 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 Cleaning requirements. The Contractor shall refer to Coast Guard Drawings 175 WLM 541-001, 175 WLM 541-006 and 175 WLM 601-003 for guidance. The Contractor shall remove tank cover(s) and clean tank interior surfaces free of all foreign materials, such as residual fuel or water, sediment, sludge, rust, or biological growth, taking care not to damage the coating system (if applicable). Remove cleaning media and residues continuously during the washing process. Remove any residual wash media; and wipe up residual moisture with clean lint-free cloths.

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

3.4 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 (if tank interior surfaces are coated).
- Tank level indicator (TLI) and/or float switch condition, as applicable.
- Sounding/vent tube and striker plate condition (including vent check valve and waster piece).
- Suction and discharge piping condition.
- Fastener material and condition (correct fastener material is stainless steel).

3.4.2 Measure up to 10 “pits” within each tank as designated by the Coast Guard Inspector using a Contractor supplied ‘Pit Gauge’. Include pit measurement results in CFR specified above, showing where pit measurements were taken and the depth of the pit.

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

3.5.1 The Contractor shall renew 100% of nuts and washers.

3.6 Operational test – post repairs. After completion of work, the Contractor shall witness Coast Guard personnel test all designated tank TLIs and vent check valves to prove satisfactory operating condition. Submit a CFR.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.7 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 Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes, Appendix C. Submit a CIR.

4. NOTES

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

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

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

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

WORK ITEM 2: Tanks (MP Fuel Service), Clean and Inspect

1. SCOPE

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

TABLE 1 - FUEL SERVICE TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Diesel Service	3-79-1-F	1,475	100
Diesel Service	3-79-2-F	1,475	100
EDG Service	02-77-1-F	245	50

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

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

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

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

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes

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

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

3. REQUIREMENTS

3.1 General.

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

- 3.9 (Ultrasonic thickness (UT) measurement).

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:

- Fuel
- Piping
- Tank access cover

3.1.4.1 The Contractor shall remove up to a total of 5,000 gallons of diesel fuel from the tanks listed in Table 1. Document a complete chain of custody record of the removed tank contents from the vessel to the point of final destination or delivery. Submit document to the COR upon completion of work.

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

NOTE

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

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.

NOTE

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

3.4 Cleaning requirements. The Contractor shall remove tank cover(s) and clean tank interior surfaces free of all foreign materials, such as residual fuel or water, sediment, sludge, rust, or biological growth, taking care not to damage the coating system (if applicable). Remove cleaning media and residues continuously during the washing process. Remove any residual wash media; and wipe up residual moisture with clean lint-free cloths. The Contractor shall refer to Coast Guard Drawings 175 WLM 541-001, 175 WLM 541-006 and 175 WLM 601-003 for guidance.

3.5 Tank content and waste disposal. The Contractor shall dispose of residual tank contents and any cleaning fluids in compliance with all applicable Federal, state, and local laws, ordinances and regulations. Document a complete chain of custody record of the removed tank contents and generated wastes, from the vessel to the point of final destination or delivery. Submit document to the COR upon completion of work.

3.6 Inspection. The Contractor shall accomplish the following tasks:

3.6.1 Visually inspect all tank interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Submit a CFR including the following, as applicable:

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

3.6.2 Measure up to 10 "pits" within each tank as designated by the Coast Guard Inspector using a Contractor supplied 'Pit Gauge'. Include pit measurement results in CFR specified above, showing where pit measurements were taken and the depth of the pit.

3.7 Tank closing. The Contractor shall ensure that the tank(s) remain open for at least 24 hours

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

3.7.1 The Contractor shall renew 100% of 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 designated tank TLI's to be in satisfactory operating condition. Submit a CFR.

3.9 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 Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes, Appendix C. Submit a CIR.

4. NOTES

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

WORK ITEM 3: 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
Deck Machinery Hydraulic Power Unit	HPU: 3-15-0-E	500 Gallons
Small Boat Davit Hydraulic Power Unit	Propulsion Thruster Room (Z-Drive): 3-88-0-E	100 Gallons

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

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

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2014, Inspect, Repair, And Test 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). Use Coast Guard Drawing 175 WLM 601-003 for guidance.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

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

3.1.3.1 Protective measures - hydraulic system(s). The Contractor shall maintain existing hydraulic system cleanliness; take all necessary precautions to prevent the introduction of contaminants into the hydraulic system. Whenever disconnecting or removing components from the hydraulic system, completely seal all openings to the rest of the system, immediately, using either caps (for externally threaded connection points), bolt-on blanks, or taped-on discs/covers (durable plastic or sheet-metal no less than 1/16-inch thick).

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
- Filters and strainers.

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) and Table 1, to demonstrate existing operational condition. Submit a CFR.

3.3 Tank contents. The Contractor shall remove and dispose of up to a total of 700 gallons of hydraulic oil, all hydraulic filters, and hydraulic trainers. Upon completion of all authorized work, the Contractor shall renew, up to 700 gallons, of hydraulic fluid in accordance with SFLC Std Spec 5000, Appendix C, Paragraph C2.1 (Fluids) and renew all hydraulic filters and strainers according to equipment manufacturer recommendations.

NOTE

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

Vessel currently uses Rando ISO 32 for the HPU and Mobil DTE 10 Excel ISO 32 for the Single Point Davit.

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, strainers, filters, 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 perform a visual inspection all tank interior surfaces and service and inspect HPU equipment, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners, gasket seating surfaces, hydraulic piping, hydraulic motors, hydraulic hoses, and hydraulic pumps. 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).
- Service and inspect hydraulic motor and pumps.

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.

3.8.1 The Contractor shall renew 100% of nuts and washers.

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 4: Tanks (Potable Water), Clean and Inspect

1. SCOPE

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

TABLE 1 - TANKS

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

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

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

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

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

OTHER REFERENCES

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

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

3. REQUIREMENTS

3.1 General.

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

- 3.10 (Ultrasonic thickness (UT) measurement).

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) and Table 1, 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 refer to Coast Guard drawings 175 WLM 601-003 and 175 WLM 533-006 for guidance.

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.

3.10 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 Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes, Appendix C. Submit a CIR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 5: 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 Storage	2-77-1-F	90	3

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

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

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements 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 from the tanks listed in Table 1. 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 dispose of removed fluids in accordance with all applicable Federal, state, and local regulations (see 4.2 (Tank content restoration)). Upon completion of all authorized work, the Contractor shall renew, up to 100 gallons, of lube oil fluid in accordance with SFLC Std Spec 5000, Appendix C, Paragraph C2.1 (Fluids) and equipment manufacturer recommendations.

NOTE

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

Vessel currently uses SAE 15W40 Lube Oil.

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. Use Coast Guard Drawing 175 WLM 601-003 for guidance. 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 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.

3.5 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.

3.6 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.
- 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.

3.7 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.

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 designated tank TLIs to be in satisfactory operating condition. Submit a CFR.

3.8.1 The Contractor shall renew 100% of nuts and washers.

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.

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

WORK ITEM 6: Voids (Accessible), Clean and Inspect

1. SCOPE

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

TABLE 1 - VOIDS

TYPE OF STRUCTURE	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Void	3-18-0-T	2,000	50
Void	3-52-0-V	5,000	50

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

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

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

OTHER REFERENCES

ASTM International (ASTM) D1330, 2010, 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).

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) and Table 1, to demonstrate existing operational condition. Submit a CFR.

3.2 Cleaning and inspection requirements. The Contractor shall refer to Coast Guard Drawing 175 WLM 601-003 for guidance to accomplish the following tasks:

3.2.1 Content removal. The Contractor shall remove and dispose of all fluids and/or residues in accordance with all applicable Federal, state, and local regulations.

3.2.2 Cleaning. The Contractor shall remove access cover(s). Clean the designated structure's 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.

3.2.3 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 and condition.

3.3 Closing. The Contractor shall ensure that the compartment(s) remain open for approximately 24 hours after completion of the tasks specified above. 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 cotton grommets on the studs (as applicable).

3.3.1 The Contractor shall renew 100% of nuts and washers.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.4 Operational test, post repairs. After completion of work and in the presence of the Coast Guard inspector, the Contractor shall thoroughly test and demonstrate the TLI's for tanks listed in paragraph 1.1 (Intent), to be in satisfactory operating condition. Submit a CFR.

3.5 Ultrasonic thickness (UT) measurement. The Contractor shall take a total of 100 UT measurements of tank plating, in locations designated by the Coast Guard Inspector, in accordance with Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes, Appendix C. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 7: Hydraulically Operated Cargo Hatch, Inspect and Service

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform inspections and service for the hydraulically-operated cargo hatch.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

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

Coast Guard Drawing 175 WLM 549-001, Rev F, Onboard Lubrication Requirements

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

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

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3610, Section 167-A, Nov 2005, Hydraulic Cargo Hatch - Model No. D-WK-787

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2014, Inspect, Repair, And Test Auxiliary Machine Systems

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, 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):

- 3.2 (Tasks to be accomplished) – 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 affected and non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor shall remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

3.1.3.1 Protective measures - hydraulic system(s). The Contractor shall maintain existing hydraulic system cleanliness; take all necessary precautions to prevent the introduction of contaminants into the hydraulic system. Whenever disconnecting or removing components from the hydraulic system, completely seal all openings to the rest of the system, immediately, using either caps (for externally threaded connection points), bolt-on blanks, or taped-on discs/covers (durable plastic or sheet-metal no less than 1/16-inch thick).

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:

- Electrical and hydraulic switches.
- Dogs.
- Toggles.
- Hydraulic cylinders.
- Hydraulic lines.
- Electrical cables.
- Hoses.
- Overhead insulation.
- Drains.
- Gaskets.
- Piping insultation.

3.2 Tasks to be accomplished. The Contractor shall perform the following tasks:

	ADDITION REQUIREMENTS

#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM 5000_STD	OTHER
1	Operate and Inspect	1	Cargo Hatch	3.2.1 (Operate and inspect)	1. Check for hatch proper operation of all indicators, switches, dogging un-dogging and overall operation. 2. Check entire coaming and drains for signs or debris or clogging of drains. 3. Conduct a visual inspection of the hatch. Check all linkage. 4. Inspect both inner and outer knife edges for proper height and evenness of wear. 5. Inspect entire hatch structure, for signs of paint wear and corrosion. 6. Inspect gasket channels for corrosion. 7. Take a total of 10 UT measurements of gasket channel surfaces, in locations designated by the Coast Guard Inspector, in accordance with Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes, Appendix C. 8. Perform NDI of all welds in accordance with Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes, Appendix C. Submit a CFR. 9. Inspect hydraulic hose condition. 10. Check condition of dogs and wedges. Submit A CIR.
2	Remove and reinstall	1	Cargo Hatch	N/A	Remove hatch, to facilitate inspections and service tasks, and reinstall hatch, upon completion of work.
3	Service and Inspect	1	Hydraulic hatch lift cylinder	3.2.2 (Service and inspect)	Submit CFR
4	NDE	1	Cargo Hatch	3.2.5 (NDE)	Components designated for NDE: All welds. Submit a CFR.
5	Renew	1	Cargo hatch gasket	N/A	See CG TP-3610. Conduct gasket compression test, upon installation. Submit CFR.
6	Groom And Lubricate	1	Cargo Hatch	3.2.6 (Groom and lubricate)	See Coast Guard Drawing 175 WLM 549-001.
7	Operational Testing –	1	Cargo Hatch	N/A	1. Raise and lower, dog and un-dog, the hatch three complete cycles.

				ADDITION REQUIREMENTS	
#	**TASK TYPE**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM 5000_STD**	**OTHER**
	Post Repairs				2. Verify hatch operates in accordance with parameters specified in TP-3610 with no unusual noise or binding. Submit CFR.
8	Boundary Testing	1	Cargo Hatch	N/A	Accomplish a chalk test and water hose test, in accordance with Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes, Appendix C. Submit a CFR.
9	Preserve	1	Cargo Hatch (i.e. all surfaces of the cargo hatch)	3.2.4 (Preservation)	Use Coating System: "Weather Decks (Weather Deck, Buoy Tender Working Deck)" in accordance with in SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems). Submit CFR.
10	Touch-Up Preservation	All	New and disturbed surfaces	N/A	Prepare and coat all new and disturbed exterior and interior surfaces to match existing adjacent surfaces, in accordance with SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems) and Appendix B (Cutter and Boat Interior Painting Systems), respectively, and as applicable.

CAUTION

Do not paint gaskets or any moving parts, including dogs, nuts, wedges, spindles, yokes, packing, connecting rods and hinge pins.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 8: SW Heat Exchangers; Clean, Inspect And Hydro

1. SCOPE

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

TABLE 1 – HEAT EXCHANGERS

DESCRIPTION	LOCATION	QTY
MDE Lube Oil Coolers	Engine Room, 3-61-0-E	2
MDE Jacket Water Coolers	Engine Room, 3-61-0-E	2
SSDG Lube Oil Coolers	Engine Room, 3-61-0-E	3
SSDG Jacket Water Coolers	Engine Room, 3-61-0-E	3
Main Hydraulic System Fluid Cooler	HPU Room, 3-15-0-E	1
Z-Drive Hyd. Fluid Cooler	Prop. Thrust Room, 3-88-0-E	2
Z-Drive Lube Oil Cooler *	Prop. Thrust Room, 3-88-0-E	2

*** Gasket part numbers 5330-01-449-2451 and 5330-01-449-2479, 2 each. All other coolers, see Coast Guard drawings for gasket requirements.**

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
Y	**Z-Drive Lube Oil Cooler	NSN: 4420-01-505-9267	2 ea.	7,725.00
N	**Main HPU Cooler	NSN: 4420-01-561-2970	1 ea.	21,518.33
N	Heat Exchanger, Gasket	NSN: 5330-01-449-2451	2 ea.	22.53
N	Heat Exchanger, Gasket	NSN: 5330-01-449-2479	2 ea.	18.66

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

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 201-001, Rev C, Machinery Spaces Arrangement

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

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

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

Coast Guard Drawing 175 WLM 256-005, Rev -, Z-Drive Lube Oil Heat Exchanger Tube Bundle, Replacmnt & Piping Mods

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

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2014, Inspect, Repair, And Test Auxiliary Machine Systems

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2014, Temporary Hull Accesses

OTHER REFERENCES

Commercial Item Description (CID) A-A-59588, 2013, Rubber Silicone

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the Contractor

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

3.1.3.1 Install blanks on the open ends of piping to prevent any contamination or foreign debris from entering the affected systems. Ensure that all cleaning equipment or media used in the cleaning process do not cause any damage to cooler components.

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

- Piping and hoses
- Filters
- Deck plating and associated framing
- Electrical cables
- Thermal insulation.

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

3.2 Environmental compliance. The Contractor shall dispose of all waste fluids in accordance with all Federal, state and local regulations. Document a complete chain of custody record of the removed tank contents and generated wastes, from the vessel to the point of final destination or delivery. Submit document to the COR upon completion of work.

3.3 Disassemble. The Contractor shall drain and disassemble the designated heat exchangers (see paragraph 1.1 (Intent)) to the extent necessary to perform all work specified herein. Refer to Coast Guard Drawings 175 WLM 201-001, 175 WLM 256-001, 175 WLM 256-003, 175 WLM 256-004, 175 WLM 256-005, and 175 WLM 256-012 for guidance.

3.3.1 Perform all disassembly and reassembly in accordance with manufacturer-recommended procedures using manufacturer-recommended tooling to ensure parts are reinstalled in proper sequence and configuration.

3.4 Inspection. Before cleaning is begun, the Contractor shall visually inspect all heat exchanger surfaces for excessive deterioration and any other defects. Submit a CFR.

3.5 Cleaning requirements. The Contractor shall clean all interior and exterior heat transfer surfaces to a state free of all debris, scale and surface contaminants in accordance with the heat exchanger manufacturer’s recommendations, and in compliance with all Federal, state, and local environmental regulations.

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

NOTE
Historically, chemical cleaning has been necessary to thoroughly clean most heat exchanger tubes.

3.6 Pipe flushing. The Contractor shall flush all new and disturbed cooling systems and piping with clean fresh water until all debris is removed but no longer than five minutes. Ensure flushing fluid is directed to move scale and foreign debris away from installed machinery and protect all connected system to prevent possible damage upon operational testing. Submit a CFR documenting date and time of flushing process and level of pipe cleanliness.

3.6.1 Dispose of flushing fluid in accordance with all applicable Federal, state, and local regulations. Document a complete chain of custody record of the removed contents from the vessel to the point of final destination or delivery. Submit document to the COR upon completion of work.

WARNING

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

3.7 Reassembly. After authorized repairs, if any, the Contractor shall reassemble each heat exchanger.

3.7.1 Renew all software (seals, gaskets, O-rings, lantern rings).

3.7.2 Renew isolation fittings/mounts and fasteners if disturbed. Apply silicone rubber sealant conforming to CID A-A-59588 around all fasteners, nozzles or gaskets that penetrate the hull.

3.7.3 Renew all hoses, thermostats and anodes as applicable.

3.7.4 Refill all heat exchanger fluid levels in accordance with manufacturer and vessel specifications. Prior to recirculation through the engines, the Contractor shall test the jacket water for chloride and nitrite concentrations in accordance with manufacturer recommendations in the presence of the Coast Guard Inspector. Submit a CFR.

3.8 Reinstallation. After completion of testing and all authorized repairs, if any, the Contractor shall reinstall each cooler (if previously removed). Where applicable, renew all zinc electrode plates, gaskets, and recessed hex-head bolts in accordance with the manufacturer's specifications. Apply a copper-based anti-seize compound on all bolts, and torque in accordance with manufacturer’s specifications.

3.9 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.)

3.10 Cleanliness requirement. The Contractor shall ensure that all cleaned surfaces are one hundred percent free of debris and surface contaminants. Submit a CFR.

CAUTION

Extreme precaution must be taken to not exceed manufacturer’s recommended test pressure during hydrostatic testing.

3.11 Pressure test. After all authorized work is complete and prior to reconnecting the heat exchanger(s), the Contractor shall pressure test each heat exchanger to the manufacturer’s recommended test pressure in accordance with the applicable Coast Guard drawing listed under

Section 2 (References). In the absence of a specified test pressure noted in the Coast Guard drawing, the Contractor shall pressure test each heat exchanger in accordance with paragraph C2.7 (Heat exchangers and fluid coolers) of SFLC Std Spec 5000. Ensure zero leakage from or permanent deformation of pressure-containing parts by repairing all leaks, deformations, and discrepancies. Submit a CFR.

3.12 Label plates. The Contractor shall attach an anodized aluminum test data plate to each heat exchanger using epoxy resin cement. Ensure that each plate is engraved with ¼-inch high letters, stating the following:

- Test pressure.
- Test date.
- Testing facility.

NOTE

If the heat exchanger design makes mounting a test data plate impractical, the Government reserves the right to request written documentation of the above-listed testing data in lieu of a test data plate, at no additional cost to the Government.

3.13 Leak test. After reconnecting the heat exchanger(s) on the vessel (and post undocking, if applicable), the Contractor shall perform an operational test of the heat exchanger and associated system piping for one hour using the system fluid at normal operating pressure. Ensure zero visible leakage from or deformation of mechanical parts by repairing all leaks and discrepancies. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 9: 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 175 WLM 259-001, Rev A, Combustion Exhaust Diagram

Coast Guard Drawing 175 WLM 259-005, Rev C, Combustion Exhaust A&D, Hull Block 970

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, 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
- Lagging.

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 175 WLM 259-001 and 175 WLM 259-

005, 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 completely 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 flange connection gaskets with suitable high temperature, non-asbestos-containing gasket materials; and renew all 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 has been satisfactorily 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 10: 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 exhaust piping system for the following diesel generators: #1 SSDG, #2 SSDG, #3 SSDG, and the EDG, including the associated stack uptakes.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 259-001, Rev A, Combustion Exhaust Diagram

Coast Guard Drawing 175 WLM 259-005, Rev C, Combustion Exhaust A&D, Hull Block 970

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2014, Temporary Hull Accesses

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
- SSDG
- Vent ducting
- Wiring
- Exhaust pipe expansion joints
- Exhaust insulation blankets

3.2 Staging or scaffolding. 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.

3.3 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.

3.3.1 Temporary safety railing. To promote safety, the Contractor shall limit existing safety railing removals to an area where new safety railing can be installed during the same workday. During periods when not actively working on new safety railing, secure any gaps between existing safety railing with a substantial temporary lifeline arrangement similar to that currently installed on the vessel. Remove and dispose of all temporary lifelines upon completion of work.

3.4 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 SSDG. The Contractor shall perform this work upon receiving Coast Guard approval of the plan.

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

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

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

3.6 Cleaning. The Contractor shall clean the interior surfaces of the exhaust piping and stack uptakes to the SSDG, shown on Coast Guard Drawing(s) 175 WLM 259-001 and 175 WLM 259-005, to a condition free from soot, tar, and any other foreign matter as follows:

3.6.1 Disconnect the exhaust piping as necessary to facilitate cleaning.

3.6.2 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 completely removed.

3.6.3 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.

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

3.7 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.

3.7.1 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 has been satisfactorily cleaned according to the work plan.

3.8 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.

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

4. NOTES

This section is not applicable to this work item.

WORK ITEM 11: Circuit Breakers (60 Hz), Inspect and Test

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and test circuit breakers (60 Hz) located on the Switchboards.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

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

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3619, 13-AUG-98, Manufacturers Instruction Book-SWBS Group(s) 324

OTHER REFERENCES

National Electrical Manufacturers Association (NEMA) Stds, Pub. No. AB4, 2003, Guidelines for Inspection and Preventive Maintenance of Molded Case Circuit Breakers Used in Commercial and Industrial Applications

Underwriters Laboratories Inc. (UL) 489, May 2002, Molded Case Circuit Breaker

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 requirement. The Contractor shall inspect all circuit breaker wire connectors, screws and plating and submit a CFR.

3.2.1 The Contractor shall provide skilled technicians, portable instrument standards and all necessary equipment to inspect and test circuit breakers designated in the work item. The Contractor may remove the circuit breakers from the vessel to a shoreside test facility. If this is done the Contractor shall exercise extreme care in transporting and reinstalling the circuit breakers to original operating condition on Switchboard.

3.2.2 Prior to any wiring disconnection and removal of circuit breakers, the Contractor shall record all wiring information, trip setting adjustments, and equipment locations necessary for use in later reinstallation. Retain all mounting and connecting hardware for later reuse. Submit a CFR.

3.2.3 Disconnect and remove the circuit breakers listed in the Table 1& 2. Coordinate the disconnection and removal of the circuit breakers with the COR to minimize disruption of power. Temporarily cover or insulate switchboard or panel board openings created by the removal of circuit breakers to prevent personnel contact with energized conductors.

3.2.4 The Contractor shall notify the COR 48 Hours prior to start work on this item.

3.2.5 Surface burn marks and hairline cracks are acceptable but shall not deteriorate the mold surface or impair physical strength. Cracks are not permitted in wall section between phase and a ground plane when there is a conducting part in contact with the wall section. Cracks shall not exceed 0.75 inch in length, and in no case should be greater than 50 percent of the length of the surface in which the crack appears. Submit a CFR.

3.3 Circuit breaker testing. The contractor shall test circuit breakers listed in the Table 1&2 in accordance with the National Electrical Manufacturers Association (NEMA) AB 4 or UL 489 Molded Case Circuit Breakers. The test shall include, at a minimum:

- Mechanical Operation
- Insulation Resistance
- Individual Pole Resistance
- Inverse-Time Over current Tripping
- Instantaneous Over current Tripping
- Rated Hold-In Current (Note: Perform this test only on the circuit breakers which are tripping under normal load condition. The Coast Guard Inspector will identify the circuit breakers).

3.4 Circuit breaker data sheet. The contractor shall provide data sheet of each circuit breaker testing with the following information:

- Circuit Breaker Model and Serial Number
- Circuit Breaker Service
- Circuit Breaker Visual Condition
- Test Voltage/Test Amperes
- Type of Test/Test Method/Test Date/Name of Test Laboratory
- Result of Testing

3.5 Circuit Breaker Renewal. Contractor's option for circuit breaker renewal. The Contractor may elect to renew circuit breakers in lieu of testing (due to high cost of labor for testing or non available nearby testing facilities) at no additional cost to the government. Ensure that all circuit breakers shall be UL 489 Certified.

TABLE 1 – CIRCUIT BREAKER LIST

QUANTITY	DESCRIPTION	SIEMENS PART NO	SERVICE	LOCATION
1	800 AF, 600 AMP	RL-AS8EAFXBA06D-U7	SS Switchboard Emergency Switchboard Bus Tie	Emergency Switchboard, 450 Volt Section
1	800 AF, 400 AMP	RL-AS8EAEXBA06D-U4	Emergency Generator	Emergency Switchboard, 450 Volt Section
2	800 AF, 100 AMP	ED63A100	Port/STBD Z-Drive Back Up Hydraulic LO Pump	Emergency Switchboard, 450 Volt Section
2	125 AF, 125 AMP	ED63M125	Fire Pump No.1&2	Emergency Switchboard, 450 Volt Section
2	125 AF, 100 AMP	ED63M100	Engine Room and Main DeckVital Panel Breaker #s 44 and 47	Emergency Switchboard, 450 Volt Section
1	125 AF, 20 AMP	ED63M020	Chart Room Vital Panel Breaker # 43	Emergency Switchboard, 450 Volt Section
1	125 AF, 20 AMP	ED63M035	Emergency Switchboard 120 Volt ABT	Emergency Switchboard, 450 Volt Section

TABLE 2– CIRCUIT BREAKER LIST

QUANTITY	DESCRIPTION	SIEMENS PART NO	SERVICE	LOCATION
1	800 A, F400 AMP	RL-AS8EAEXBA06D-U4	Shore Power	Main Switchboard
1	800 AF, 520 AMP	RL-AS8EXXXBAXXD-U7	SSDG No.1	Main Switchboard
2	800 AF, 600 AMP	RL-AS8EAFXBA06D-U7	SSDG No.2 and 3	Main Switchboard
2	800 AF -Non Automatic	RL-AS8EXXXBAXXD-U7	Bus Tie 1S-2S & 2S-3S	Main Switchboard

QUANTITY	DESCRIPTION	SIEMENS PART NO	SERVICE	LOCATION
1	800 AMP	RL-AS8EAGXBA06E-K	Bow Thruster	Main Switchboard
1	400 AMP	JXD63M400	Ss Swchtbd / Emerg Bus Tie Bkr	Main Switchboard
1	200 AMP	FXD63M200	01 Lvl Htr Pnl	Main Switchboard
1	800 AF, 400 AMP	JXD63M400	HPU Control Panel/Deck Machinery	3S Bus
1	100 AMP	ED63M100	RHIB Crane HPU	3S Bus
1	50 AMP	ED63M050	Capstan	3S Bus
2	100 AMP	ED63A100	Z-Drive Pumps	1S Bus
2	125 AMP	ED23M125	Fire Pumps # 1 and 2	1S Bus
16	100 AMP	ED23M100	Breaker #s 26,16,17,18,21,22, and 32	1S Bus
2	80 AMP	ED23M080	Breaker #s 23 and 27	1S Bus
2	50 AMP	ED23M050	Breaker #s 15 and 24	1S Bus
1	35 AMP	ED23M035	Breaker # 20	1S Bus
1	25 AMP	ED23M025	Breaker # 35	1S Bus
1	20 AMP	ED23M020	Breaker # 33	1S Bus

3.6 Circuit Breaker Installation. After all testing is complete; reinstall circuit breakers using previously recorded wiring information to its original operating condition and Coast Guard TP 3619.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.7 Operational test - general.

3.7.2 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 listed in Table 1 and 2 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.

WORK ITEM 12: Vent Ducts (Engine Room), 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 175 WLM 512-001, Rev E, HVAC Diagram

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 5100 (SFLC Std Spec 5100), 2014, Clean Shipboard Ventilation Systems

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.
- Hot/Chill water coils.
- 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 175 WLM 512-001, in accordance with SFLC Std Spec 5100. Submit a CFR.

TABLE 1 – ENGINE ROOM

SYSTEM LOCATION	TYPE	SYSTEM NO.
Engine room	Supply	S1-71-1
Engine room	Exhaust	E03-76-1

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 13: 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 175 WLM 512-001, Rev E, HVAC Diagram

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 5100 (SFLC Std Spec 5100), 2014, Clean Shipboard Ventilation Systems

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.
- Hot/Chill water coils.
- 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 175 WLM 512-001, in accordance with SFLC Std Spec 5100. Submit a CFR.

TABLE – 1 SYSTEM LOCATION

SYSTEM LOCATION	TYPE	SYSTEM NO.
Galley	Supply	S01-52-0
Gaylord hood	Exhaust	E02-68-2

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. Ensure that cleaning of galley ventilation systems is scheduled between 1900 and 0530 so that it WILL NOT interfere with meal preparation and service.

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: 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 175 WLM 512-001, Rev E, HVAC Diagram

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 5100 (SFLC Std Spec 5100), 2014, Clean Shipboard Ventilation Systems

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.
- Hot/Chill water coils.
- 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 175 WLM 512-001, in accordance with SFLC Std Spec 5100. Submit a CFR.

TABLE 1 – SYSTEM LOCATIONS

SYSTEM LOCATION	TYPE	SYSTEM NO.
Laundry room	Exhaust	E01-52-1

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 15: 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 175 WLM 512-001, Rev E, HVAC Diagram

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 5100 (SFLC Std Spec 5100), 2014, Clean Shipboard Ventilation Systems

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.
- Hot/Chill water coils.
- 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 175 WLM 512-001 and Table 1, in accordance with SFLC Std Spec 5100. Submit a CFR.

TABLE 1 – SYSTEM LOCATIONS

FAN	SERVING	LOCATION
AH1	Pilot House, Chart Room	02-52-2-Q
AH2	01 Deck	02-52-1-Q
FC1	Ecc	2-52-0-C
FC2	Ships Office	1-52-2-Q
FC2	Eng Log Office	1-57-2-Q
FC3	Messdeck	1-61-0-L
FC4	Crew Sf	1-79-2-L
FC4	Crew Sr	1-79-3-L
F5	Fr 15 Fwd	1-10-0-Q
F6	Bow Thruster	3-6-0-E
F7	Hyd Equip Room	3-15-0-E
F8	Cargo Hold	3-15-0-E
F9	Machine Shop, Eng Strm, Pot Water Equip Rm	3-42-0-Q
F10	Em Shop	01-51-0-Q
F11	Pump Room	3-79-0-E
F12	Z-Drive	3-88-0-E
F13	Aton Shop Ext Hood	1-10-0-Q
F17	Md Dk OASupply	01-51-0-Q
F18	Md Dk Exh	01-51-0-Q
F19	01 Deck Exh	02-52-1-Q
F20	Storeroom	3-35-4-A

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 16: 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	LOCATION	QTY	OPERATING PRESSURE (PSI)
Ship's Service	3-61-0-E	2	250
Ship's Whistle	3-61-0-E	1	140

TYPE	SIZE	DESIGNATION	QTY	SET PRESSURE (PSI)
Relief	½"	V13-1	1	155
Relief	½"	V13-2	1	155
Relief	½"	V41-1	1	155
Relief	½"	V41-2	1	155
Relief	½"	V60-1	1	40
Relief	½"	V60-2	1	40
Relief	½"	V61-1	1	275
Relief	½"	V61-2	1	275
Relief	½"	V61-3	1	275
Relief	½"	V61-4	1	275
Reducing	¾"	V43-1	1	250-125
Reducing	¾"	V44-1	1	250-125
Reducing	1 ½"	V44-2	1	250-125

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 551-001, Rev J, Compressed Air System Diagram

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, 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 Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes, 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 175 WLM 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.

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 Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes, 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 175 WLM 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 ^{o}F” 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 17: Hull Fittings (Weight Handling Rigging Hardware), Inspect and Test

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and test designated hull fittings, listed in Table 1.

TABLE 1. DESIGNATED ATON HULL FITTINGS

QTY	DESCRIPTION	LOCATION
6	Pad Eye, Flush Deck (S-A S301)	Buoy Deck, 171" Off CL, P/S
2	D-Ring w/ Flush Ring (PH-F564)	Buoy Deck, 30-1/2" Off Deck Edge, P/S
14	Pad Eye, Flush Deck (S-A S301)	Buoy Deck, 111" Off CL, P/S
16	Pad Eye, Flush Deck (S-A S301)	Buoy Deck, 51" Off CL, P/S
5	Pad Eye, Flush Deck (S-A S301)	Buoy Deck, CL between Frames 45 and 50
8	Pad, Eye Not Flush	Buoy Deck
4	Pad Eye, Flush Deck (S-A S299)	Cargo Hold, Frame 28, P/S
6	Pad Eye, Flush Deck (S-A S299)	Cargo Hold, Frame 30, P/S
6	Pad Eye, Flush Deck (S-A S299)	Cargo Hold, Frame 32, P/S

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 573-008, Rev A, Aton Tie Downs

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2014, Inspect, Repair, And Test Auxiliary Machine Systems

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

2014, 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 each hull fitting designated in paragraph 1.1, using Coast Guard Drawing 175 WLM 573-8 as guidance, and submit a CFR:

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

3.2.2 Measurements. Perform below measurement tasks and record percent wastage. Be aware that a 10% reduction in the original dimensions shall be cause for removal from service.

3.2.2.1 D-Ring. Using a suitable micrometer, measure the diameter (measurement A) at 90-degrees to the horizontal (top dead center). See Table 2 and the sketches provided in this work item as guidance, as applicable.

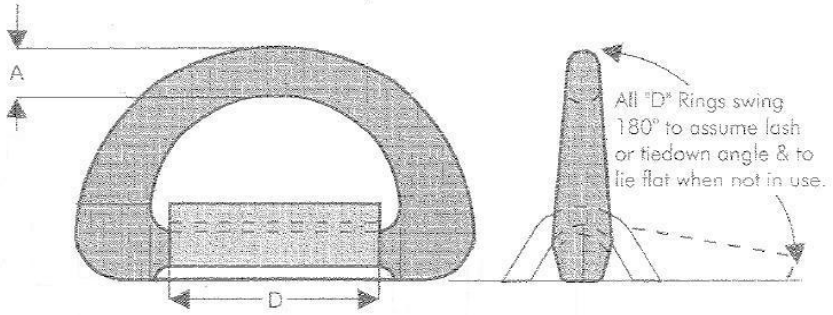
3.2.2.2 Flush deck tie-downs. Using a suitable micrometer, measure the diameter (measurement A) at center of bar of the S301 and S299 fittings. See Table 2 and the sketches provided in this work item as guidance, as applicable.

TABLE 2. HULL FITTING MEASUREMENTS

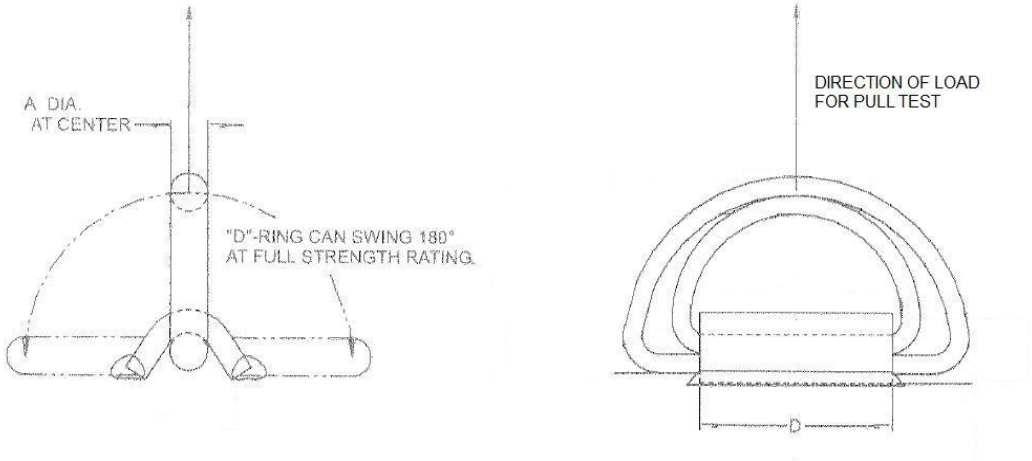
MANUFACTURER	MODEL/MANUFAC. PART NUMBER	RING/BAR DIAMETER

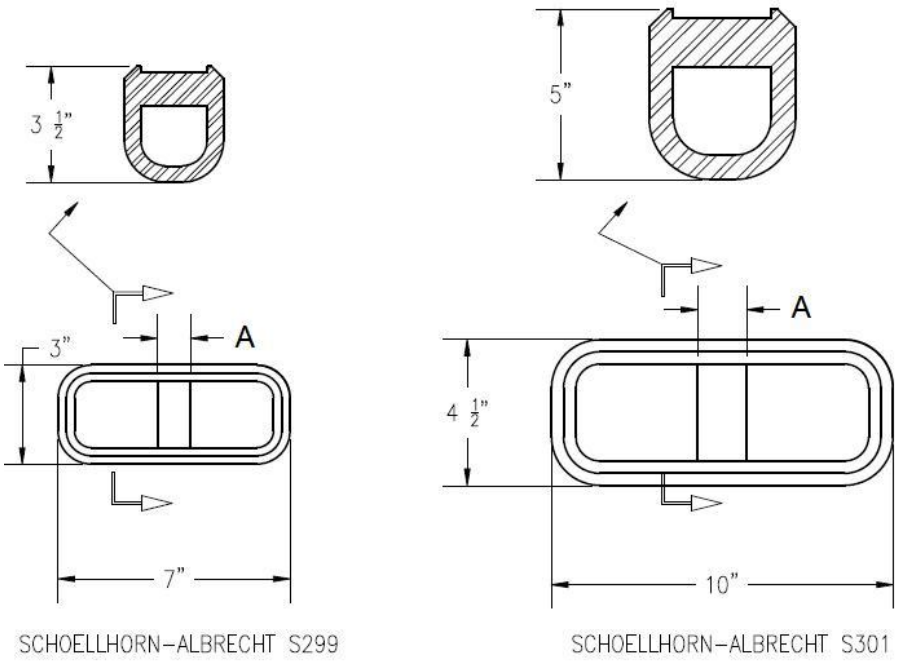
	DESIGNATOR	STRAP LENGTH (MEASUREMENT D) (INCHES)	(MEASUREMENT A) (INCHES)
Schoellhorn-Albrecht	S113-50 (Generation 1)	5.0	1.00*
	S113-50 (Generation 2)	4.00	1.08
	S113-50 (Generation 3)	5.13	1.00
	S301		1.5
	S299		1.0
Peck and Hale	F564		0.91
Austin Hardware and Supply	982-0046		1.0

***D-Ring has a tapered cross section. Measurement is only valid in the vertical. See Sketch 1.**



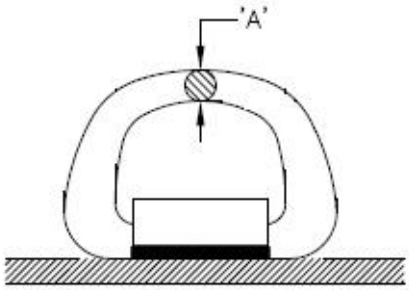
Sketch 1. Schoellhorn-Albrecht S113-50 (Generation 1) D-Ring and Strap.





Sketch 2.

Schoellhorn-Albrecht S113-50 (Generation 2 and 3) D-Ring and Strap.
Sketch 3. Schoellhorn-Albrecht S299 and S301 Flush Deck Tie Downs.



Sketch 4. Peck and Hale F564 D-Ring and Strap.

Sketch 5. Austin Hardware and Supply 982-0046 Heavy Duty Tie Down Rings with Clip.

3.2.3 Pull-test. Pull test all pad eyes and tie-downs in accordance with paragraph 3.2.7 (Pull test) of SFLC Std Spec 5000 , using Coast Guard Drawing 175 WLM 573-8 as guidance.

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

4. NOTES

This section is not applicable to this work item.

57301_HydChnStprInspctSrvc_MWC_1115_IBCT
REC_57301_HydChnStppr_IBCT_175 WLM (ALL) (1115)

WORK ITEM 18: Hydraulic Chain Stoppers, Inspect And Service

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and service the Coast Guard Yard Model Rising Sheave Chain Stoppers (RSCS).

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	Repair Kit Assembly	NSN: 2040-01-496-9418	2 ea.	1,968.67
N	Rod Seal Repair Kit (FL-2605-29 PC#37)	NSN: 2040-01-496-9422	2 ea.	3,030.07
N	Repair Kit, Cable Chain (Includes Pads) (FL-2605-29 PC#36)	NSN: 3020-01-538-0684	16 ea.	257.99
N	Cylinder Assembly Actuating, Linear	NSN: 3040-01-496-9424	2 ea.	1,969.24

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Fleet Drawing FL 2605-029, Rev H, Chain Stopper System Rising Sheave Assembly

Coast Guard Drawing 175 WLM 573-050, Rev A, Hydraulic Piping Installation for Chain Stopper

Coast Guard Drawing 175 WLM 573-051, Rev B, Chain Stopper Structural Mods for Hydraulic Roller Assembly

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3939, SWBS 573-A, Apr 2007, Rising Sheave Chain Stopper

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2014, Inspect, Repair, And Test Auxiliary Machine Systems

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following task(s) in Table 1:

- Task #1.
- Task #2.
- Task #3.
- Task #4.

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 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).

3.2 Inspection and repair tasks. The Contractor shall refer to Coast Guard Drawings FL-2605-29, 175 WLM 573-050, and 175 WLM 573-051; and TP-3939 as guidance. Perform all work in Table 1 below accordance with SFLC Std Spec 5000.

TABLE 1 - TASKS

				ADDITION REQUIREMENTS	
#	**TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM SFLC STD SPEC 5000**	**OTHER**
1	Operate and Inspect	2	Hydraulic Chain Stopper Assembly	3.2.1 (Operate and Inspect)	Additional inspections: 1. Check the hydraulic stopper mechanical foundation and all mounting hardware. 2. Inspect hydraulic hoses, ensuring that hose tags match hose log installation dates. 3. Verify the relief valve; adjust settings to 2150 PSI. 4. Visually inspect the seal gland; check for signs of water intrusion. 5. Visually inspect the stopper roller. 6. Verify proper speed of raise and lower (4 seconds each way). 7. Submit A CIR.
2	Disassemble and Inspect	2	Directional control valve assembly	C2.4 (Valves and manifolds)	Submit A CIR.
3	Disassemble and Inspect	2	Rising Sheave Assembly (sheave pin assembly)	3.2.3 (Disassemble and Inspect)	1. Renew all fasteners exposed to weather. 2. Lubricate in accordance with references. 3. Submit A CIR.
4	Disassemble and Inspect	4	Hydraulic cylinder	3.2.3 (Disassemble and Inspect)	Submit A CIR.
5	NDE	2	Hydraulic Chain Stopper Assembly and Machinery Foundation	3.2.5 (NDE)	Areas to NDE: 1. Entire stopper structure and all weld joints attaching chain stoppers to deck. 2. Foundation of the hydraulic rams and

				ADDITION REQUIREMENTS	
#	TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
					holdback blocks. 3. Submit a CFR.
6	Preserve	2	Hydraulic Chain Stopper Assembly, including foundation and chain stopper pockets.	3.2.4 (Preservation)	Finish coat color: 1. Chain stopper: Black (17038) 2. Foundation: Gray (16099).
7	Renew	All	Hydraulic Fluid	C2.1 (Fluids)	Refer to Tech Pub.
8	Groom and Lubricate	2	Hydraulic Chain Stopper Assembly	3.2.6 (Groom and lubricate)	
9	Final Test	2	Hydraulic Chain Stopper Assembly	B2.2 (Hydraulic chain stoppers)	Operational Load Test Weight: 16,500 (+0 -825) pounds Submit CFR.
10	Fabricate and Install	2	Label Plate	B2.9 (Label plates)	Weight: 16,500 (+0 -825) pounds

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 2 below, the Contractor shall refer to the corresponding Appendix or paragraph of SFLC Std Spec 5000.

TABLE 2 – 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 to this work item.

WORK ITEM 19: Hydraulic Crossdeck Winches, Inspect And Service

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and service the below-listed hydraulic crossdeck winch assemblies:

- Port Fwd Crossdeck Winch (PFW)
- Stbd Fwd Crossdeck Winch (SFW)
- Port Aft Crossdeck Winch (PAW)
- Stbd Aft Crossdeck Winch (SAW)

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
Y	Hydraulic Brake Assembly	NSN: 2530-01-550-7474	4 ea.	399.00
N	Winch Gear Box Assembly	NSN: 3010-01-F16-4570 PN: SK9052AZ-SAEB-31.4-H1 (Nord Gear Corp) or YMD-7914 (Appleton Marine Inc)	4 ea.	1,000.00
Y	Hydraulic Motor	NSN: 4320-01-470-8467	4 ea.	900.00
N	Wire Rope	NSN: 4010-01-620-9604	4 ea.	577.95
N	Counter Balance Valve	NSN: 4820-01-324-4269	8 ea.	107.50
N	Shuttle Valve	NSN: 4820-01-317-2748	8 ea.	34.78
N	Needle Valve	NSN: 4820-01-329-0051	4 ea.	38.00
Y	**Directional Control Valve	NSN: 4810-01-543-3252	4 ea.	3,465.17
N	Electrical Connector, Hirshmann	NSN: 5935-01-640-6747	2 ea.	32.00

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

2. REFERENCES

COAST GUARD DRAWINGS

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

Coast Guard Drawing 175 WLM 549-001, Rev F, Onboard Lubrication Requirements

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3631, Mar 2007, Manufacturer's Instruction Book-SWBS Group(s) 573-581, Section B, Cross Deck Winch – Appleton Marine Model BMD-463

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2014, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2014, Inspect, Repair, And Test Auxiliary Machine Systems

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

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

- Task #1.
- Task #2.

3.1.2 Tech Rep. The Contractor shall provide the services of certified Appleton Tech Rep, who is familiar with the Appleton crossdeck winch Model BMD-463 equipment/system, to accomplish the following tasks – on site:

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

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

3.1.2.3 Submit a copy of the Tech Rep's résumé and a list of references to the COR at the Arrival Conference.

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

3.1.3.1 Hydraulic system. The Contractor shall maintain existing hydraulic system cleanliness; take all necessary precautions to prevent the introduction of contaminants into the hydraulic

system. Whenever disconnecting or removing components from the hydraulic system, completely seal all openings to the rest of the system, immediately, using either caps (for externally threaded connection points), bolt-on blanks, or taped-on discs/covers (durable plastic or sheet-metal no less than 1/16-inch thick).

CAUTION

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).

3.2 Contractor-furnished parts. The Contractor shall furnish all snap rings, bearings, thrust buttons, seals, o-rings, gaskets, seal washers, keys, shims, lockwashers, bushings, dowel pins, thrust washers, cotter pins, rope clamp, foundation bolts and nuts, as applicable, in accordance with CG TP-3631, and CG Drawings 175-WLM 549-001 and 175-WLM 573-001.

3.3 Inspection and service. The Contractor shall perform the tasks designated in Table 1, in accordance with SFLC Std Spec 5000, SFLC Std Spec 3042, and using Coast Guard Drawings 175 WLM 549-001, 175 WLM 573-001, and TP-3631 (SWBS 573-581) as guidance.

NOTE

PFW was recently renewed.

TABLE 1 – RECURRING MAINTENANCE REQUIREMENTS

				ADDITIONAL REQUIREMENTS	
#	**TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM SFLC STD SPEC 5000**	**OTHER**
1	Operate and Inspect	4	Crossdeck Winch Assembly	3.2.1 (Operate and Inspect)	Submit A CIR.
2	Disassemble and Inspect	4	Crossdeck Winch Assembly	3.2.3 (Disassemble and Inspect)	Winch Main Drum Shaft Assembly, Clutch Assembly, And Warping Head Assembly Submit A CIR.
3	Renew	4	Winch Brake Assembly	D2.3 (Brakes And Clutches)	GFP
4	Renew	4	Winch Gear Box Assembly		GFP Flush and replenish gear oil.
5	Renew	4	Winch Hydraulic Motor Assembly		GFE Motor and seal kit.
6	Renew	4	Wire Rope Assembly	D2.2 (Wire Rope	GFP

				ADDITIONAL REQUIREMENTS	
#	**TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM SFLC STD SPEC 5000**	**OTHER**
				Assemblies)	
7	Renew	4	Hydraulic Cartridge Valve	C2.4 (Valves and manifolds)	GFP Counter balance valve GFP Needle valve GFP Shuttle valve
8	Renew	4	Winch Hydraulic Motor Assembly		GFE Motor and seal kit.
9	NDE	4	Cross Deck Winch Foundations	3.2.5 (NDE)	Areas to NDE: all weld joints connecting winch foundations to the deck. Submit CFR.
10	Renew	4	Foundation Fasteners	D2.1 (Fastener assemblies	All foundation bolts shall be 3/4 - 10NC Grade 8. The use of lower grade bolts is not authorized Tighten all loose bolts with a torque wrench to 376 foot-pounds.
11	Preserve	4	Winch Assembly and associated foundation	3.2.4 (Preservation)	Surfaces to be preserved include, but are not limited to: inside and outside surfaces of foundations, and all winch exterior surfaces that are accessible with no disassembly. Select the following top coat colors: Spar (10371) for equipment surfaces. Black (17038) for foundation surfaces.
12	Renew	4	Electrical Connector		GFP
13	Groom and Lubricate	4	Crossdeck Winch Assembly	3.2.6 (Groom and lubricate)	
14	Weight Test	4	Crossdeck Winch Assembly	B2.3 (Winches)	Test weight particulars: Static Load Test Weight: 9,000 (450-0) Rated Load Test Weight: 6,000 (0-300) Pounds. Submit CFR.
15	Fabricate and Install	4	Label Plate	B2.9 (Label plates)	

3.4 Additional tasks. The Contractor shall perform the task(s) marked with an "X" in Table 2. Combine or group CFRs, as required, to minimize administrative burden and maximize efficiency.

TABLE 2 – ADDITIONAL TASKS

			ADDITIONAL REQUIREMENTS	
DESIGNATED EQUIPMENT	**TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM SFLC STD SPEC 5000**	**OTHER**
_____PFW _____SFW _____PAW _____SAW	Renew	Directional Control Valve Assembly	C2.4 (Valves and manifolds)	GFP
___X___PFW ___X___SFW ___X___PAW ___X___SAW	Renew	Hose Assembly - Externally Installed (Set Of 6 Per Winch)	C2.2 (Hose assemblies)	
_____PFW _____SFW _____PAW _____SAW	Disassemble and Inspect	Winch Planetary Gearbox	D2.4 (Open gearing and gear reducers)	Submit a CFR.
_____PFW _____SFW _____PAW _____SAW	Disassemble and Inspect	Winch Main Drum Shaft Assembly, Clutch Assembly, And Warping Head Assembly	3.2.3 (Disassemble and Inspect)	See CG TP-3631, SWBS 573-581. Submit CFR
___X___PFW ___X___SFW ___X___PAW ___X___SAW	Disassemble and Inspect	Hand Pump Assembly	3.2.3 (Disassemble and Inspect)	See CG TP-3631, SWBS 573-581. Submit CFR
_____PFW _____SFW _____PAW _____SAW	Renew	Hand Pump Assembly	N/A	See CG TP-3631, SWBS 573-581

4. NOTES

This section is not applicable to this work item.

WORK ITEM 20: Hydraulic Inhaul Winch, Inspect And Service

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and service the hydraulic inhaul (buoy chain) winch.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	Roller bearing Unit	NSN: 3130-01-504-4363	2 ea.	4,012.00
N	Grease seal	NSN: 5330-01-462-5544	4 ea.	79.25
N	Level wind pivot bushing	NSN: 3120-01-621-2293	1 ea.	1,139.00
N	Level wind thrust bearing	NSN: 3120-01-621-2300	2 ea.	483.30
N	Rexroth DCV	NSN: 4810-01-507-0037	1 ea.	208.29
N	Rexroth Sandwich Flow Control	NSN: 4810-01-505-9289	1 ea.	250.00
N	Sun Sandwich Relief Valves	NSN: 4820-01-439-2451	2 ea.	900.00
N	Rexroth Tandem Center Proportional Directional Valve	NSN: 4810-01-506-3841	1 ea.	300.00
Y	Level Wind Hydraulic Cylinder	NSN: 3040-01-441-3721	1 ea.	7,423.00
N	3:1 Pilot Ratio, Vented Counterbalance Valve Assembly	NSN: 4820-01-563-5841	1 ea	98.70
N	Fully Adjustable Needle Valve	NSN: 4820-01-416-0579	1 ea	48.75
N	Wire Rope Assembly	NSN: 4010-01-646-6972	1 ea.	500.00
Y	**Hydraulic Motor	NSN: 4320-01-445-2248	1 ea	23,998
N	**Pump, Hydraulic Ram, Hand Driven	NSN: 4320-01-286-4065	1 ea.	419.77
N	**Cylinder Pin	NSN: 5315-01-515-9847	1 ea	500.00
N	**Cylinder Pin	NSN: 5315-01-515-9912	1 ea	520.00

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

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 549-001, Rev F, Onboard Lubrication Requirements

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

Coast Guard Drawing FL 7101-573, Rev L, Buoy Chain Winch Assy Model CW1

COAST GUARD PUBLICATIONS

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

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2014, Inspect, Repair, And Test Auxiliary Machine Systems

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures

OTHER REFERENCES

ASTM International (ASTM) D5363, 2008, Standard Specification for Anaerobic Single Component Adhesives (AN)

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

MIL-PRF-24176 , Oct 2004, Cement, Epoxy, Metal Repair And Hull Smoothing (Metric)

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

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following task(s) in Table 1:

- Task#1

3.1.2 Tech Rep. The Contractor shall provide the services of Tech Rep, who is familiar with the buoy chain winch Model CW1/MOD1 equipment/system, to accomplish the following tasks – on site:

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

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

3.1.2.3 Submit a copy of the Tech Rep’s résumé and a list of references to the COR at the Arrival

Conference.

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

3.1.3.1 Protective measures, hydraulic system(s). 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).

3.1.5 General hydraulic system requirements. The Contractor shall perform all work in accordance with paragraph 3.1 of SFLC Std Spec 5000, as applicable.

3.1.6 Contractor-furnished parts. The Contractor shall furnish all snap rings, bearings, thrust buttons, seals, o-rings, gaskets, seal washers, keys, shims, lockwashers, bushings, dowel pins, thrust washers, cotter pins, rope clamp, foundation bolts and nuts, as applicable, in accordance with Coast Guard Drawings 175-WLM 549-001 and 175-WLM 573-001.

3.2 Recurring maintenance requirements. The Contractor shall perform the tasks in Table 1 below.

TABLE 1 – RECURRING MAINTENANCE REQUIREMENTS

				ADDITION REQUIREMENTS	
#	**TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM SFLC STD SPEC 5000**	**OTHER**
1	Operate and Inspect	1	Buoy Chain In-haul Winch and Level Wind Arm Assembly	3.2.1 (Operate and Inspect)	Inspection particulars: 1. Inspect hydraulic hoses, ensuring that hose tags match hose log installation dates. 2. Visually inspect level wind arm, and hydraulic cylinder. 3. Inspect roller chock bearings, to ensure

				ADDITION REQUIREMENTS	
#	**TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM SFLC STD SPEC 5000**	**OTHER**
					compliance with Coast Guard Drawing FL 7101-573. 4. Inspect foundation mounting bolts. 5. Visually inspect pillow block bearings, seals, and mounting bolts; check for proper bearing alignment. 6. Inspect wire rope, hook termination, and lubrication. 7. Inspect pinion and drum drive gears. Check for proper lubrication. 8. Check gear train backlash, to ensure whether backlash is between .020 and .030 inch. 10. Check hydraulic motor for proper alignment, Check all hardware and pinion seals for leakage 11. Inspect hydraulic controls for corrosion and freedom of operation/adjustment (including emergency brake components). 12. Check chain winch speed; document whether satisfactory or not. 13. Check level wind speed; document whether satisfactory or not. 14. Verify level wind arm relief valve settings. 15. Inspect chain winch remote's handle and rubber boot. 16. Check and operate chain winch and level wind arm controls from remove (crane booth or

				ADDITION REQUIREMENTS	
#	**TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM SFLC STD SPEC 5000**	**OTHER**
					shack). 17. Inspect the winch ratchet pawl for proper operation of the pawl and lock pin. Submit a CIR.
2	Service and Inspect	1	Ratchet Pawl Assembly	3.2.2 (Service and inspect)	Submit a CFR.
3	Service and Inspect	1	Bull and Pinion Gears	D2.4 (Open Gearing And Gear Reducers)	Submit a CFR.
4	Inspect and Preserve	1	Winch Drum and Shaft Assembly (External Surfaces)	3.2.4 (Preserve)	1. Visual inspection of inspection of the load bearing ends of the shaft for cracks. Submit a CFR. 2. Abrasive-blast drum shaft to “Near-White”, in accordance with SSPC-SP 10. 3. Coat blasted surfaces with one coat 3.0-4.0 mils DFT Inorganic Zinc (See SFLC Std Spec 6310, Appendix C).
5	Preserve		Winch Drum (Internal Surfaces)	N/A	1. Fill interior winch drum with 10 gallons of rust preventive compound conforming to MIL-PRF-16173, Class II, Grade 3, and rotate drum for 5 minutes to coat all interior surfaces and then drain. 2. Drain, collect, and dispose of drained compound in accordance with all applicable Federal, state, and local regulations. Ensure that the coated surfaces are left exposed to the atmosphere for 24 hours to allow for adequate drying. 3. Renew each plug with a new stainless steel, Type 316, or Monel drain plug. Coat new

				ADDITION REQUIREMENTS	
#	**TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM SFLC STD SPEC 5000**	**OTHER**
					plugs prior to installation with a sealing and locking compound conforming to ASTM D5363-AN0123 or a flexible joint compound conforming to MIL-S-45180, Type II.
6	Service and Inspect	1	Roller Chock Shaft Assembly	3.2.2 (Service and inspect)	GFP. Submit a CFR.
7	Service and Inspect	1	Level Wind Arm Pivot Pin Assembly	3.2.2 (Service and inspect)	GFP. Submit a CFR.
8	Renew and Preserve	1	Level Wind Arm Hydraulic Cylinder	3.2.4 (Preserve)	GFP.
9	Renew		Wire rope assembly	D2.2 (Wire Rope Assemblies)	GFP.
10	Renew	1	Level Wind Cylinder Control Block	C2.4 (Valves And Manifolds)	GFP
11	Service and Inspect	1	Chain Winch Control Block	C2.4 (Valves And Manifolds)	GFP Submit a CFR.
12	Renew	1	Level Wind Hydraulic Cylinder.		GFP
13	Renew	18	Buoy Chain In-haul Winch Foundation Bolts	D2.1(Fastener Assemblies)	Type: 1"-8UNC-2A x 4-1/2" LG, SS 316 Torque value: See Table 6-1 in TP-3498.
14	NDE	1	Buoy Chain In-haul Winch and Level Wind Arm Assembly Foundations	3.2.5 (NDE)	Weld joints to NDE: all joints attaching winch foundations to deck. Submit a CFR.
15	Preserve	1	Buoy Chain In-haul Winch Assembly and Level Wind Arm Assembly	3.2.4 (Preservation)	Surfaces to be preserved include, but are not limited to: winch drum shaft assembly, ratchet pawl assembly, level wind arm hydraulic cylinder, and all previously coated surfaces.
16	Renew	1	Counterbalance Valve Assembly, and Fully Adjustable Needle Valve	C2.4 (Valves And Manifolds)	GFP, Adjust Counterbalance manifold setting Appendix F of Tech Pub 3498.
17	Renew	1	Hydraulic motor		GFP
18	Align	1	Buoy Chain In-haul Winch Assembly		Perform alignment per Appendix E of Tech Pub 3498, Chain Winch Realignment

				ADDITION REQUIREMENTS	
#	**TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM SFLC STD SPEC 5000**	**OTHER**
					Instructions. Submit a CFR
19	Renew	1	Hand Pump		GFP
20	Groom and Lubricate	1	Buoy Chain In-haul Winch and Level Wind Arm Assembly	3.2.6 (Groom and Lubricate)	Perform all adjustments in Chapter 6-2 of TP-3498.
21	Weight Test	1	Buoy Chain In-haul Winch and Level Wind Arm Assembly	N/A	Perform all weight testing In accordance TP-3498, Chapter 6, paragraph 8-6.4, Inspection and test procedures for the Buoy Chain Winch Model CW-1 onboard 175WLM, 225 WLB, and 240 WLBB class cutters. See Table 2 below. Submit a CFR.
22	Fabricate and Install	1	Label plate	B2.9 (Label Plates)	

NOTE

Coast Guard personnel will operate all machinery during testing.

TABLE 2 – TEST WEIGHTS

	MAIN HOIST TEST WEIGHTS
Static	24,750 (+5% - 0%) lbs
Rated	16,500 (+5% - 0%) lbs
Emergency Brake Release	5,000 (+0% - 5%) lbs

3.3 Additional maintenance requirements. The Contractor shall perform tasks in Table 3 below marked with an "X". Submit a CFR to document all inspections and recommended additional repairs. Combine or group CFR, as required, to minimize administrative burden and maximize efficiency.

NOTE

Tasks not initially marked with an "X" must be exercised via authorized and released Change Requests (CR), when determined to be necessary by inspection results.

TABLE 3 – ADDITIONAL MAINTENANCE REQUIREMENTS

	ADDITIONAL REQUIREMENTS

#	TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)	DESIGNATED TASK	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
	Preserve	1	Winch Drum (Internal Surfaces)	N/A	1. Drill and tap two one- inch drain and fill holes, in locations designated by the CG Inspector. 2. Preserve internal surfaces, as specified in Task # 5 of Table I. 3. Plug each hole with a new stainless steel, Type 316, or Monel plug. 4. Coat new plugs prior to installation with a sealing and locking compound conforming to ASTM D5363-AN0123 or a flexible joint compound conforming to MIL-S-45180, Type II.
X	Renew	All	All Internal and Externally Installed Hose Assemblies	C2.2 (Hose Assemblies)	
	Disassemble and Inspect	1	Ratchet Pawl Assembly	3.2.3 (Disassemble and Inspect)	Submit a CIR.
	Disassemble and Inspect	1	Bull and Pinion Gears	D2.4 (Open Gearing And Gear Reducers)	Submit a CIR.
	Disassemble and Inspect	1	Roller Chock Shaft Assembly	3.2.3 (Disassemble and Inspect)	Submit a CIR. GFP.
	Disassemble and Inspect	1	Level Wind Arm Pivot Pin Assembly	3.2.3 (Disassemble and Inspect)	Submit a CIR. GFP.
	Disassemble and Inspect	1	Level Wind Cylinder Control Block	C2.4 (Valves And Manifolds)	Submit a CIR.
	Disassemble and Inspect	1	Chain Winch Control Block	C2.4 (Valves And Manifolds)	Submit a CIR.
	Disassemble and Inspect	1	Brake Control Block	C2.4 (Valves And Manifolds)	Submit a CIR.

	Disassemble and Inspect	1	Hydraulic motor	3.2.3 (Disassemble and Inspect)	Perform alignment per Appendix E of Tech Pub 3498, Chain Winch Realignment Instructions. Submit a CIR.
	Renew	1	Hand Pump and Isolation Valves	C2.4 (Valves And Manifolds)	GFP.
	Renew	1	Hydraulic motor	3.2.4 (Preservation)	GFP. Return the original hydraulic motor to the CG PA as a MTI. Perform alignment per Appendix E of Tech Pub 3498, Chain Winch Realignment Instructions.
	Renew and Preserve	1	Level Wind Arm Hydraulic Cylinder	3.2.4 (Preservation)	GFP.
	Disassemble and inspect	1	Winch Drum Shaft Assembly	3.2.3 (Disassemble and inspect)	Submit a CIR. GFP.
	Disassemble and Inspect	1	Roller Chock Shaft Assembly	3.2.3 (Disassemble and inspect)	Submit a CIR. GFP.
	Disassemble and Inspect	1	Level Wind Arm Pivot Pin Assembly	3.2.3 (Disassemble and inspect)	Submit a CIR. GFP.
	Renew	1	Hand Pump and Isolation Valves	C2.4 (Valves And Manifolds)	GFP.
	Renew	1	Level Wind Arm Hydraulic Cylinder	3.2.4 (Preserve)	GFP.
	Renew	1	Wire rope assembly	D2.2 (Wire Rope Assemblies)	Nominal diameter: 1-1/8 inch Nominal strength: XIPS Total length of rope required: 150 ft. End fitting type: Fiege OR poured spelter.
	Renew	18	Buoy Chain In-haul Winch Foundation Bolts	D2.1(Fastener Assemblies)	Type: 1"-8UNC-2A x 4-1/2" LG, SS 316 Torque value: See Table 6-1 in TP-3498.

	Renew	1	Counterbalance Valve Assembly, and Fully Adjustable Needle Valve	C2.4 (Valves And Manifolds)	GFP, Adjust Counterbalance manifold setting Appendix F of Tech Pub 3498.

4. NOTES

This section is not applicable to this work item.

57310_MchChnStpprInspctSrvc_PWB_0715_IBCT
REC_57310_MchChnStppr_IBCT_175 WLM (ALL) (0215)

WORK ITEM 21: Mechanical Chain Stoppers, Inspect and Service

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and service the port and starboard mechanical chain stoppers.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	Hardware Kit	NSN: 5430-01-494-2479	2 ea.	618.54
N	Hardware Kit, Mechanical	NSN: 2030-01-485-7215	2 ea.	784.35

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing FL 2605-034, Rev C, Mechanical Chain Stopper Repair Kit: 1-7/8", 1-5/8" & 1-1/4"

Coast Guard Drawing FL 2605-031, Rev D, Mechanical Chain Stopper, 1-7/8" Buoy Chain

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2014, Inspect, Repair, And Test Auxiliary Machine Systems

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

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

- Task# 1.
- Task# 2.

3.1.2 Tech Rep.

Not applicable.

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

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

3.2 Repair particulars. The Contractor shall use Coast Guard Drawing FL2605-31 for reference, and perform all tasks in TABLE 1.

TABLE 1 – REPAIR TASKS

				ADDITIONAL REQUIREMENTS	
#	**TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM SFLC STD SPEC 5000**	**OTHER**
1	Operate and Inspect	2	Mechanical Chain Stopper Assembly	3.2.1 (Operate and Inspect)	Submit A CIR
2	Disassemble and Inspect	2	Mechanical Chain Stopper Assembly	3.2.3 (Disassembly and inspect)	Submit A CIR. Reassemble chain stoppers with repair listed GFP
3	NDE	2	Mechanical Chain Stopper Assembly	3.2.5 (NDE)	NDE task is limited to Chain stopper welds.
4	Preserve	2	Mechanical Chain Stopper Assembly and foundation	3.2.4 (Preservation)	Select the following top coating colors: Black (17038) for the chain stopper surfaces. Gray (16099) for the foundation surfaces.
5	Groom and	2	Mechanical Chain	3.2.6 (Groom and	

				ADDITIONAL REQUIREMENTS	
#	**TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM SFLC STD SPEC 5000**	**OTHER**
	Lubricate		Stopper Assembly	lubricate)	
6	Weight Test	2	Mechanical Chain Stopper Assemblies	B2.1(Mechanical Chain Stoppers)	Test load: 25,000 lbs. Operational Load:
7	Fabricate and Install	2	Label plate	B2.9 (Label plates)	

4. NOTES

This section is not applicable to this work item.

WORK ITEM 22: Single Point Davit, Disassemble and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to disassemble, inspect and service the Single Point Davit (SPD).

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	Swing Brake Seal Kit	NSN: 2030-01-351-2820	2 ea.	138.80
N	Swing Brake Disc & Bearing Kit	NSN: 2030-01-349-9486	2 ea.	937.70
N	Wire Rope Assembly, Single Leg	NSN: 4010-01-602-8365	1 ea.	234.00
Y	Winch Assembly	NSN: 2030-01-505-1581	1 ea.	17,454.50
N	Reciprocating Pump	NSN: 4320-00-684-7192	1 ea.	436.50
N	Console Assy	PN: 40238	1 ea.	23,779.18

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

2. REFERENCES

COAST GUARD DRAWINGS

None

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3632, March 2014, Chapter 583, Section C, Technical Manual for Slewing Arm Davit Model D6000CT

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2014, Inspect, Repair, And Test Auxiliary Machine Systems

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

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

- Task #1.
- Task #3.

3.1.2 Tech Rep. The Contractor shall provide the services of Tech Rep, who is familiar with the Single Point Davit (Slewing Arm Davit Model D6000CT) equipment/system, to accomplish the following tasks – on site:

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

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

3.1.2.3 Submit a copy of the Tech Rep's résumé and a list of references to the COR at the Arrival Conference.

3.1.3 Protective measures, general. 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 below-listed:

- RHI Boat associated with SPD

3.2 Tasks to be accomplished. The Contractor shall perform the tasks designated in Table 1 below, in accordance with SFLC Std Spec 5000 and CG TP 3632.

TABLE 1- RECURRING TASKS

#	TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
1	Operate and Inspect	1	SPD System	3.2.1 (Operate and Inspect) Appendix A	Submit a CIR
2	Service and Inspect	1	Winch Assembly	3.2.2 (Service and Inspect)	Submit a CFR.
3	Disassemble and Inspect	2	Swing Drive Brake	D2.3 (Brakes and clutches)	Reassemble with components provided in GFP kits. Submit a CIR.
4	Renew	All	System Hydraulic Fluids	C2.1 (Fluids)	Refer to CG TP 3632. Submit a CFR.
5	Renew	1	Emergency lowering reciprocating pump		GFP.
6	Renew	1	Control Assembly	N/A	Install GFP control Assembly Refer to CG TP 3632.
7	Renew	1	Wire Rope Assembly	D2.2 (Wire Rope Assemblies)	GFP.
8	Preserve	1	SPD Exterior Surfaces (All normally painted surfaces), including foundation surfaces	3.2.4 (Preservation)	
9	Groom and Lubricate	1	SPD System	3.2.6 (Groom and Lubricate)	Perform all maintenance specified in Chapter 4 of CG TP-3632.
10	Final Operational And Weight Test	1	SPD System	B2.7 (Davits)	Test weight particulars: Static Load: f 6,000 (+300 -0) pounds Dynamic load: 5,000 (+250 -0) pounds Rated load: 4,000 (+0 -200) pounds Submit a CFR.
11	Fabricate and Install	1	Label plate	B2.9 (Label Plates)	

3.3 Additional maintenance requirements. The Contractor shall perform the tasks below marked with an "X". Submit CFR(s) to document all inspections, to recommend additional repairs, and to document completed maintenance and repair tasks. Combine or group CFRs, as required, to minimize administrative burden and maximize efficiency.

TABLE 2 – ADDITIONAL TASKS

ADDITIONAL TASK	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
X	Renew and Weatherize	All	Hose Assemblies	C2.2 (Hose Assemblies) C2.2.1.2.2 (Weatherization).	
	Disassemble and Inspect	1	Winch Assembly	3.2.3 (Disassemble and inspect)	Submit CFR.
X	Renew	1	Winch Assembly		GFP

4. NOTES

This section is not applicable to this work item.

WORK ITEM 23: Buoy Crane, Inspect and Service

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and service the Appleton SB230-42 Buoy Crane.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	Wire Rope, Crane Aux Fall	NSN: 3950-01-617-1692	1 ea	629.00
N	Wire Rope, Crane Main Fall	NSN: 3950-01-617-1700	1 ea	1,425.00
N	Luff Cylinder Seal kit	NSN: 5330-01-433-6307	1 ea	380.00
N	Holding Valve	NSN: 4810-01-353-0586	2 ea	84.88
N	Shuttle Valve	NSN: 4820-01-317-2748	2 ea	18.97
N	Needle Valve	NSN: 4820-01-329-0051	1 ea	36.17
Y	Luff Cylinder Control Valve	NSN: 4820-01-602-7668	1 ea	5,259.00
N	Bushing, Heel	NSN: 5365-01-F12-2920	4 ea	81.00
N	Snap ring	NSN: 5325-00-005-5768	4 ea	274.99
N	Hydraulic swivel seal kit	NSN: 4730-01-566-2864	1 ea	1,125.00
N	**Pin, Heel	NSN: 5315-01-500-6931	2 ea	1006.60
N	**Hand pump w/ Stainless Steel Option, P18	NSN: 4320-01-517-1444	1 ea	473.00
N	**Plate, Backing, Brake (Item 231)	NSN: 3040-00-119-9848	1 ea	1,575.00
N	**Plate, Brake (Item 232)	NSN: 3040-01-068-7647	1 ea.	377.00
N	**Driver Plate (Item 233)	NSN: 3040-01-F14-3994	1 ea.	197.00
N	**Plate, Backing, Brake (Item 234)	NSN: 3040-00-119-9848	1 ea	1,575.00
N	**Packing Assortment, Preformed	NSN: 5330-01-191-2622	1 ea.	10.94
N	**GH30 seal kit	NSN: 2590-01-398-5741	1 ea.	165.23
N	**Disc-Friction, Brake	NSN: 3040-01-051-3606	1 ea.	24.42
N	**Spring, Helical, Comp	NSN: 5360-01-268-0044	12 ea	13.13
N	**PD12C Seal kit	NSN: 2590-01-398-5741	1 ea	60.73
N	**Disc, Steel	NSN: 2530-01-066-9585	1 ea	
Y	**Master brake rebuild kit	NSN: 5330-01-F16-4572 PN: 98-015-3001 (Eskridge Inc)	3 ea	1,758.00
Y	**Hydraulic Control Valve Assembly (winch)	NSN: 4810-01-566-2663	1 ea.	9,222.00

N	**Hydraulic Control Valve Assembly (Swing/Luff)	NSN: 4820-01-602-7668	1 ea.	5.259.00
Y	**Aux Hoist Hook (Overhaul Ball)	NSN: 4030-01-572-3945	1 ea	629.31
N	Block, Tackle	NSN: 3940-01-566-2929	1 ea	1,425.45
N	**Relief Valve Cartridge	NSN: 4820-01-481-7116 PN: RPIC-LAN (Sun Hydraulics Inc)	1 ea	425.00
N	**Control Stand Selector Valve Assembly	NSN: 4730-01-507-3516	1 ea	1,145.21
N	**Bushing, Luff Cylinder	NSN: 3120-01-363-7629	4 ea	105.91
N	**Pin, Luff Cylinder	NSN: 5315-01-F12-2922 PN: MMD-2232	2 ea	1,576.00

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

2. REFERENCES

COAST GUARD DRAWINGS

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

Coast Guard Drawing 175 WLM 549-001, Rev F, Onboard Lubrication Requirements

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3630, SWBS 573, Section A (573A), Jun 2015, Manufacturer's Instruction Book-SWBS Group 573, Buoy Crane

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2014, Inspect, Repair, And Test Auxiliary Machine Systems

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor shall Submit a CIR. for the inspections listed in the following tasks, in Table 1:

- Task #1.
- Task #2.
- Task #4.
- Task #7.
- Task #8.
- Task #10.

- Task #17.
- Task # 22

3.1.2 Tech Rep. The Contractor shall provide the services of certified Appleton Tech Rep, who is familiar with the Appleton crane model SB230-42 equipment/system, to accomplish the following tasks – on site:

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

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

3.1.2.3 Submit a copy of the Tech Rep's résumé and a list of references to the COR at the Arrival Conference.

3.1.3 Protective measures, general. 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).

3.2 Tasks. The Contractor shall perform the tasks designated in Table 1 below, in accordance with SFLC Std Spec 5000, CG TP-3630, Section 573-A, and Coast Guard Drawings 175 WLM 573-001 and 175-WLM 549-1. Install all Government-furnished equipment, as applicable, during equipment/component reassembly.

TABLE 1 - RECURRING TASKS

#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
1	Operate and Inspect	1	Buoy Crane Assembly	3.2.1 (Operate and Inspect) Appendix A (General Inspection Requirements)	In addition to components listed in Appendix A of SFLC Std Spec 5000, additional components for inspection include, but are not limited to: Wire rope and fittings; block fittings, hooks, links, shackles and associated pins, swivels, hydraulic controls and fittings, winches and slewing gear brake, bearings, motors, Anti-Two-Block Limit Switches, and gear boxes. Submit a CIR..
2	Disassemble, Inspect, and Preserve	1	Boom, and Turret, Assembly	3.2.3 (Disassemble and Inspect) 3.2.4 (Preserve)	Unship the boom to inspect, pins and bushings. Submit a CIR..
3	Service and Inspect	2	Boom Hinge Pin Assemblies	3.2.3 (Service and Inspect)	Submit a CFR. Install GFP bushings, and pins.
4	Disassemble and Inspect	1	Luffing Cylinder	3.2.3 (Disassemble and Inspect)	Inspect luffing cylinder rod. Renew wiper and cylinder seals. Submit a CIR..
5	Service and Inspect	1	Main Winch Assembly	D2.1 (Fastener assemblies) D2.4 (Open gearing and gear reducers) C2.8.1 Flushing	Remove winches for inspection of hydraulic motors, brakes, drums, gears and controls. Submit a CFR. Renew foundation bolts. Flush and renew each winch oil.

#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
6	Service and Inspect	1	AuxWinch Assembly	D2.1 (Fastener assemblies) D2.4 (Open gearing and gear reducers) C2.8.1 Flushing	Remove winches for inspection of hydraulic motors, brakes, drums, gears and controls. Submit a CFR. Renew foundation bolts. Flush and renew each winch oil.
7	Disassemble and Inspect	1	Aux Winch Brake, Assembly	D2.3 (Brake and clutch)	Submit a CIR..
8	Disassemble and Inspect	1	Brake, Main Winch Assembly	D2.3 (Brake and clutch)	Submit a CIR..
9	Service and Inspect	3	Slew Drive Assemblies	D2.1 (Fastener assemblies) D2.4 (Open gearing and gear reducers) C2.8.1 Flushing	Remove units for inspection of hydraulic motors, brakes, pinion gears, planetary gear reducers and controls. Submit a CFR. Renew foundation bolts. Flush each unit, and replenish it oil contents. Submit a CFR.
10	Disassemble and Inspect	3	Slew Drive Brake Assemblies	D2.3 (Brakes and clutches)	Submit a CIR..
11	Service and Inspect	2	Main Hoist Sheave Assemblies	3.2.2 (Service and Inspect)	Submit a CFR.
12	Service and Inspect	2	Aux Hoist Sheave Assemblies	3.2.2 (Service and Inspect)	Submit a CFR.
13	Renew	1	Crane Main Block		GFP. .
14	Renew	1	Aux Hoist Hook, (Overhaul Ball)		GFP
15	Renew	1	Main Hoist Wire Rope Assembly	D2.2(Wire Rope assemblies)	GFP See paragraph 5.1 (Retention of wire rope manufacturer's Test Certification and Serial Number)
16	Renew	1	Aux Hoist Wire Rope Assembly	D2.2(Wire Rope assemblies)	GFP See paragraph 5.1 (Retention of wire rope manufacturer's Test Certification and Serial Number)
17	Disassemble and Inspect	1	Hydraulic Swivel	3.2.3 (Disassemble and Inspect)	Submit a CIR.. Renew all seals, O-rings, and gaskets.

#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
18	Preserve	All	Crane Exterior Surfaces (Examples: Booms, Cylinder Bodies, Turret, Hydraulic Motor Case, Pedestal/Foundation, Winch Body, Control Stand, etc… that are accessible with no disassembly)	3.2.4 (Preservation)	
19	Set and tag in place	All	System Pressure Control Valves (E.G. Relief Valves, Etc.)	C2.4 (Valves and manifolds)	Perform in conjunction with "Groom, Lubricate, and Op Test and Weight Test Buoy Crane Assembly" below.
20	Renew	All	Pressure, Return and Hydraulic Oil Reservoir Filter Elements and Breather		See 3630, SWBS 573A.
21	Service and Inspect	1	Hydraulic Power Unit Assembly		Service and inspect all HPU equipment. Submit CFR.
22	Disassemble and Inspect	1	Heat Exchanger	C2.7 (Heat Exchangers/fluid coolers	Submit a CIR.. Heat exchanger PN:7A8-08692 Renew Zinc. In addition of renewal components that listed per C2.7.3.
23	Renew	All	Hydraulic Fluid	C2.1 (Fluids)	See CG TP-3630, SWBS 573A
24	Groom and Lubricate	1	Buoy Crane Assembly	3.2.6 (Groom and lubricate)	

#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
25	Operate and Weight Test and Emergency Brake Release test No load test Rated load test,100% WLL Emergency release function Overload test, 125% WLL Static Test, 150% WLL	2	Buoy Crane Assembly		After completion of all other work, the Contractor shall perform the operational and weight testing specified in CG TP-3630, SWBS 573A, Chapter 6. Do not raise pump compensator for any load test. Bypass procedure B under overload test. Submit a CFR.
26	Fabricate and Install	1	Label plate	B2.9 (Label plates)	
27	Weatherize	All	Hose fittings	C2.2.1.2.2 (Weatherization).	

3.3 Additional maintenance requirements. The Contractor shall perform the tasks in Table 2, when marked with an "X". Submit a CFR(s) to document all inspections, to recommend additional repairs, and to document completed maintenance and repair tasks. Combine or group CFRs, as required, to minimize administrative burden and maximize efficiency.

TABLE 2 - ADDITIONAL TASKS

ADDITIONAL TASK	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
X	Renew	All	System Hose Assemblies Installed Inside The Skin Of The Ship	C2.2 (Hose assemblies)	See TP 3630.
X	Renew	All	System Hose Assemblies Installed Outside The Skin Of The Ship	C2.2 (Hose assemblies)	See TP 3630.
	Service and Inspect	All	Hydraulic Gages And Associated Tubing.	C2.3 (Piping and tubing.) C2.5 (Gages)	Submit a CFR
	Service and Inspect	All	Control Stand DCV	C2.4 (Valves and Manifolds)	Submit a CFR.
	Renew	All	DCV blocks	C2.4 (Valves and Manifolds)	GFP

ADDITIONAL TASK	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
	Service and Inspect	1	Turret Bearing, Bull Gear, And Pinion Gear Assembly.	D2.4 (Open gearing and gear reducers)	Submit a CFR.
	Service and Inspect	1	Control Stand Assembly	C2.2 (Hose Assemblies) C2.3 (Piping and tubing.) C2.4 (Valves and Manifolds)	Submit a CFR
	Service and Inspect	1	Outer Boom Hydraulic Cylinder Assembly	3.2.3 (Service and Inspect)	Submit a CIR.
	Renew	3	Slew Drive Brake Assembly	D2.3 (Brakes and clutches)	
	Renew	1	Hoist Hook		GFP
	Service and Inspect	1	Hydraulic Manifold Assembly and Associated Valves for Luff, Swing, and CT	3.2.3 (Service and Inspect)	Note: Mounted on the Starboard side of the buoy crane turret. Submit a CFR.
	Service and Inspect	1	Hydraulic Valve Assembly for Main and Aux Winches	C2.4 (Valves And Manifolds)	Note: Mounted on the Starboard side of the buoy crane turret. Submit a CFR.
	Service and Inspect	1	Emergency Release Manifold and Valves	C2.4 (Valves And Manifolds)	Submit a CFR.
	Service and Inspect	1	Hand Pump	3.2.3 (Service and Inspect)	Submit a CFR.
	Service and Inspect	3	Swing Drive Hydraulic Manifold Assemblies	C2.4 (Valves And Manifolds)	Submit a CFR.
	Service and Inspect	3	Swing Drive Hydraulic Motors	N/A.	Submit a CFR.
	Service and Inspect	1	Hydraulic Swivel	C2.4 (Valves And Manifolds)	GFP.
	Service and Inspect	1	Turntable bearing	3.2.3 (Service and Inspect)	Submit a CFR.
	Service and Inspect	1	Swivel Head Assembly	3.2.3 (Service and Inspect)	Submit a CFR.
	Service and Inspect	1	Aux Winch Load Cell	3.2.3 (Service and Inspect)	Submit a CFR.
	Service and Inspect	1	Main Winch Load Cell	3.2.3 (Service and Inspect)	Submit a CFR.
	Service and Inspect	1	Slack Line Roller Assembly	3.2.3 (Service and Inspect)	Submit a CFR.

ADDITIONAL TASK	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
X	Service and Inspect	1	Swing Angle Sensor, Boom Angle Sensor, and Rotary Limit Switch	3.2.3 (Service and Inspect)	Submit a CFR.
X	Service and Inspect	2	Anti-Two-Block Limit Switches	3.2.3 (Service and Inspect)	Submit a CFR.
	Renew	1	Aux-Winch Assembly	D2.1 (Fastener assemblies) D2.4 (Open gearing and gear reducers)	Submit a CFR.

4. NOTES

4.1 Retention of wire rope manufacturer's test certification and serial number. Ship's crew will retain both Main and Aux wire rope manufacturer's test certification and serial numbers. These certifications MUST be produced during the BHS visits, in order to allow crane to be operated.

WORK ITEM 24: Grey Water Holding and Collection Tanks, Clean and Inspect

1. SCOPE

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

TABLE 1 – TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Grey Water Collection Tank	3-83-1-W	2,822	142
Grey Water Collection Tank	3-83-2-W	2,822	142

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

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

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

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

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

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

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

OTHER REFERENCES

ASTM International (ASTM) D1330, 2010, 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):

- 3.6 (Ultrasonic thickness (UT) measurement).

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).
- Zincs.

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.

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 Coast Guard drawings 175 WLM 593-001,175 WLM 593-009, 175 WLM 506-001, 175 WLM 528-001, 175 WLM 633-001, and Tech Pub 3611 Manufacturers Instruction Book, SWBS Group 202, Section A for guidance.

3.4.1 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.
- 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 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 Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes, Appendix C. Use Coast Guard Drawings 175 WLM-506-001, 175 WLM-528-001, 175 WLM 593-001, 175 WLM 593-009, and 175 WLM 633-001 as guidance. Submit a CIR.

3.7 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

3.8 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.

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

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

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

3.9.2 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.

3.9.3 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 25: Sewage Holding and Vacuum Collection Tanks, Clean and Inspect

1. SCOPE

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

TABLE 1 – TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Sewage Holding Tank	2-84-2-W	847	43
Vacuum Collection Tank	2-82-2-W	330	17

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

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

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

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

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

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

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

OTHER REFERENCES

ASTM International (ASTM) D1330, 2010, 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):

- 3.5 (Ultrasonic thickness (UT) measurement).

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) provided in Table 1 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).
- Zincs.

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
The lead and lag are currently non-operational.

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 Coast Guard drawings 175 WLM 593-001,175 WLM 593-009, 175 WLM 506-001, 175 WLM 528-001, 175 WLM 633-001, and Tech Pub 3611 Manufacturers Instruction Book, SWBS Group 202, Section A for guidance:

3.4.1 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 taken, percentage, location, and type of coating failure.
- 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 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 Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes, Appendix C. Use Coast Guard Drawings 175 WLM-506-001, 175 WLM-528-001, 175 WLM 593-001, 175 WLM 593-009, and 175 WLM 633-001 as guidance. Submit a CIR.

3.6 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.

3.6.1 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 accomplish the following in the presence of the Coast Guard Inspector, and submit a CFR:

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

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

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

4. NOTES

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

ENVIROVAC Inc.

1260 Turret Dr.

Rockford IL. 6115-1486

(815) 654-8300

4.2 Eductor seal information.

REF. NO.	PART NUMBER	DESCRIPTION	QTY PER ASSEMBLY	TOTAL QUANTITY
2	5500020-005	O-ring	1	2
3	5500033-002	Gasket, Ring, 125 x 100 x 2mm	1	2

4	5500033-001	Gasket, Ring, 135 x 90 x 2mm	2	4
5	5600032	Nozzle, 45mm	1	2

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

WORK ITEM 26: 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 175 WLM 593-001, Rev G, Sewage & Waste Water System Diagram

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

OTHER REFERENCES

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

DOD-STD-2187, Aug 1987, Chemical Cleaning of Salt Water Piping Systems

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 Protect non affected vessel's equipment, components, and spaces during surface and coating application procedures as specified in SFLC Std Spec 0000 paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.3.2 Abide by all applicable environmental protection task, as specified in SFLC Std Spec 0000 Appendix A, (Requirements for Environmental Protection).

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

- Grey water pumps.
- Grey water piping and associated equipment
- Grey water tanks

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.

3.3 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.

3.4 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. The Contractor shall accomplish the following:

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 conforms to DOD-STD-2187 (where applicable), is environmentally safe, and pre-approved by the COR. 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.

The Contractor shall submit a MSDS to the COR for all chemicals proposed for use.

3.4.1 Procedure requirements. 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 3.4.3 (Personnel qualification) herein).

- Locations in the grey water 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.

3.4.2 Plan submittal. Submit the written plan to the COR for approval at least 48 hours prior to commencing cleaning operations.

CAUTION

The Contractor shall be aware multiple turns and elbows are present in this piping system, which may hinder cleaning operations. The Contractor shall install additional access points as necessary. Include anticipated access points in plan submittal (see paragraph 3.4.2).

3.4.3 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.

3.4.4 Cleaning operations. Upon approval of the plan, the Contractor shall clean of all horizontal and vertical runs at no more than 25-foot intervals.

3.5 Clean and flush. The Contractor shall clean and flush approximately 900 linear feet of grey water system piping, shown on Coast Guard Drawing 175-WLM 593-001.

3.5.1 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.

3.5.2 Cleaning. The Contractor shall continue cleaning until all of the following conditions are met:

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

3.5.3 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.

3.6 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.

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

3.8 Leak test. After all system components are reinstalled, the Contractor shall test all disturbed piping for leaks, as follows:

- 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.
- Submit CFR.

3.9 Inspection. The Contractor shall 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. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 27: 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 175 WLM 593-001, Rev G, Sewage & Waste Water System Diagram

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

OTHER REFERENCES

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

DOD-STD-2187, Aug 1987, Chemical Cleaning of Salt Water Piping Systems

3. REQUIREMENTS

3.1 General. The Contractor shall clean and flush approximately 500 linear feet of sewage system piping, shown on Coast Guard Drawing 175 WLM 593-001.

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.

3.1.3.1 Protect non affected vessel's equipment, components, and spaces during surface and coating application procedures as specified in SFLC Std Spec 0000 paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor shall handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the 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 (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 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 conforms to DOD-STD-2187 (where applicable), is environmentally safe, and pre-approved by the COR. 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.

3.5.3 Cleaning operations. Upon approval of the plan, the Contractor shall proceed with the cleaning of all horizontal and vertical runs of the piping system at no more than 25-foot intervals, as follows:

3.6.1 Pumps and valves. 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.

3.6.2 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.

3.6.4 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 28: Tanks (Grey Water Holding), Preserve "100%"

1. SCOPE

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

TABLE 1 – TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Grey Water Collection Tank	3-83-1-W	2,822	142
Grey Water Collection Tank	3-83-2-W	2,822	142

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

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

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

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

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

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

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2014, Temporary Hull Accesses

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

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

- Piping
- Pump(s)
- Zincs.

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

NOTE

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

3.2 Surface preservation. The Contractor shall accomplish the following tasks for the tanks listed in paragraph 1.1 (Intent) and Table 1, and refer to Coast Guard drawings 175 WLM 593-001,175 WLM 593-009, 175 WLM 506-001, 175 WLM 528-001, 175 WLM 633-001, and Tech Pub 3611 Manufacturers Instruction Book, SWBS Group 202, Section A for guidance in accomplishing this work item.

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

3.2.2 Prepare and coat all (100%) tank interior surfaces (including internal surfaces of manhole cover(s), manhole cover hull ring(s) extending outward to the weld line that ties the hull ring into

the tank plating on the tank exterior), using the system specified for "Tanks and Voids (Grey Water, Sewage, and CHT Tanks), Option I", in SFLC Std Spec 6310, Appendix B (Cutters and Boat Interior Paint Systems). Select finish/top coat color to match existing.

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

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

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

4. NOTES

This section is not applicable to this work item.

WORK ITEM 29: Tanks (Grey Water Holding), Preserve "Partial"

1. SCOPE

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

TABLE 1 – TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	UP TO % OF TANK COATING REPAIR	LOW SUCTION (GALLONS)
Grey Water Collection Tank	3-83-1-W	2,822	33%	142
Grey Water Collection Tank	3-83-2-W	2,822	33%	142

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

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

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

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

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

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

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2014, Temporary Hull Accesses

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. 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:

- Piping.
- Pump(s).
- Zincs.

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

NOTE

This item is written to be used as an “Option” item, in conjunction with the clean and inspect “Definite” item. Requirements for tank opening and closing, content disposal, and inspection are covered in the clean and inspect work item.

3.2 Surface preservation. The Contractor shall, referring to Coast Guard drawings 175 WLM 593-001,175 WLM 593-009, 175 WLM 506-001, 175 WLM 528-001, 175 WLM 633-001, and Tech Pub 3611 Manufacturers Instruction Book, SWBS Group 202, Section A for guidance, prepare and coat up to 33 % of the interior surfaces of each of the designated tanks listed in Table 1, using the system specified for "Tanks and Voids (Grey Water, Sewage, and CHT Tanks), Option I", in

SFLC Std Spec 6310, Appendix B (Cutters and Boat Interior Paint Systems). Power tool clean all affected surfaces to “bare metal”, in lieu of using abrasive blasting; and feather edges of existing intact coating to the prepared areas, in order to provide a smooth transition with the new paint. Select finish/top coat color to match existing adjacent surfaces.

3.3 In-process quality control measures. The Contractor shall abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for “critical-coated surfaces). Surfaces being preserved are considered “critical-coated surfaces”.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 30: Tanks (Sewage Holding and Vacuum Collection), Preserve "100%"

1. SCOPE

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

TABLE 1 – TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Sewage Holding Tank	2-84-2-W	847	43
Vacuum Collection Tank	2-82-2-W	330	17

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

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

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

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

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

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

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2014, Temporary Hull Accesses

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General. The Contractor shall refer to Coast Guard drawings 175 WLM 593-001,175 WLM 593-009, 175 WLM 506-001, 175 WLM 528-001, 175 WLM 633-001, and Tech Pub 3611 Manufacturers Instruction Book, SWBS Group 202, Section A for guidance.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

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

3.1.3.1 The Contractor shall plug all inlet and outlet piping in the tank(s) listed in Table 1 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 COR 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 below-listed:

- Piping.
- Pumps.
- TLI.
- Sewage ejector assembly.

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

NOTE

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

3.2 Inspection. After surface preparation and before coating application, 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.
- Tank level indicator (TLI) and/or float switch condition.
- Sounding tube and striker plate condition.
- Suction and discharge piping.

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

3.3.1 Remove and retain the tank manhole cover(s). Remove the sewage ejector and bulkhead packing gland assembly.

3.3.2 Prepare and coat all tank interior surfaces (including the interior and exterior bulkhead surfaces under the packing gland assembly and the internal surfaces of manhole cover(s), the manhole cover hull ring(s) extending outward to the weld line that ties the hull ring into the tank plating on the tank exterior), using the system specified for "Tanks and Voids (Grey Water, Sewage, and CHT Tanks), Option I", in SFLC Std Spec 6310, Appendix B (Cutters and Boat Interior Paint Systems). Select finish/top coat color to match existing.

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

3.4 In-process quality control measures. The Contractor shall abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for “critical-coated surfaces). Surfaces being preserved are considered “critical-coated surfaces”.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 31: Tanks (Sewage Holding and Vacuum Collection), Preserve "Partial"

1. SCOPE

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

TABLE 1 – TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)	UP TO% OF TANK COATING REPAIR
Sewage Holding Tank	2-84-2-W	847	43	33%
Vacuum Collection Tank	2-82-2-W	330	17	33%

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

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

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

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

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

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

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2014, Temporary Hull Accesses

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General. The Contractor shall refer to Coast Guard drawings 175 WLM 593-001,175 WLM 593-009, 175 WLM 506-001, 175 WLM 528-001, 175 WLM 633-001, and Tech Pub 3611 Manufacturers Instruction Book, SWBS Group 202, Section A for guidance.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

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

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

- Piping.
- Pump(s).
- Zincs.

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

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

3.2 Surface preservation. The Contractor shall prepare and coat the designated tank interior surfaces listed in Table 1, using the system specified for "Tanks and Voids (Grey Water, Sewage, and CHT Tanks), Option I", in SFLC Std Spec 6310, Appendix B (Cutters and Boat Interior Paint Systems). Power tool clean all affected surfaces to “bare metal”, in lieu of using abrasive blasting; and feather edges of existing intact coating to the prepared areas, in order to provide a smooth transition with the new paint. Select finish/top coat color to match existing adjacent surfaces.

3.3 In-process quality control measures. The Contractor shall abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for “critical-coated surfaces). Surfaces being preserved are considered “critical-coated surfaces”.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 32: Tanks (Potable Water), Preserve "Partial"

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to prepare and coat a portion of the surfaces of the following tank(s) as designated:

TABLE 1 - TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	% OF TANK COATING REPAIR	LOW SUCTION (GALLONS)
Potable Water	1-94-0-W	2,167	33	68
Potable Water	2-36-1-W	5,172	33	163

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

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

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

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2014, Temporary Hull Accesses

OTHER REFERENCES

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

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

3. REQUIREMENTS

3.1 General. The Contractor shall refer to Coast Guard drawings 175 WLM 601-003 and 175 WLM 533-006 for guidance.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

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

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

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

3.1.6 In-process quality control measures. The Contractor shall abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for “critical-coated surfaces”). Surfaces being preserved are considered “critical-coated surfaces”.

3.2 Tank content removal. The Contractor shall remove and dispose of all tank contents 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).

3.3 Surface preservation. The Contractor shall remove and retain the tank manhole cover(s). Prepare and coat the designated tank interior surfaces, using the system specified for "Tanks and

Voids (Potable Water Tanks)" in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). Power tool clean all affected surfaces to “bare metal”, in lieu of using abrasive blasting; and feather edges of existing intact coating to the prepared areas, in order to provide a smooth transition with the new paint. Select finish/top coat color to match existing adjacent surfaces.

3.3.1 The Contractor shall ensure heated air is used if necessary to maintain the proper temperature during application and cure. Ventilation shall be a continuous airflow with a minimum of one complete air change every four (4) hours.

3.3.2 The Contractor shall ensure tanks are cured in accordance with the manufacturer’s instructions for NSF/NEHC certification under the same conditions before being filled.

NOTE

Typical curing times are at least 7 days, and range up to 14 days or longer, depending on the paint selected, amount of surface area covered, and environmental conditions. See paint manufacturer’s recommendations for specific application.

CAUTION

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

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

3.3.3 The Contractor shall ensure freshly painted potable water tanks are rinsed at least twice with freshwater before being disinfected and put into service.

3.4 Inspection. After surface preparation and before coating application, 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
- Tank level indicator (TLI) and/or float switch condition
- Sounding tube and striker plate condition
- Suction and discharge piping.

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

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

3.6 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 disinfecting the tank(s), remove and dispose of all treated water in accordance with all Federal, state and local regulations. Ensure no one enters the tanks once disinfection is completed.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 33: Temporary Services, Provide - Cutter

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to provide temporary services to the Cutter, during the performance of this availability.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

None

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 8635 (SFLC Std Spec 8635), 2014, Temporary Services

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area

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

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

3.2 Temporary service particulars. The Contractor shall provide the below listed temporary services, in accordance with SFLC Std Spec 8635.

TABLE 1 - SERVICE SELECTION

*SUB-PARAGRAPH	TITLE	Y/N
3.3.1	Office space	N
3.3.2	Telephone	N
3.3.3	Parking	Y
3.3.4	Duty section berthing: 1 male, 1 female. Duty section berthing shall be provided during the disruption of berthing areas and work interfering with habitability	Y
3.3.5	Electrical power (including all requirements in associated sub-paragraphs)	Y
3.3.6	Hull grounding straps (not applicable when cutter is waterborne)	N
3.3.7	Compressed air (including all requirements in associated sub-paragraphs)	Y
3.3.8	Hazardous material/hazardous waste disposal (see Tables 2 and 3 below)	Y
3.3.9	Heavy lift equipment: 8 hours	Y
3.3.10	Water supply	
3.3.10.1	Potable water: 500 gallons per day, at 50 psig.	N
3.3.10.2	Hot-circulating water	N
3.3.10.3	Cooling water	Y
3.3.10.4	Firemain system (including all requirements in associated sub-paragraphs)	Y
3.3.11	Steam (including all requirements in associated sub-paragraphs)	N
3.3.12	Refuse disposal	N
3.3.13	Sewage and grey water disposal (including all requirements in associated sub-paragraphs)	Y
3.3.14	Storage – General (including all requirements in associated sub-paragraphs):	
3.3.14.1	Dry stores.	N
3.3.14.2	Paint and flammable stores.	N
3.3.14.3	Refrigerated stores.	N
3.3.15	Small boat storage (including all requirements in associated sub-paragraphs)	N

***Each sub-paragraph number relates directly to the identical sub-paragraph number in SFLC Std Spec 8635.**

TABLE 2 - HAZARDOUS WASTE DISPOSAL – LIQUIDS (GALLONS)

PAINT THINNERS	ENGINE COOLANT	BILGE WATER
00	00	00

TABLE 3 - HAZARDOUS WASTE DISPOSAL – SOLIDS

OILY FILTERS	OILY RAGS (LBS)	EMPTY 1-GAL CONTAINER*	EMPTY 5-GAL CONTAINER*	EMPTY 55-GAL CONTAINER*
00	00	00	00	00

***Previously housed hazardous materials.**

3.3 Temporary service particulars. The Contractor shall provide the below listed temporary services, in accordance with SFLC Std Spec 0000.

TABLE 4 - SERVICE SELECTION

*SUB-PARAGRAPH	TITLE	Y/N
3.2.11	Temporary Sanitary and Sewage Facilities	Y
3.3.3.1	Temporary Ventilation	Y

***Each sub-paragraph number relates directly to the identical sub-paragraph number in SFLC Std Spec 0000.**

3.4 Extended temporary services. If the performance period of the contract is extended by the KO, the contractor shall continue to provide all temporary services as specified herein for the extension period.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 34: Buoy Crane Main Winch, CT Function, Remove

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to modify Government Furnished Main Constant Tension (CT) Winch to remove the constant tension motor and related components from the main winch. Then the Contractor shall replace the existing main winch with the modified Government Furnished main none constant tension winch and remove hoses, relief valve, check valve, slack line roller assembly, and related electrical, hydraulic, and mechanical constant tension components from the buoy crane and control cab. This Engineer Change (EC) will replace GH30CT-44076-07SP winch, with GH30-44076-07SP winch, which is a modified GH30 winch without the constant tension motor.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
Y	Main CT Winch	NSN: 3950-01-419-1845	1 ea.	26,000.00
N	Joystick Controller, Winch	NSN: 3950-01-603-1550	1 ea	500.00

***Government-loaned property, which shall be returned to the vessel upon completion of the availability.**
****New or refurbished equipment that the Government may provide for installation in place of existing equipment.**
*****Government-furnished property, which is to be supplied by either the vessel or the C4IT Service Center.**

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM 437-7, Rev L, Buoy Dk Control Sys Block, ISO & Elem Wrg Diag

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3630, SWBS 573, Section A (573A), Jun 2015, Manufacturer's Instruction Book-SWBS Group 573, Buoy Crane

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2014, Inspect, Repair, And Test Auxiliary Machine Systems

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures

OTHER REFERENCES

Surface Forces Logistics Center Time Compliant Technical Order (TCTO) TP2030.1, Buoy Crane Main Winch, CT Function, Remove

3. REQUIREMENTS

3.1 General.

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

- Tasks #1.

3.1.2 Tech Rep. The Contractor shall provide the services of qualified Tech Rep, who is familiar with the Appleton crane SB230-42 equipment/system, to accomplish the following tasks – on site:

Provide manufacturer's proprietary information, software, and tools pertinent to the equipment/system.

Assist with proper repair methods, and ensure compliance with manufacturer's procedures and standards during disassembly, inspection, repair, modification, calibration, and reassembly of the equipment/system.

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

3.1.2.3 Submit a copy of the Tech Rep's résumé and a list of references to the COR at the Arrival Conference.

3.1.3 Protective measures, general. 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).

3.2 Contractor furnished parts. The Contractor shall furnish the following parts to modify the Government Furnished main CT winch to main none CT winch.

TABLE 1 – CONTRACTOR FURNISHED PARTS

PART DESCRIPTION	PART NUMBER, MCMASTER	NSN	QUANTITY
Cover Plate, 4"x 8", 3/8" thick, 316 SS	8896K172		1 ea
Gasket	27663	5330-01-411-0133	1 ea
1/4" NPT Plug	4452K542		1 ea
Socket Head Cap Screw 300 series SS 3/8"-16, 5/8" long, MS 16995-78	92200A674		4 ea
Washer, Lock	91475A031	5310-01-529-3362	4 ea
Sealing Compound	Loctite 270, 50ML	8030-99-224-9318	1 bt
Sealing Compound	226654	8030-00-599-7753	1tu
Mobilegear 600 XP 150	MOGEAR600/15	3020-01-564-0963	1 ea

3.2 Recurring maintenance. The Contractor shall perform the tasks specified in Table 2 for the buoy crane, in accordance with SFLC Std Spec 0000, SFLC Std Spec 5000, SFLC Std Spec 6310, Coast Guard Drawing 175-WLM -437-7, and CG TP3630.

TABLE 2 – RECURRING TASKS

				ADDITIONAL REQUIREMENTS	
#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
1	Operate and Inspect	1	Buoy Crane Assembly	3.2.1 (Operate and Inspect) Appendix A (General Inspection Requirements)	In addition to components listed in Appendix A of SFLC Std Spec 5000, additional components for inspection include, but are not limited to: Wire rope and fittings; block fittings, hooks, links, shackles and associated pins, swivels, hydraulic controls and fittings, winches and slewing gear brake, bearings, motors, and gear

				ADDITIONAL REQUIREMENTS	
#	**TASK TYPE**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM SFLC STD SPEC 5000**	**OTHER**
					boxes. Submit (CIR).
2	Disconnect and Remove	1	Main CT winch		Unship the CT winch and package for shipment. See instruction under Paragraph 3.2.1.
3	Modify the GFP CT Winch	1	GFP CT Winch		Use GFP Main CT winch and Contractor furnished parts to remove motor and related CT components, to complete modification of the main CT winch to GH30 main winch without the constant tension motor. See Table 1 for all necessary parts for modification. See instruction under Paragraph 3.3.
4	Install Non-CT Main Winch	1	Main Winch		The winch being modified will be installed in the existing location of the buoy crane. It will connect to the existing power supply and piping. Renew all foundation

				ADDITIONAL REQUIREMENTS	
#	**TASK TYPE**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM SFLC STD SPEC 5000**	**OTHER**
					fasteners. See instruction under Paragraph 3.3.
5	Replace Joystick	1	Control Cab		The GFP joystick controller will be installed in the location of the removed joystick controller.
6	Partially Preserve	1	Buoy Crane	3.2.4.2	Disturbed area
7	Groom and Lubricate	1	Buoy Crane Assembly	3.2.6 (Groom and Lubricate)	
8	Operate and Emergency Brake Release test	1	Buoy Crane Assembly	B2.4 (Booms and Cranes)	After completion of all other work, the Contractor shall perform the operational and weight testing and inspect. See Table 5 for test weights. Submit CFR.
9	Fabricate and Install	1	Label plate	B2.9 (Label plates)	
10	Weatherize	All	Hose fittings	C2.2.1.2.2 (Weatherization)	Wrap each hose fitting with a petroleum wax saturated tape coatings such as “Densil (Densyl) Tape“ or equivalent, conforming to ANSI/AWWA C217, after installation (Petroleum wax tape vendors). Follow manufacturer’s instructions, to ensure proper installation of the tape.

3.2.1 Instruction procedures. The following are detailed removal and installation instructions:

3.2.1.1 Complete Red Danger Tags IAW SFLC Std Spec 0000.

3.2.1.2 Remove wire rope from main winch.

3.2.1.3 Remove constant tension motor hydraulic oil supply hose.

3.2.1.4 Remove constant tension motor hydraulic oil return hose.

3.2.1.5 Remove check valve from control valve.

3.2.1.6 Remove constant tension brake release line # 109 from the constant tension brake port (Refer to TP 3630, page 537).

3.2.1.7 Remove main winch from crane.

3.2.1.8 Drain oil from the final drive housing by removing plug # 83 (refer to TP 3630, page 533). Apply sealing compound, P/N: LOCTITE 270 50ML, to plug 83. There is no torque value required, do not over tighten. Install the plug after all oil has been drained.

3.2.1.9 Remove elbow # 113 from the constant tension brake release port (refer to TP3630, page 537).

3.2.1.10 Remove the entire constant tension motor sub-assembly (refer to TP3630, page 519).

3.2.1.11 Disconnect electrical wiring from main winch joystick controller, P/N: JRM 101-2014.

3.2.1.12 Remove wires 3-1, 3-2, 3-3, and 3-4 (refer to TP-3630, page 169 & 319, and Coast Guard Dwg 175-WLM-437-007).

3.2.1.13 Remove main winch joystick controller.

3.2.1.14 Remove constant tension placard from control panel.

3.2.1.15 Disconnect 24 volt DC power supply to solenoids on pilot operated directional control valve.

3.2.1.16 Remove 24 volt DC power supply wires.

3.2.1.17 Remove proximity switch from slack line roller assembly (refer to TP 3630, page 250).

3.2.1.18 Remove wires 5-9 and 5-10, (Refer to TP 3630, page 330).

3.2.1.19 Remove slack line roller assembly.

3.2.1.20 Apply sealing compound, P/N: LOCTITE 270 50ML, to a ¼ inch NPT plug, P/N: 4452K542. There is no torque value required, do not over tighten.

3.2.1.21 Install ¼ inch NPT plug, P/N: 4452K542, into the constant tension brake release port.

3.2.1.22 Clean the gasket surface.

3.2.1.23 Apply sealing compound, P/N: 226654, to both gasket surfaces prior to installation.

3.2.1.24 Install gasket, P/N: 27663.

3.2.1.25 Install cover for constant tension housing opening using plate P/N: 8896K172.

3.2.1.26 Install cover using four 3/8-16 NC X 5/8 inch capscrews, P/N: 92200A674, and lock washers, P/N: 91475A031.

3.2.1.27 Torque the capscrews, P/N: 92200A674, to 35 ft-lbs.

3.2.1.28 Install SAE 20 plug, P/N: 9-6408-20, in the supply port marked "CTP" of the three valve control manifold. There is no torque value required, do not over tighten.

3.2.1.29 Install SAE 20 plug, P/N: 9-6408-20, plug in the return port "CTR" of the three valve control manifold.

NOTE
QA required at this point.

3.2.1.30 Always pre-fill the primary housing with hydraulic oil before placing into service.

3.2.1.31 Fill final drive housing to the level plug near the six o'clock position on the final drive end cover with gear oil, P/N: MOGEAR600/15 or equivalent.

NOTE
QA required at this point.

3.2.1.32 Install main winch on crane. Torque foundation bolts to lubricated torque of 987 ft-lbs.

3.2.1.33 Install new main winch joystick controller, P/N: JRM 101-3001.

3.2.1.34 Connect wiring as per Coast Guard Dwg 175-WLM-437-007.

3.2.1.35 Remove all Red Danger Tags IAW SFLC Std Spec 0000.

3.2.1.36 Check winch oil levels, refer to TP 3630.

3.2.1.37 Install main winch wire rope.

NOTE
QA required at this point.

3.2.1.38 Operate the entire system, refer to SFLC Std Spec 5000.

3.2.1.39 Inspect the entire system, refer to SFLC Std Spec 5000.

3.2.1.40 Complete buoy handling system weight tests, refer to TP 3630.

3.3 Additional maintenance requirements. The Contractor shall perform the tasks below marked with an "X". Submit CFR(s) to document all inspections, recommend additional repairs, and to document completed maintenance and repair tasks. Combine or group CFRs as required minimizing administrative burden and maximize efficiency.

TABLE 3 – ADDITIONAL TASKS

ADDITIONAL TASK		TASK TYPE	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
____	1	Service and Inspect	1	Hydraulic Cylinder Assembly	3.2.2 (Service and Inspect)	Submit CFR
____	2	Renew	3	Slew Drive Brake Assembly	D2.3 (Brakes and clutches)	Submit CFR
____	3	Renew	1	Hoist Hook		GFP
____	4	Disassemble and Inspect	1	Hydraulic Manifold Assembly and Associated Valves for Luff, Swing	3.2.3 (Disassemble and Inspect)	Submit CIR
____	5	Service and Inspect	1	Hydraulic Valve Assembly for Main and Aux Winches	C2.4 (Valves And Manifolds)	Submit CFR.

3.5 Special requirements for various components. If a Change Request has been authorized for additional work on any of the components listed in Table 4 below, the Contractor shall refer to the corresponding Appendix or paragraph of SFLC Std Spec 5000.

TABLE 4 – COMPONENTS

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

TABLE 5 – TEST WEIGHTS

	TEST WEIGHTS – AUX HOIST
Static Test	13,500 (+675 -0) pounds
Dynamic Test	11,250 (+625 -0) pounds
Rated Test	9,000 (+0 -450) pounds
	TEST WEIGHTS – MAIN HOIST
Static Test	30,000 (+1500 -0) pounds
Dynamic Test	25,000 (+1250 -0) pounds
Rated Test	20,000 (+0 -1000) pounds
Emergency Brake Release	500 pounds

test	

NOTE

Coast Guard Personnel will operate equipment.

4. NOTES

This item is not applicable to this work item.

WORK ITEM 35: Potable Water Pneumatic 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 potable water pneumatic tank(s):

TABLE 1 – TANKS

SERVICE	LOCATION	CAPACITY (GALLONS)	PRESSURE (PSIG)
Hydro-Pneumatic	3-42-1-E	100	40-65

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 533-001, Rev G, Potable Water System Diagram

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes

OTHER REFERENCES

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

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 below-listed:

- Piping.

3.2 Preparation. The Contractor shall depressurize and drain the designated tank(s) (see paragraph 1.1 (Intent)) before performing any work on them. Dispose of all fluids in accordance with all applicable Federal, state, and local environmental regulations. Do not drain any fluids (including fresh water) into any space, bilge or exterior location.

3.3 Tanks. The Contractor shall, using Coast Guard Drawing 175 WLM 533-001 for guidance, accomplish the following for all designated tank(s) (see paragraph 1.1 (Intent)):

3.3.1 Visual inspection. Clean and visually inspect the internal and external surfaces of each tank for signs of corrosion, pitting, and other damage. If required by the pneumatic tank's construction, the Contractor shall provide and use a borescope during the visual inspection. Submit a CFR.

3.3.2 Surface preservation. If a Change Request has been authorized and released, the Contractor shall prepare and coat each tank's interior surfaces using the system specified for "Tanks and Voids (Potable Water Tanks)" in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). If preservation is for less than 100 percent of tank interior surfaces, power tool clean all affected surfaces to "bare metal" in lieu of using abrasive blasting, and feather edges of existing intact coating to the prepared areas in order to provide a smooth transition with the new paint.

3.3.3 Hydrostatic test. After any authorized repairs, The Contractor shall hydrostatically test the designated tank(s) in accordance with Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes, 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. The potable water system

(other than pressure tank) and compressed air system shall be excluded from hydrostatic pressure test.

3.3.4 Reinstallation. After all authorized repairs, The Contractor shall reinstall the tank(s) to the original configuration with new rubber gaskets conforming to ASTM D1330. Renew all fasteners with stainless steel.

3.4 Written certification. The Contractor shall, after completion of testing (and after any authorized repairs), submit written documentation listing each tank tested, the date of test, and testing facility to the COR.

3.5 Data Plates. The Contractor shall affix to each tank an anodized aluminum test data plate using epoxy resin cement. Engrave the data plate with ¼-inch high letters stating the following:

- Tank name/number (as applicable).
- Hydrostatic test pressure.
- Date of inspection and test.
- Testing facility.

3.6 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), 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.

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 potable water tank(s) and associated piping to be in satisfactory operating condition. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 36: Gripes, Binders and Jacks (Loose Rigging Gear), Inspect and Test

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and pull test loose rigging gear.

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), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2014, Inspect, Repair, And Test Auxiliary Machine Systems

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, 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 testing requirements. The Contractor shall perform the work described in the

				ADDITION REQUIREMENTS	
#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	APPENDIX & PARA. FROM SFLC STD SPEC 5000	OTHER
1	SERVICE,INSPECT, AND WEIGHT TEST	2	PELICAN HOOKS W/1" CHAIN AND 1" HAMMERLOCK	3.2.2 (SERVICE AND INSPECT) 3.2.7 (PULL TEST)	TEST WEIGHT: 34,000 LBS
2	SERVICE,INSPECT, AND WEIGHT TEST	26	1/2" GRIPE CHAINS	3.2.2 (SERVICE AND INSPECT) 3.2.7 (PULL TEST)	TEST WEIGHT: 24,000 LBS
3	SERVICE,INSPECT, AND WEIGHT TEST	1	1" OBLONG RING	3.2.2 (SERVICE AND INSPECT) 3.2.7 (PULL TEST)	TEST WEIGHT: 9,000 LBS
4	SERVICE,INSPECT, AND WEIGHT TEST	3	MODEER SHACKLES	3.2.2 (SERVICE AND INSPECT) 3.2.7 (PULL TEST)	TEST WEIGHT: 60,000 LBS
5	SERVICE,INSPECT, AND WEIGHT TEST	1	3/4" CHAIN SLING WITH MASTER LINKS	3.2.2 (SERVICE AND INSPECT) 3.2.7 (PULL TEST)	TEST WEIGHT: 45,200 LBS
6	SERVICE,INSPECT, AND WEIGHT TEST	1	3/4" X 6' CHAIN SLING WITH MASTER LINKS	3.2.2 (SERVICE AND INSPECT) 3.2.7 (PULL TEST)	TEST WEIGHT: 70,600 LBS
7	SERVICE,INSPECT, AND WEIGHT TEST	6	6" SNATCH BLOCKS	3.2.2 (SERVICE AND INSPECT) 3.2.7 (PULL TEST)	TEST WEIGHT: 24,000 LBS
8	FABRICATE AND INSTALL	93	LABEL PLATES	B2.9 (LABEL PLATES)	AFFIX A METAL LABEL PLATE ON EACH ITEM LISTED ABOVE, ENGRAVE OR STAMPED EACH LABEL PLATE WITH THE

				ADDITION REQUIREMENTS	
#	**TASK TYPE**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX & PARA. FROM SFLC STD SPEC 5000**	**OTHER**
					FOLLOWING INFORMATION SPECIFIC TO EACH COMPONENT TESTED: WORKING LOAD, TEST LOAD, TEST DATE, TEST FACILITY.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 37: Compressed Air System Refrigerated Air Dryer, Replacement

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to remove the existing compressed air refrigerated dryer and install a new compressed air refrigerated dryer. Work to be performed includes the modification of a foundation, electrical connection, compressed air inlet and outlet piping connections, and a condensate drain.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY (PER CUTTER)	ESTIMATED COST ($/UNIT)
N	Refrigerated Air Filter-Dryer	Ingersoll-Rand model D72IN	1	$1000.00

***Government-loaned property, which shall be returned to the vessel upon completion of the availability.**
****New or refurbished equipment that the Government may provide for installation in place of existing equipment.**
*****Government-furnished property, which is to be supplied by either the vessel or the C4IT Service Center.**

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 551-001, Rev J, Compressed Air System Diagram

Coast Guard Drawing 175 WLM 551-005, Rev E, Compressed Air System A/D Hull Block 940, 950

Coast Guard Drawing 175 WLM 201-001, Rev C, Machinery Spaces Arrangement

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

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 3041 (SFLC Std Spec 3041), 2014, Shipboard Electrical Cable Test

Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2014, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures

OTHER REFERENCES

MIL-STD-1622, Nov 2006, Cleaning of Shipboard Compressed Air Systems

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.3 (SSPC-SP 3), 2004, Power Tool Cleaning

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.11 (SSPC-SP 11), 2004, Power Tool Cleaning to Bare Metal

3. REQUIREMENTS

3.1 General.

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

None.

3.1.2 Technical Representative.

Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install suitable covering to seal off and protect all non-affected surfaces and equipment 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 Control Air Compressor and associated equipment. Handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 General information.

3.2.1 The work will be performed in the Engine Room (1-61-0-E).

3.2.2 In the presence of the Coast Guard Inspector, inspect and test all equipment and systems that will be disturbed during the performance of this work to document their original condition. Submit a Condition Found Report for all such equipment and systems noting any existing (pre-work) discrepancies in their operation.

3.2.3 Attached figures at end of this specification, illustrate the prototype installation in photographs.

3.3 Rip-Out.

3.3.1 Mechanical Ripout. After ensuring all pressurized air has been bled to zero psi, disconnect the inlet and outlet connections from each air dryer. Remove and discard air dryer's supply and discharge air piping and components that were previously marked and confirmed by the Coast Guard Inspector during above inspection in paragraph 3.3.1 (Pre-removal on-board inspection).

3.3.1.1 Arrangement Drawings. The following sheets of USCG Dwg 175-WLM 551-5 show the piping details for air dryer piping:

- Hull 551 and 552 - sheet 33 and 33A
- Hull 553 and 554 - sheet 33B and 33C
- Hull 555 and on - sheet 33E and 33F

3.3.1.2 Install plugs or caps or any open piping or valves after removals to prevent any foreign materials from entering the system or contamination of surrounding area.

3.3.1.3 Temporarily disconnect pipe hangers/supports located along the path of piping removals to facilitate installation of GFE air dryer. Inspect conditions of existing hanger and submit CFR. Renewal of deteriorated hangers/supports will be a change order.

3.3.1.4 Disconnect the condensate drain line. Retain condensate line for continued use with new unit.

3.3.1.5 Control Air Dryer removal. The Contractor shall remove and discard the Ingersoll Rand Refrigerated Air Dryer located in Engine Room (1-61-0-E) from its foundation. Removal of the unit may be accomplished in pieces by separately removing the motor and compressor from the common base plate. The air dryer unit has liquid refrigerant. The refrigerant shall be recovered and discarded in accordance with federal regulations.

NOTE

The existing Refrigerated Control Air Dryer contains Refrigerant. The Control Air Dryer is a self contained unit, but will require proper system evacuation prior to disposal. The Contractor shall evacuate and dispose of the Control Air Dryer in accordance with all state, Federal and local laws and regulations.

3.3.1.5.1 Personnel qualifications. The Contractor shall ensure that all personnel servicing Air Conditioning and Refrigeration (AC&R) equipment that uses CFC or HCFC refrigerant hold a current Environmental Protection Agency (EPA) Technician Certification, Type IV (Universal Certification) and meet all state and local regulations and licensing requirements.

3.3.2 Electrical Ripout. Disconnect the electrical wiring from each air dryer and coil back for later reconnection. Accomplish electrical work in accordance with SFLC Std Spec 3042, and test cables in accordance with SFLC Std Spec 3041.

3.3.2.1 Tape the wires at the exposed end of the cable.

3.3.3 Structural Foundation Modification.

3.3.3.1 The existing foundation shall be used to facilitate mountings of Government-furnished air dryer.

3.3.3.2 Visually inspect each foundation structural surfaces including welds and prepare foundation in accordance with SSPC-SP 11 prior to modifications. Submit a CFR.

3.3.3.3 Prepare and coat existing and modified foundation surfaces, to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs).

3.3.3.4 Template alignment and locate dimensions of the mounting holes to the GFE air dryer, and drill mounting holes on each foundation.

3.4 Control Air Dryer installation. The Contractor shall replace the existing Ingersoll-Rand model DXR35 Air Dryer with the designated Government-furnished Ingersoll-Rand D72IN refrigerated air dryer. The Contractor shall install the new GFE Air Dryer in the same location as the removed existing Dryer. The Contractor shall supply all replacement components, fittings, materials and shall accomplish all piping modifications to complete this installation.

3.4.1 Equipment and system items to be installed include but not be limited to the following:

3.4.1.1 One (1) Ingersoll-Rand D72IN refrigerated air dryer.

3.4.1.2 The following data is available from Ingersoll-Rand D72IN that will assist with the installation. If contractor has difficulty obtaining notify USCG Inspector for assistance.

- Ingersoll-Rand, D72IN Refrigerator Air Dryer, Operators Manual
- Ingersoll-Rand, D72IN, Engineering Data
- Ingersoll-Rand, D72IN, Installation Drawing – 719.0002.01.00

3.4.2 Mechanical Installation.

3.4.2.1 Furnish all materials and labor to fabricate any securing device(s) required to install the refrigerated air dryer. The unit shall be bolted to the existing platform foundation. A neoprene sheet/pad shall be installed between the unit and the platform for isolation. All threaded fasteners shall be stainless steel 316L.

3.4.2.2 Install new piping and fittings consistent with previous installed materials. Piping may not connect to the new GFE air dryer the same way as previously piped, i.e. piping connected at top of existing units may now connect at back of new units. Contractor shall field route as necessary to connect new air dryers. The following sheets of USCG Dwg 175-WLM 551-5 depict the piping details for air dryer piping:

- Hull 551 and 552 - sheet 33 and 33A
- Hull 553 and 554 - sheet 33B and 33C
- Hull 555 and on - sheet 33E and 33F

3.4.2.3 Reconnect the existing condensate drain line

3.4.2.4 Cut or grind welds smooth for welded and/or unsweat brazed or soldered type fittings to facilitate piping and/or fitting removals.

3.4.2.5 Template all piping removals to facilitate installation of new piping to the Government-furnished air dryer.

3.4.2.6 The Contractor and Coast Guard Inspector shall visually inspect the new installations.

3.4.3 Structural Installation.

3.4.3.1 Install each GFE air dryer from the newly modified and prepared foundation with new foundation fasteners. All fasteners shall be stainless steel 316L.

3.4.4 Electrical Installation.

3.4.4.1 The Contractor shall accomplish all electrical work in accordance with SFLC Std Spec 3042, and test cables in accordance with SFLC Std Spec 3041. Existing wireways shall be utilized for new cable runs as much as possible

3.4.1.2 Reconnect existing electrical power supply to the new refrigerated air dryer.

3.5 Pipe flushing. After all authorized work is complete the Contractor shall accomplish the following prior to hydrostatic test

NOTE

The Contractor may opt at their own expense to clean affected piping with weld joints by blowing down in accordance with MIL-STD-1622 until cleanliness and dryness of MIL-STD-1622 are met. When the piping systems cannot be sufficiently cleaned by blowing down, a hot water flush in accordance with MIL-STD-1622 shall be done until cleanliness and dryness of MIL-STD-1622 are met.

3.5.1 Flush all new and disturbed air dryer supply and discharge air piping systems with clean fresh water until all debris is removed but not longer than five minutes. Ensure flushing fluid is directed to move scale and foreign debris away from installed components to prevent possible damage upon operational testing. Submit a CFR documenting date and time of flushing process and level of pipe cleanliness. Blow dry all flushed piping with dry, low-pressure air. Ensure all water is removed to prevent contamination of the ship service (air supply to air dryer) and control air (air discharge from air dryer) systems.

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

WARNINGS

1. Isolate air dryer, compressors, filters, and any instrumentation from the flushing medium. The Contractor has option to remove piping assemblies between union joints to facilitate flushing of new piping and components at their facility.

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

3. When and where the newly installed piping assemblies are not isolatable from the piping system, accomplish cleaning by blowing

down until cleanliness and dryness in accordance with MIL-STD-1622 are met. If blowing down is not successful, use hot water flush in accordance with MIL-STD-1622 until cleanliness and dryness requirements are met.

3.6 Hydrostatic test. After all authorized repairs, the Contractor shall hydrostatically test all new and disturbed piping and components of the Control Air system in accordance with Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes, 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.

NOTE

In lieu of piping hydrostatic testing, the Contractor has option to perform NDI of all new welded piping joints. The Contractor shall perform NDI of the newly installed piping welds joints in accordance with Std Spec 0740 Appendix C.

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 compressed air refrigerant air dryer systems to be in satisfactory operating condition. Submit a CFR.

3.7.1 Coast Guard personnel will operate machinery for the operational test.

3.7.1 During the operational test, verify tightness of all mechanical/threaded joints.

3.8 Surface preservation. The Contractor shall prepare and coat the renewed and disturbed piping surfaces using the system specified in SFLC Std Spec 6310.

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

3.9.1 Prepare all new and disturbed surfaces in accordance with SSPC-SP No.3.

3.10 Refrigerant air dryer label plate - general. The Contractor shall furnish and install a nameplate label on each newly installed air dryer. Ensure the nameplate is made of the melamine type material with either engraved black letters on white background or white letters on black background; or metal photo type material with black letters photographically sealed onto an aluminum surface. .

4. NOTES

This section is not applicable to this work item.

FIGURE 1. NEW AIR DRYER INSTALLED FRONT VIEW

FIGURE 1. NEW AIR DRYER INSTALLED WITH DRAIN LINE IDENTIFIED

WORK ITEM 38: Buoy Deck Scuttle, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew the internal, DC deck and below, watertight doors and scuttles identified in Table 1.

TABLE 1 – WATERTIGHT SCUTTLE LOCATION

DESCRIPTION	LOCATION	DRAWING
QAWTS 1-20-2; 21" Diameter Quick-Acting Watertight Raised Scuttle, Steel, 3-Dog, Fwd Hinge	Buoy Deck ~FR 20	NAVSEA DWG 803-1401892

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	21" Diameter Quick-Acting Watertight Raised Scuttle, Steel, 3-Dog, Fwd Hinge (including associated 12"coaming)	PN: N/A	1 ea.	4,500.00

2. REFERENCES

COAST GUARD DRAWINGS

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

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

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, 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:

- Hydraulic piping
- Insulation
- Inhaul winch
- Level arm

NOTE

Geometric dimensioning, tolerance variances, and minor hardware differences are to be expected with the Government-furnished closures. These variances and differences are not limited to the following: location and physical size of the hinge assemblies; location, physical size, and number of flush mounted pockets; location, size, and orientation of securing devices.

3.2 Renewal. The Contractor shall crop, remove, and dispose of the scuttle identified in Table 1 of this work item, including the associated coaming in accordance with Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes.

3.2.1 Install GFP scuttle in place of removed. When GFP scuttle is not provided, the Contractor shall fabricate and install a new door or scuttle.

3.2.2 Perform all necessary modifications not limited to relocation, fabrication and installation of a new securing device, and modifications to ensure renewed item properly fits and functions.

3.2.3 At the direction of the Coast Guard Inspector, perform all necessary relocation and modification of securing latches.

3.2.4 Provide and install new gasket and fasteners for new installation identified in Table 1.

3.3 Testing. Upon complete renewal of each structural closure, the Contractor shall perform the following boundary tests and submit a CFR:

- a chalk test
- a water hose test

NOTE

Do not paint knife-edges, gaskets, or any moving parts; including dogs, nuts, wedges, spindles, yokes, packing, connecting rods and hinge pins.

3.4 Preservation. The Contractor shall accomplish the following tasks, in accordance with SFLC Std Spec 6310, Appendix B (Cutter and Boats Interior Painting Systems):

3.4.1 Scuttle surfaces. Prepare and coat both sides of the new scuttle assembly and all other disturbed surfaces to match existing adjacent surfaces as follows:

3.4.1.1 Coat topside surfaces using the system specified for "Decks, Metal Interior and Non-Skid Areas (Steel Decks - Dry Areas and Low Wear Areas).

3.4.1.2 Coat bottom side surfaces using the system specified for "Door, Joiner, Option I".

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

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

- Closures are properly secured, to prevent accidental or unintentional movement.
- Securing latches adequately engage closure and positively lock into place without excessive force or manipulation by the operator.

4. NOTES

4.1 Damage control decals. Ship's force will apply damage control decals.

WORK ITEM 39: Warping Capstan (Aft), Inspect and Service

1. SCOPE

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

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

None

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3632, Section 582-A, March 2014, Manufacturer's Instruction Book-SWBS Groups 582-583, Aft Capstan

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 3020 (SFLC Std Spec 3020), 2014, Overhaul AC Electrical Motors

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2014, Inspect, Repair, And Test Auxiliary Machine Systems

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

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

- Task #1
- Task #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 service particulars. The Contractor shall perform the tasks in Table 1 below:

TABLE 1 – RECURRING TASKS

				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 bearing, seals and gaskets. Refer to TP-3632. Renew all foundation fasteners. Submit a CFR.
3	Disassemble and Inspect	1	Electric brake	D2.3(Brakes and clutches)	Renew brake friction discs (3 ea. Stearns P/N 5-66-8472-00). Renew “Vertical Below Modification” components (disc separator springs, Stearns PN: 5-66-3172-00 and 5-66-3173-00). Renew No. 8 solenoid kit (Stearns PN 5-66-5081-00) and No. 8 coil kit (Stearns PN: 5-66-6804-33). Submit a CIR.
4	Overhaul	1	Electric Motor	N/A	Perform paragraphs 3.1 through 3.4.1and 3.4.5 through 3.8 of SFLC Std

				ADDITION REQUIREMENTS	
#	**TASK TYPE**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM SFLC STD SPEC 5000**	**OTHER**
					Spec 3020 to remove, inspect, recondition, and reinstall the drive motor. Renew motor bearings. Submit a CFR. Be aware that based on the inspection report, the Government may elect to issue a change order to omit reconditioning or increase the scope to include rewinding or miscellaneous repairs.
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 for damage, cracks, excessive wear. Renew thrust and tapered roller bearings. Inspect gear teeth for damage, cracks, excessive wear. Renew seals and gaskets. Submit a CIR.
6	NDE	1	Capstan Assembly And Foundation	3.25 (NDE)	Weld joints to NDE: All joints attaching capstan foundations to deck. Submit a CFR.
7	Preserve	1	Capstan Assembly And Foundation	3.2.4 (Preservation)	Preservation to include: capstan 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.

				ADDITION REQUIREMENTS	
#	**TASK TYPE**	**QTY**	**COMPONENT OR ASSEMBLY**	**APPENDIX AND PARA. FROM SFLC STD SPEC 5000**	**OTHER**
8	Groom and lubricate	1	Capstan Assembly	3.2.6 (Groom and lubrication)	None
9	Operational Test	1	Capstan Assembly	B2.6 (Capstans)	Submit CFR.
10	Fabricate and Install	1	Label Plate	B2.9 (Label plates)	None

NOTE

The capstan assembly weighs approximately 3,300 pounds.

4. NOTES

This section is not applicable to this work item.

S_63410_ESD_0716_SWIT
S16_013_63410_JBK_1216_551

WORK ITEM 40: Deck Covering, Electrical Matting, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew electrical matting as identified in Table 1.

TABLE 1 - DECKING SYSTEM PARTICULARS

LOCATION	AREA (*SQFT)	DECK MTL (A/S**)	SYSTEM/ APPENDIX (SFLC STD SPEC 6341)	COVE BASE ***	SYSTEM COLOR
EM Shop, 2-57-1-Q	150	S	Renew existing underlayment	Y	See 3.4 Deck covering color
Bridge, 02 ½-52-0-C	500	S	Renew existing underlayment	Y	See 3.4 Deck covering color
Engineering Control Center (ECC), 2-52-0E	350	S	Renew existing underlayment	Y	See 3.4 Deck covering color
Chart Room, 02-61-0-C	200	S	Renew existing underlayment	Y	See 3.4 Deck covering color

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	Blue Insulating Floor Matting	NSN: 7220-00-267-4630	11 ro.	530.18

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 601-002, Rev H, Booklet of General Plans

Coast Guard Drawing 175 WLM 634-001, Rev G, Deck Covering Schedule

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 6341 (SFLC Std Spec 6341), 2014, Install Interior Deck Covering Systems

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, 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) measurement.

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 Renewal. For all decks listed in Table 1, the Contractor shall perform all tasks specified in SFLC Std Spec 6341, CG Dwg 175 WLM 634-001 and herein, to install a new covering system in the location(s) specified in Table 1 above.

NOTE

Insulation underlayment may be used to prevent condensation in certain areas - e.g., above ballast tanks and hot machinery spaces, especially where these decks form the deck tops of living spaces.

3.3 Ultrasonic thickness (UT) measurement. The Contractor shall take a total of 100 UT measurements in accordance with Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes, Appendix C in each location designated by the Coast Guard Inspector and using Coast Guard Drawing 175 WLM 601-002 as guidance. Submit a CFR/ CIR.

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.

S_63500_ESD_0715_SWIT
S16_013_63500_JBK_1216_551

WORK ITEM 41: Compartment Insulation (General), Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew insulation as described in Table 1.

TABLE 1 - INSULATION RENEWAL

DESCRIPTION	LOCATION	APPROXIMATE AREA (SQFT)
Bulkhead and Overhead	Cargo Hold (3-24-0-AA)	75
Overhead	Pump Room (3-79-0-E)	100

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 601-002, Rev H, Booklet of General Plans

Coast Guard Drawing 175 WLM 631-001, Rev D, Painting Schedule (551)

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

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes

OTHER REFERENCES

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.11 (SSPC-SP 11), 2004, Power Tool Cleaning to Bare Metal

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 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 Renewal. The Contractor shall renew insulation identified in Table 1. Coast Guard Inspector will identify boundaries of installation. Refer to the drawing listed in Section 2 for guidance.

3.2.1 Removal. The Contractor shall remove existing insulation material specified by Coast Guard Inspector.

3.2.2 Disposal. The Contractor shall dispose of all removed materials, in accordance with all applicable Federal, state, and local regulations.

3.2.3 Surface preservation. The Contractor shall prepare and coat all designated/exposed surfaces, including adjacent structural members in accordance with CG Drawing 175 WLM 631-001 and using the system specified for "Bulkheads and Overheads, Un-insulated Steel (Appearance not a factor, i..e., voids) and Insulated Steel, Option II", in SFLC Std Spec 6310 in Appendix B (Cutter and Boat Interior Painting Systems).

NOTE

Power-tool cleaning to "Bare Metal", in accordance with SSPC-SP 11, may be used as the surface preparation method, for the following situations:

1. Abrasive blasting is not permitted in location of work.

2. Surfaces being preserved are considered too small to merit abrasive-blasting.

3.2.4 Substrate inspection - visual inspection. Upon completion of surface preparation and prior to application of primer coat, the Contractor shall visually inspect the prepared surfaces; submit a CFR.

3.2.5 New thermal insulation installation. The Contractor shall install new faced thermal insulation material, over plating surfaces and structural members identified in Table 1, as shown on Coast Guard Drawing 175 WLM 635-001. Coat the newly installed insulation using the system specified for “Insulation Surfaces, Fiberglass Sheet/Closed Cell PVC Foam” in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems).

4. NOTES

This section is not applicable to this work item.

WORK ITEM 42: Relocate 1MC Box and Band Cables

1. SCOPE

1.1 Intent. This work item describes the requirements to relocate 1MC box and band cables in Boatswain storeroom on main deck, Frame 1-6-0-Q of CGC IDEA LEWIS.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

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

Coast Guard Drawing 175 WLM 433-001, Rev J, Announcing System Blk, ISO & EWD

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 3041 (SFLC Std Spec 3041), 2014, Shipboard Electrical Cable Test

Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2014, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures

OTHER REFERENCES

MIL-STD-2003-4A, Sep 2009, Electric Plant Installation Standard Methods for Surface Ships & Submarines (Cableways)

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. Furnish and install suitable covering to seal off and protect all non-affected surfaces/equipment and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, remove protective material and inspect for the presence of contamination. Clean all equipment and spaces, contaminated due to improper protection, to original condition of cleanliness.

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

3.1.5 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.)

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

3.2.1 Refer to MIL-STD-2003-4 for cable handling, bending and hanging supports.

3.3 Relocate the 1MC Loudspeaker box (LS-305B/SIC) in Boatswain storeroom (STRM). The Contractor shall refer to drawings 175 WLM-320-001, Sheet 8 and 175 WLM-433-001 to accomplish this work item.

3.3.1 Turn-off (OPEN) and tag-out the C-21MC circuit breaker (CB) from the 120VAC IC Switchboard Panel (PNL 21) in Pilothouse.

3.3.2 Remove and relocate the 1MC Loudspeaker box (305/703) away from the hydraulic lines to a new location on bulkhead with about 2-feet inboard with laterally the same high from deck level. (See Figure 1).

3.3.2.1 Ensure to support the 1MC speaker box not damage the cables and cable connections from the MC speaker box during relocation transition.

3.3.2.2 Inspect the cables to check for any visual damages prior to install the 1MC box.

3.3.2.3 If any cable replacement is required for the C-1MC26 or C-1MC43, a new cable shall be Type of LS2SJ-20, MIL-C-24643/43, relabeled in accordance with drawing 175 WLM-433-001 and SFLC Std Spec 3042.

3.3.3 Remove the Tag-out and turn on the CB specified in paragraph 3.3.1 when ready for the operational test.

3. 4 Reband cables. The Contractor shall re-band and /or move in compartment approximately 40 cables at Boatswain Storeroom (Frame 1-6-0-Q) in accordance with SFLC Std Spec 3042 and MIL-STD-2003-4A.

3.5 Post-installation operational test. After completion of work, the Contractor shall, in the presence of the Coast Guard Inspector, thoroughly test and prove all items and shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

FIGURE 1 – THE 1MC BOX LOCATED RIGHT UNDER AND RUBBED BY HYD. PIPES IN BOASTSWAIN STRM.

4.0. NOTES

This section is not applicable to this work item.

TCTO_TM2000_52800_MDW_0913_175WLM

WORK ITEM 43: Garbage Grinder Drain, Modification

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to modify the garbage grinder drain piping in the Engine Room 3-61-0-E and Pump Room 3-79-0-E.

1.2 Government-furnished property.

None

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 528-005, Rev -, Modifications to Garbage Grinder Drain Piping

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

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3633, Section A, June 1999, Sewage System

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements

General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, 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). Known interferences include, but are not limited to the below- listed:

- Overhead insulation.

3.2 Rip-out. The Contractor shall prevent overboard discharge of gray water by shutting overboard discharge valve V38-2 before operating 3-way diverter valve V32-1. The Sewage Holding Tank shall be pumped out and washed down using the installed wash down nozzles before ripping out any drain piping. The Sewage Collection Tank shall be pumped out, washed down and gas-freed in accordance with Coast Guard Technical Publication (TP) 3633, Section A before ripping out any drain piping. The contractor shall isolate the affected drain piping from the Gray Water Tank using 3-way diverter valve V32-1 before ripping out any existing drain piping. The Contractor shall rip-out piping designated for rip-out as shown on Coast Guard Drawing 175 WLM 528-005.

3.3 Installation. The Contractor shall install new drain piping as shown on Coast Guard Drawing 175 WLM 528-005.

3.4 Red-lined drawing deliverable(s). The Contractor shall “red-line” Coast Guard Drawing 175 WLM 528-005 to clearly reflect the work or deviations specified in this work item.

3.4.1 No later than 24 hours after completion of this work item, submit a draft copy of the "red-lined" drawing(s) to the COR for review and approval.

3.4.2 No later than 10 calendar days after receiving Coast Guard comments or completion of the availability, whichever occurs first, incorporate all comments and deliver one set of the final red-lined drawing(s) to the COR.

3.5 Inspection/Test. The Contractor shall submit a CFR upon performing the following

- Witnessing the initial operational test of the Galley garbage grinder drain, Galley sink drains, Galley deck drains, Scullery garbage grinder drain, dishwasher drain, Scullery deck drain and vacuum flush system.
- Conduct a hydrostatic water test of the modified drain piping
- Conduct a post repair operational test of the Galley garbage grinder drain, Galley sink drains, Galley deck drains, Scullery garbage grinder drain, dishwasher drain, Scullery deck drain and vacuum flush system

3.6 Hydrostatic test. After all authorized repairs, the Contractor shall hydrostatically test all new and disturbed piping and components of the drain piping system in accordance with Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes, 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.

3.7 Thermal insulation renewal. The Contractor shall renew existing un-faced thermal insulation material as shown on Coast Guard Drawing 175 WLM 635-001. Coat the newly installed insulation using the system specified for "Insulation Surfaces, Fiberglass Sheet/Closed Cell PVC Foam" in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems).

3.8 Operational test - specific.

3.8.1 Operational test - initial. Prior to commencement of work, the Contractor shall witness Coast Guard Personnel perform an initial operational test of the Galley garbage grinder drain, Galley sink drains, Galley deck drains, Scullery garbage grinder drain, dishwasher drain, Scullery deck drain and vacuum flush system to demonstrate existing operational condition. Submit a CFR.

3.8.2 Operational test – post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the Galley garbage grinder drain, Galley sink drains, Galley deck drains, Scullery garbage grinder drain, dishwasher drain, Scullery deck drain and vacuum flush system to be in satisfactory operating condition. Submit a CFR.

3.9 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 44: Potable Water Piping & Valve, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew the Potable Water piping & valve and associate hardware.

1.2 Government-furnished property.

None.

2. APPLICABLE DOCUMENTS

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 533-001, Rev G, Potable Water System Diagram

Coast Guard Drawing 175 WLM 533-005, Rev D, Potable Water System A/D Hull Block 970

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 0740 (Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes), 2014, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Protective measures. The Contractor shall furnish and install suitable covering to seal off and protect all non-affected surfaces/equipment and spaces in the vicinity of the work area against

contamination during the performance of work. Upon completion of work, remove protective material and inspect for the presence of contamination. Clean all equipment and spaces, contaminated due to improper protection, to original condition of cleanliness.

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

- Piping.
- Deck drains.
- Insulation, lagging.
- Wiring.
- Ceiling tiles
- Existing bulkhead connection and associated piping.
- Berthing Areas.
-

3.1.4 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.

3.2 Fluid handling. The Contractor shall remove an dispose of removed fluids from the affected piping system, in accordance with all applicable Federal, state, and local regulations.

WARNING

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

3.3 Piping renewal particulars. The Contractor shall renew the potable water piping, including the valve from female berthing compartment (01-76-0-L), through the bulkhead , up to the weather deck (small boat) using Coast Guard Drawings as guidance.

3.3.1 This piping and associated fittings and valves shall be renewed in its entirety from below the deck penetration. A new deck penetration shall be installed (item #5 of 175 WLM 533-5). Mark area of cut and obtain USCG Inspector's concurrence prior to cutting.

3.3.2 Piping is 3/4" commercial "K" copper tubing as detailed in referenced drawing (item #28 of 175 WLM 533-5). All materials shall be in accordance with 175 WLM 533-5. Estimate length 20ft.

3.3.3 Perform all weld in accordance with (SFLC Std Spec) 0740, Welding and Allied Processes.

3.3.4 When and where necessary, fabricate and install new pipe hangers in way of the permanently discarded hangers in accordance with General Requirements. Remove any old discontinued pipe hangars no longer used.

3.3.5 Shop fabrication, cleaning, flushing and testing to maximum extent possible is recommended and preferable.

3.4 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.

3.5 Hydrostatic test. After all authorized repairs, the Contractor shall hydrostatically test all new and disturbed piping and components of the potable water system in accordance with Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes, 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.

3.6 Piping insulation installation. The Contractor shall install new insulation materials over the exposed pipe surfaces at thicknesses appropriate to the application and temperature ranges specified in ASTM F683 Tables and in accordance with details in NAVSEA Drawing 804-5959214:

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

3.7 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 45: Piping Insulation, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew Water Piping Insulation.

TABLE 1 - INSULATION RENEWAL

DESCRIPTION SYSTEM/ PIPE DIAMETER/ LINEAR FEET	LOCATION	DRAWING
Eye wash station Piping / ½ in / 2ft	Paint Locker (1-9-2-K)	See below
Fire Main Piping / 4.0 in / 30ft	Hydraulic Equipment Room (3-15-0-E)	"
Fire Main Piping / 4.0 in / 30ft	Cargo Hold (3-24-0-AA)	"

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 521-001, Rev K, Firemain System Diagram

Coast Guard Drawing 175 WLM 521-050, Rev B, Firemain Piping Mods

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures

OTHER REFERENCES

ASTM International (ASTM) F683, 2003, Standard Practice for Selection and Application of Thermal Insulation for Piping and Machinery

NAVSEA Drawing 804-5959214, Rev-, Piping Insulation - Installation Details

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 Renewal. The Contractor shall renew all piping system insulation identified in Table 1 and using the relevant Coast Guard Drawing(s) as guidance.

NOTE

Although pipe lengths, routes, and sizes are detailed in the specified drawings, the as-built configuration may vary slightly in routes, lengths, and sizes.

3.2.1 Removal. The Contractor shall remove all existing insulation material over the designated pipe surfaces, including associated pipe hangers, valves, fittings, and flanges.

3.2.2 Disposal. The Contractor shall dispose of all removed materials in accordance with all applicable federal, state, and local regulations.

NOTE

Other surfaces/fittings affected include: brackets, bulkhead penetrations, flat work, and all other protrusions or fixtures that will condense due to relative humidity from surrounding atmosphere.

3.2.3 Surface preparation. The Contractor shall clean all exposed pipe and pipe component surfaces with a soft bristle brush and a mild detergent solution to remove all visible surface contaminants.

3.3 Preservation. The Contractor shall paint the newly installed insulation system, in accordance with SFLC Std Spec 6310, using the system specified for “Insulation Surfaces, Fiberglass Sheet/Closed Cell PVC Foam” in Appendix B (Cutter and Boat Interior Paint Systems).

NOTE

Glass cloth lagging is required only in high traffic areas where insulation is subject to damage.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

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.

4. NOTES

4.1 List of known suppliers. Below is a list of known manufacturers/suppliers:

SOURCE	PHONE NUMBER
Temperature Inc. 7500Appling Center Dr Memphis TX 38133	(901)388-4706 O (901)331-8683 C
Industrial Commercial Marine(ICM)	(410) 771-8070
Advanced Thermal Products (ATP), Inc.	(800) 826-8417

WORK ITEM 46: Shower Stalls, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew three (3) shower stalls, including renewal of the associated deck covering system, in the following compartments:

- CO Washroom (01-66-1-L)
- Crew Washroom (1-83-2-L)
- Crew Washroom (1-83-0-L)

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	Oemga Products Inc Model S Shower 32” x 32” x 80” Type 304 18 ga SS w/ 14 gal tub Including hardware and light hole	PN: Model S	3 ea.	2,249.00
N	Speakman Company Shower Pressure Balancing valve with shower head	PN: 1160514	3 ea.	511.92

***Government-loaned property, which shall be returned to the vessel upon completion of the availability.**
****New or refurbished equipment that the Government may provide for installation in place of existing equipment.**
*****Government-furnished property, which is to be supplied by either the vessel or the C4IT Service Center.**

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 528-008, Rev E, Plumbing & Deck Drains A & D, Hull Block 970

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

Coast Guard Drawing 175 WLM 634-001, Rev G, Deck Covering Schedule

Coast Guard Drawing 175 WLM 644-001, Rev G, Sanitary Facilities & Laundry Space Arrangement & Details

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

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 6341 (SFLC Std Spec 6341), 2014, Install Interior Deck Covering Systems

OTHER REFERENCES

MIL-PRF-24613, Dec 1990, Deck Covering Materials, Interior, Cosmetic Polymeric

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.11 (SSPC-SP 11), 2004, Power Tool Cleaning to Bare Metal

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. 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:

- Shower heads and control valve assemblies.
- Deck drains.
- Hot and cold potable water piping.
- Plumbing boxes.
- Showerheads.
- Overhead panels.

- Lighting fixtures.

NOTE

The existing shower head and valves are suspended in the shower stalls from the hot and cold potable water piping which enters through the overhead of the shower stall. There is silicone sealant around the penetration to prevent water leakage into the overhead above the shower stall.

3.2 Renewals. The Contractor shall accomplish the following tasks, referring to the references listed in Section 2 "References" for guidance.

3.2.1 Removals.

3.2.1.1 Remove and dispose of the existing shower stalls, including the shower pans, faucets, shower heads, and deck covering system.

3.2.1.2 Cap the pipe ends to prevent contamination from entering the potable water system.

3.2.1.3 Disconnect and retain the existing lighting fixtures for reinstallation.

3.2.2 Surface preparation. Power tool clean all steel deck in way of shower stall removal, to provide a minimum 1.0 mil anchor profile, in accordance with SSPC-SP 11.

3.2.3 Visual inspections. In the presence of the Coast Guard Inspector, conduct a visual inspection of all clean decks, bulkheads and overhead in the work area. Inspect all exposed decks, bulkheads, piping, and drains for corrosion and deterioration. Submit a CFR.

3.2.4 Ultrasonic thickness (UT) measurement. Take a total of 100 UT measurements of the exposed shower decking areas in accordance with Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes, Appendix C in locations designated by the Coast Guard Inspector. Submit a CFR.

3.2.5 Surface coating. Prime and coat all prepared deck surfaces using the coating 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).

3.2.6 Installation.

3.2.6.1 Install the new government-furnished shower stalls, including associated components (i.e. faucets, shower heads, towel bars, soap dishes, etc), in accordance with Coast Guard Drawing 175 WLM 644-001. Ensure the shower pan is sloped to drain properly. Use all new stainless steel fasteners, Type 316.

3.2.6.2 Caulk all seams requiring caulking with a silicone based caulking in accordance with MIL-A-46106.

3.2.6.3 Reinstall the lighting fixture.

3.2.6.4 Install GFP shower pressure balancing valves.

3.2.6.5 Inspect existing shower head, drain, and shower piping and plumbing connections and submit a CFR.

3.2.7 Shower stall decking system. Apply a new cosmetic polymeric deck covering system in the shower stall, including new underlayment, in accordance with SFLC Std Spec 6341.

3.3 Operational test – post repairs. After completion of work, the Contractor shall thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the showers to be in satisfactory operating condition. Ensure zero visible leakage from or deformation of mechanical parts by repairing all leaks and discrepancies. 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 Sources of supply. Authorized suppliers for cosmetic polymeric deck covering systems are listed on the Qualified Product Listing (QPL) 24613 for MIL-PRF-24613.

WORK ITEM 47: Heat Pumps # 5 and 6, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew the # 2 Heat Pump Systems.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST
Y	Heat Pump #5	Model HP5SC	1 ea.	29,000.00
Y	Heat Pump # 6	Model HP6SC	1 ea.	29,000.00
N	Relief Valves	Sherwood Valve P/N 3014-300	1 ea.	500.00

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 512-001, Rev E, HVAC Diagram

Coast Guard Drawing 175 WLM 516-001, Rev F, HVAC Refrigeration System Piping Diagram

Coast Guard Drawing 175 WLM 516-003, Rev D, HVAC Refrigeration System Piping A & D

Coast Guard Drawing 175 WLM 516-004, Rev A, HVAC Refrigeration Piping Arr & Details

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

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3626, 12/16/1996; Manufacturers Instruction Book-SWBS Group(s) 516-533

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements General Requirements

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep. The Contractor shall provide the services of qualified Tech Rep, who is familiar with the Adrick heat pumps, to accomplish the following tasks – on site:

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

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

3.1.2.3 Submit a copy of the Tech Rep's résumé and a list of references to the COR at the Arrival Conference.

3.1.2 The Contractor shall inspect the ship's air conditioning and heating system from HP1 to HP6, and submit a CFR.

3.1.3 Personnel qualification. The Contractor shall ensure that all personnel servicing Air Conditioning and Refrigeration (AC&R) equipment that uses CFC or HCFC refrigerant hold a current Environmental Protection Agency (EPA) Technician Certification, Type IV (Universal Certification), and meet all State and local regulations and licensing requirements.

3.1.4 Refrigerant draining and recovery. The Contractor shall drain, recover and dispose of all existing refrigerant from the vessel's AC unit into a suitable external container in accordance with all Federal, state and local environmental regulations.

3.1.5 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.

3.1.6 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):

- Insulation.
- Piping.
- Lagging.
- Electric cables.

3.1.7 Work locations. The Contractor shall be aware that work areas shall primarily include but not be limited to the following:

- 01 deck heat pump space
- A/C Flats.
- Pump Room.
- Engine Room

3.2 Modification particulars. The contractor shall accomplish the following tasks, using the Coast Guard Drawings 175-WLM-512-001 and 175-WLM-601-1 and Tech Pub 3626 as guidance:

3.2.1 Rip-outs and Reinstall. Rip-out of old equipment and ducting/piping shall be done in accordance with this specification and drawings and attachments referenced in this specification.

- Heat pump # 5 and 6.
- Condenser.
- Compressor.

3.2.2 Piping installation. Ensure the following for all piping installations:

- Piping shall be adequately supported by hangers.
- Piping shall be suitably tagged for machinery and piping designation and marking.
- Install GFE relief valves.
- ASW valves.
- Freon (R-22) piping.
- All associated wiring and solenoid valves

3.2.3 Insulation. Using CG Drawings 175 WLM 516-1, 3, and 4 as a guide, renew ASW and refrigerant piping insulation on # 5 and 6 heat pumps system. (size from ½ to 1 ¼)

3.3 System flush. The Contractor shall flush the refrigerant system and all associated components of any contaminates that would cause the refrigerant to become contaminated below AHRI 700 Standard for new refrigerants. The flushing medium shall be an agent approved by the EPA for such use. Perform flush in accordance with manufacturer's instructions. Standard refrigeration industry practices shall be adhered to at all times.

3.3.1 After flushing, evacuate the system to a minimum of 500 microns, in accordance with TP 3626.

3.3.2 If the flushing medium instructions dictate evacuation of the system at a lower pressure, meet the more restrictive requirement. Follow the same evacuation procedure in accordance with TP 3626.

3.4 Recharge refrigerant. The Contractor shall recharge the system with refrigerant in accordance with TP 3626.

3.5 Operational test - final. After completion of work, the Contractor shall witness an operational test (by Coast Guard personnel) of the A/C system to prove satisfactory operating condition.

3.5.1 Submit an operational report following startup. State the operating conditions of the system to be utilized as a baseline of status. Ensure the system is operating within the manufacturer's recommended parameters. Include, at a minimum, the following:

- Suction pressures.
- Head pressures.
- Amperage draws.
- Loading and unloading times of the compressor.
- Compressor oil levels.
- Raw water temperatures entering the condenser and leaving the condenser.
- Chilled water temperatures entering the cooler and leaving the cooler.

4. NOTES

This section is not applicable to this work item.