



USCGC MARIA BRAY (WLM 562)

SPECIFICATION FOR DOCKSIDE REPAIRS

FY2019

(Rev-0, 13 December 2018)

## TABLE OF CONTENTS

Revisions Record.....	iii
Consolidated List of References.....	iv
Consolidated List of Government-furnished Property .....	ix
Consolidated List of Critical Inspection Items .....	xii
Principal Characteristics - TENDER.....	xiii
General Requirements .....	1
WORK ITEM 1: Tanks (Mp Fuel Service), Clean And Inspect .....	11
WORK ITEM 2: Voids (Accessible), Clean and Inspect.....	15
WORK ITEM 3: Main Diesel Engine (MDE) Exhaust Piping, Commercial Clean .....	18
WORK ITEM 4: Ship Service Diesel Generator (SSDG) Exhaust Piping, Commercial Clean.....	21
WORK ITEM 5: Vent Ducts (Engine And Motor Room All), Commercial Cleaning .....	24
WORK ITEM 6: Vent Ducts (Galley and Pantry Room All), Commercial Cleaning.....	27
WORK ITEM 7: Vent Ducts (Laundry Exhaust), Commercial Cleaning.....	30
WORK ITEM 8: Vent Ducts (All Other), Commercial Cleaning .....	32
WORK ITEM 9: Potable Water Pneumatic Tank(s), Clean and Inspect .....	35
WORK ITEM 10: Hull Fittings (Weight Handling Rigging Hardware), Inspect and Test.....	38
WORK ITEM 11: Hydraulic Chain Stoppers, Inspect And Service .....	43
WORK ITEM 12: Hydraulic Inhaul Winch, Inspect And Service.....	47
WORK ITEM 13: Mechanical Chain Stoppers, Inspect and Service.....	56
WORK ITEM 14: Hull Fittings (Mooring and Towing), Inspect and Test.....	59
WORK ITEM 15: Buoy Crane, Inspect And Service.....	62
WORK ITEM 16: Grey Water Holding Tank(s), Clean and Inspect .....	71
WORK ITEM 17: Sewage Holding Tank(s), Clean and Inspect.....	75
WORK ITEM 18: Sewage Piping, Clean And Flush .....	79
WORK ITEM 19: Accessible Void(s), Preserve “Partial” .....	82
WORK ITEM 20: Single Point Davit Winch, Replace .....	85
WORK ITEM 21: Compartment Insulation (General), Renew .....	89
WORK ITEM 22: Deck Covering (Interior Wet/Dry), Renew .....	92
WORK ITEM 23: Watertight Doors and Scuttles (External), Renew.....	95
WORK ITEM 24: Molded Case Circuit Breakers, Inspect & Test .....	99
WORK ITEM 25: Power Circuit Breakers, Inspect, Maintain & Test.....	108
WORK ITEM 26: Z-Drive Hydraulic Oil Drain Piping, Renew.....	120
WORK ITEM 27: Oil Containment Coamings, Repair.....	122
WORK ITEM 28: Auxiliary Seawater (ASW) System Valves, Renew.....	127
WORK ITEM 29: Goose Neck Vent Pipes, Renew .....	131
WORK ITEM 30: Buoy Chain Port(s) Renew .....	134
WORK ITEM 31: Engine Room Vent Louver, Repair .....	136
WORK ITEM 32: Sounding Caps, Repair .....	139
WORK ITEM 33: Upper Propulsion Thruster Space Deck, Preserve.....	141
WORK ITEM 34: Grey Water Piping, Clean And Flush.....	143
WORK ITEM 35: HVAC Systems (Chartroom and ECC), Upgrade .....	147

## REVISIONS RECORD

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

DATE	REV#	WORK ITEM#	CHANGES MADE

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

## CONSOLIDATED LIST OF REFERENCES

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

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

### COAST GUARD DRAWINGS

- Coast Guard Drawing 175 WLM 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 AG, Electrical One-Line Diagram
- Coast Guard Drawing 175 WLM 320-003, Rev L, Power System Deck Plan, Fr 61-24, Below Main Deck
- Coast Guard Drawing 175 WLM 320-004, Rev F, Power System Deck Plan, ER and Pump Room
- Coast Guard Drawing 175 WLM 320-007, Rev R, Power System Deck Plan, 01 Level and Above
- Coast Guard Drawing 175 WLM 437-008, Rev G, HVAC Control System; Block, ISO & Elem W.D.
- Coast Guard Drawing 175 WLM 506-001, Rev G, Overflows, Air Escapes & Sounding Tubes Diagram
- Coast Guard Drawing 175 WLM 512-001, Rev E, HVAC Diagram
- Coast Guard Drawing 175 WLM 512-017, Rev C, HVAC Mods to Compartments 2-52-0-C & 02-61-0-C.
- Coast Guard Drawing 175 WLM 533-001, Rev G, Potable Water System Diagram
- 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 573-001, Rev T; 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 Modifications for Hydraulic  
Roller Assembly
- Coast Guard Drawing 175 WLM 573-8, Rev -, ATON Tie Downs
- Coast Guard Drawing 175 WLM 582-001, Rev D, Mooring and Towing, A & D
- Coast Guard Drawing 175 WLM 593-001, Rev G, Sewage & Waste Water System Diagram
- Coast Guard Drawing 175 WLM 593-001, Rev G, Sewage and 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 L, General Arrangement and Inboard and Outboard  
Profiles
- Coast Guard Drawing 175 WLM 601-003, Rev F, Booklet of General Drawings (552-564)
- Coast Guard Drawing 175 WLM 601-003, Rev F, Booklet of General Drawings 552-564
- Coast Guard Drawing 175 WLM 633-001, Rev D, Cathodic Protection
- Coast Guard Drawing 175 WLM-528-001, Rev E, Plumbing and Interior Deck Drains Diagram

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

Coast Guard Drawing 175-WLM 506-1, Rev G, Overflows, Air Escapes & Sounding Tubes Diagrams  
Coast Guard Drawing 175-WLM 506-3, Rev D, Vents & Sounding Tubes A & D Frame 6 Forward, Hull Block 901  
Coast Guard Drawing 175-WLM 506-7, Rev D, Vents & Sounding Tubes Main Deck & Above a & D, Hull Block 970  
Coast Guard Drawing 175-WLM 512-11, Rev D, HVAC a & D, FR 70-50, Main Deck & Above, Hull Block 960  
Coast Guard Drawing 175-WLM 512-12, Rev C, HVAC a & D, Frame 70-88 Main Deck & Above, Hull Block 970  
Coast Guard Drawing 175-WLM 512-13, Rev A, HVAC Std Details & General Instructions  
Coast Guard Drawing 175-WLM 512-9, Rev A, HVAC a & D, Frame 88-61, Platform, Hull Block 940  
Coast Guard Drawing 175-WLM 130-001, Rev -, Mods to Buoy Deck Incid to Hawser Pipe Cover  
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 Frame 61 FWD, Blocks 910, 920, & 930  
Coast Guard Drawing 175-WLM 256-004, Rev J, Seawater Cooling System A&D, Hull Blocks 940-970  
Coast Guard Drawing 175-WLM 256-012, Rev B, ASW System Piping Modifications  
Coast Guard Drawing 175-WLM 320-1, Rev AF, Electrical One-Line Diagram  
Coast Guard Drawing 175-WLM 320-1, Rev AL, Electrical One-Line Diagram  
Coast Guard Drawing 175-WLM 506-001, Rev G, Overflows Air Escapes & Sounding Tubes Diagrams  
Coast Guard Drawing 175-WLM 506-008, Rev C, Oil Containment Coamings  
Coast Guard Drawing 175-WLM 549-001, Rev E, Onboard Lubrication Requirements  
Coast Guard Drawing 175-WLM 549-1, Rev C, Onboard Lubrication Requirements  
Coast Guard Drawing 175-WLM 561-001, Rev J, Z-Drive Hydraulic System Diagram  
Coast Guard Drawing 175-WLM 561-003, Rev H, Z-Drive Hydraulic System A/D, Block 940 & 950  
Coast Guard Drawing 175-WLM 573-001, Rev R, Buoy Deck Arrangement  
Coast Guard Drawing 175-WLM 601-001, Rev N, General Arr, Inboard and Outboard Profiles  
Coast Guard Drawing 175-WLM 601-001, Rev N, General Arrangement, Inbd and Outbd Profiles  
Coast Guard Drawing 175-WLM 601-001, Rev T, General Arrangement Inboard and Outboard Profiles  
Coast Guard Drawing 175-WLM 601-003, Rev N, Booklet of General Plans  
Coast Guard Drawing 175-WLM 601-1, Rev G, General Arrangement, Inboard and Outboard Profiles  
Coast Guard Drawing 175-WLM 635-001, Rev F, Hull Thermal & Acoustic Insulation Schedule  
Coast Guard Drawing 175-WLM 801-017, Rev B, Scantlings, Superstructure  
Coast Guard Drawing 175-WLM 920-001, Rev K, Hull Block 920 Panels  
Coast Guard Drawing 175-WLM\_635\_1, Rev F, Hull Thermal & Acoustic Insulation Schedule  
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 Fleet Drawing FL-2605-29, Rev L, Chain Stopper System – Rising Sheave Assembly  
NAVSEA Drawing 804-5773931, Rev A, Acoustic & Thermal Insulation For Compartments Installation Details

**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) 3619, Mar 2001 Switchboard, Ship Service & Emergency
- Coast Guard Technical Publication (TP) 3619, SWBS 324, Sep 2012, Manufacturer's Instruction Book
- 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) 3749, 26-APR-05, 1-7/8 Inch ATON Mechanical Chain Stopper
- Coast Guard Technical Publication (TP) 3939, SWBS 573-A, Apr 2007, Rising Sheave Chain Stopper
- NAVSEA Drawing 804-5773931, Rev A, Acoustic & Thermal Insulation For Compartments Installation Details
- Surface Forces Logistics Center Standard Specification (SFLC Std Spec) 0000, 2012, General Requirements
- Surface Forces Logistics Center Standard Specification (SFLC Std Spec) 0000, 2014, General Requirements
- Surface Forces Logistics Center Standard Specification (SFLC Std Spec) 3042, 2012, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation
- Surface Forces Logistics Center Standard Specification (SFLC Std Spec) 3042, 2014, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation
- Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements
- Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), Jan 2012, General Requirements
- Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes
- Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2014, Welding and Allied Processes.
- Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), Jan 2012, 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 5000 (SFLC Std Spec 5000), 2014, 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, Preserve Ship Structures
- 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

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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/National Electrical Manufacturers Association (ANSI/NEMA) AB 4, Mar 2011, Guidelines for Inspection and Preventive Maintenance of Molded Case Circuit Breakers Used in Commercial and Industrial Applications
- American National Standards Institute/Underwriters Laboratories Inc. (ANSI/UL) 489, Molded Case Circuit Breakers, Molded-Case Switches and Circuit-Breaker Enclosures, Jan 2013
- American Society of Mechanical Engineers (ASME) B16.34, 2004, Valves-Flanged, Threaded, and Welding End
- ASTM International (ASTM) D1330, 2004, Standard Specification for Rubber Sheet Gaskets
- ASTM International (ASTM) D1330, 2010, Standard Specification for Rubber Sheet Gaskets
- ASTM International (ASTM) D1330, 2015, Standard Specification for Rubber Sheet Gaskets
- ASTM International (ASTM) D5363, 2008, Standard Specification for Anaerobic Single Component Adhesives (AN)
- ASTM International (ASTM) F992, 2006, Standard Specification for Valve Label Plates
- Code of Federal Regulations (CFR) Title 29, Part 1915, 2014, Occupational Safety and Health Standards for Shipyard Employment
- Commercial Item Description (CID) A-A-59316, 2003, Abrasive Materials for Blasting
- DOD-STD-2187, Aug 1987, Chemical Cleaning of Salt Water Piping Systems
- Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-61, 2003 Edition, Pressure Testing Of Steel Valves
- Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-67, 2002 Edition, Butterfly Valves
- Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-72, 1999 Edition, Ball Valves with Flanged or Butt-Welding Ends for General Service
- Manufacturers' Standardization Society of the Valve and Fittings Industry (MSS) SP-80, 2008 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-24667C, May 2008, Coating System, Non-Skid, for Roll, Spray, or Self-Adhering Application
- MIL-S-45180, 1998; Sealing Compound, Gasket, Hydrocarbon Fluid and Water Resistant
- QPL-24667, May 2008, Qualified Product List (Military) of Products Qualified Under Detail Specification MIL-PRF-24667, Coating System, Non-Skid, for Roll, Spray, or Self-Adhering Application
- Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) C6183, 2013, Cork and Rubber Composition Sheet; For Aromatic Fuel and Oil Resistant Gaskets
- The Society for Protective Coatings (SSPC) QP 1, 2012, Standard Procedure for Evaluating the Qualifications of Industrial/Marine Painting Contractors (Field Application to Complex Industrial Steel Structures and Other Metal Components)

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

- 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.11 (SSPC-SP 11), 2012, Power Tool Cleaning to Bare Metal
- The Society for Protective Coatings (SSPC)/NACE International (NACE) 2006, Joint Surface Preparation Standard SSPC-SP 10/NACE No.2, Near-White Blast Cleaning
- The Society for Protective Coatings (SSPC)/NACE International (NACE) Joint Surface Preparation Standard SSPC-SP 10/NACE No.2, 2007, Near-White Blast Cleaning
- The Society for Protective Coatings (SSPC)/NACE Joint Surface Preparation Standard SSPC-SP 10/NACE No.2, 2004, Near-White Blast Cleaning
- Underwriters Laboratories Inc. (UL) 1066, Low-Voltage AC and DC Power Circuit Breakers Used in Enclosures, Apr 2012

**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.

<b>WORK ITEM</b>	<b>MTI</b>	<b>ITEM DESCRIPTION</b>	<b>NSN/PN</b>	<b>QTY</b>	<b>ESTIMATED COST (\$/UNIT)</b>
11	N	Repair Kit Assembly	NSN: 2040-01-496-9418	2 ea.	1,968.67
11	N	Rod Seal Repair Kit (FL-2605-29 PC#37)	NSN: 2040-01-496-9422	2 ea.	3,030.07
11	N	Repair Kit, Cable Chain (Includes Pads) (FL-2605-29 PC#36)	NSN: 3020-01-538-0684	16 ea.	257.99
11	N	Cylinder Assembly Actuating, Linear	NSN: 3040-01-496-9424	4 ea.	1,969.24
12	N	Roller bearing Unit	NSN: 3130-01-504-4363	2 ea.	4,012.00
12	N	Grease seal	NSN: 5330-01-462-5544	4 ea.	79.25
12	N	Level wind pivot bushing	NSN: 3120-01-621-2293	1 ea.	1,139.00
12	N	Level wind thrust bearing	NSN: 3120-01-621-2300	2 ea.	483.30
12	N	Rexroth DCV	NSN: 4810-01-507-0037	1 ea.	208.29
12	N	Rexroth Sandwich Flow Control	NSN: 4810-01-505-9289	1 ea.	250.00
12	N	Sun Sandwich Relief Valves	NSN: 4820-01-439-2451	2 ea.	900.00
12	Y	Level Wind Hydraulic Cylinder	NSN: 3040-01-441-3721	1 ea.	7,423.00
12	N	3:1 Pilot Ratio, Vented Counterbalance Valve Assembly	NSN: 4820-01-563-5841	1 ea.	98.70
12	N	Fully Adjustable Needle Valve	NSN: 4820-01-416-0579	1 ea.	48.75
12	N	Wire Rope Assembly	NSN: 4010-01-646-6972	1 ea.	500.00
12	Y	**Hydraulic Motor	NSN: 4320-01-445-2248	1 ea.	23,998
12	N	**Pump, Hydraulic Ram, Hand Driven	NSN: 4320-01-286-4065	1 ea.	419.77
12	N	**Cylinder Pin	NSN: 5315-01-515-9847	1 ea.	500.00
12	N	**Cylinder Pin	NSN: 5315-01-515-9912	1 ea.	520.00
13	N	Hardware Kit	NSN: 5430-01-494-2479	2 ea.	618.54
13	N	Hardware Kit, Mechanical	NSN: 2030-01-485-7215	2 ea.	784.35
15	N	Wire Rope, Crane Aux Fall	NSN: 3950-01-617-1692	1 ea.	629.00
15	N	Wire Rope, Crane Main Fall	NSN: 3950-01-617-1700	1 ea.	1,425.00
15	N	Luff Cylinder Seal kit	NSN: 5330-01-433-6307	1 ea.	380.00
15	N	Holding Valve	NSN: 4810-01-353-0586	2 ea.	84.88

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

15	N	Shuttle Valve	NSN: 4820-01-317-2748	2 ea	18.97
15	N	Needle Valve	NSN: 4820-01-329-0051	1 ea	36.17
15	Y	Luff Cylinder Control Valve	NSN: 4820-01-602-7668	1 ea	5,259.00
15	Y	Valve Assembly Manifold	NSN: 4810-01-506-7738	1 ea	19,892.60
15	N	Bushing, Heel	NSN: 5365-01-F12-2920	4 ea	81.00
15	N	Hydraulic swivel seal kit	NSN: 4730-01-566-2864	1 ea	1,125.00
15	N	**Pin, Heel	NSN: 5315-01-500-6931	2 ea	1006.60
15	N	**Hand pump w/ Stainless Steel Option, P18	NSN: 4320-01-517-1444	1 ea	473.00
15	N	**Plate, Backing, Brake (Item 231)	NSN: 3040-00-119-9848	1 ea	1,575.00
15	N	**Plate, Brake (Item 232)	NSN: 3040-01-068-7647	1 ea.	377.00
15	N	**Driver Plate (Item 233)	NSN: 3040-01-F14-3994	1 ea.	197.00
15	N	**Plate, Backing, Brake (Item 234)	NSN: 3040-00-119-9848	1 ea	1,575.00
15	N	**Packing Assortment, Preformed	NSN: 5330-01-191-2622	1 ea.	10.94
15	N	**Disc-Friction, Brake	NSN: 3040-01-051-3606	1 ea.	24.42
15	N	**Spring, Helical, Comp	NSN: 5360-01-268-0044	12 ea	13.13
15	N	PD12C Seal kit	NSN: 2590-01-398-5741	1 ea	60.73
15	N	**Disc, Steel	NSN: 2530-01-066-9585	1 ea	
15	Y	Master brake rebuild kit	NSN: 5330-01-F16-4572 PN: 98-015-3001 (Eskridge Inc)	3 ea	1,758.00
15	Y	**Aux Hoist Hook (Overhaul Ball)	NSN: 4030-01-572-3945	1 ea	629.31
15	N	Block, Tackle	NSN: 3940-01-566-2929	1 ea	1,425.45
15	N	**Relief Valve Cartridge	NSN: 4820-01-481-7116 PN: RPIC-LAN (Sun Hydraulics Inc)	1 ea	425.00
15	N	**Control Stand Selector Valve Assembly	NSN: 4730-01-507-3516	1 ea	1,145.21
15	N	**Bushing, Luff Cylinder	NSN: 3120-01-363-7629	4 ea	105.91
15	N	**Pin, Luff Cylinder	NSN: 5315-01-F12-2922 PN: MMD-2232	2 ea	1,576.00
21	Y	Winch, Boat Davit	NSN: 2030-01-505-1581 PN: 49396	1 ea	\$22,366.77
21	N	Capscrews, 3/4 NC x 3.5" G8	PN: 221664W	4 ea	30.00

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

21	N	Locknuts, ¾ NC G8	PN: 223188	4 ea	9.00
21	N	Wire Rope Assembly, 75', 5/8", 6x37, IWRC, EIPS	NSN: 4010-01-602-8365	1 ea	600.00
24	N	Marine Weathertight, Steel, 26"x66" w/ 14"x18" LITE, WEAT 2 Dog w/ Lock	PN: B-930812-11	1 ea.	
24	N	Marine Weathertight, Steel, 26"x66" w/ 14"x18" LITE, WEAT 2 Dog w/ Lock	PN: B-930812-11	1 ea.	
37	N	4 Ton Heat Pumps	NSN: 4120-01-F17-5298	2 ea.	3,100.00
37	N	13,500 BTU AC Unit	NSN: 4120-01-614-6103	1 ea.	1,000.00
37	N	Ceiling Mounted Fan Coil Unit	NSN: 4120-01-F18-5565	1 ea.	1,000.00

**\*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
11	Hydraulic Chain Stoppers, Inspect And Service
12	Hydraulic Inhaul Winch, Inspect And Service
13	Mechanical Chain Stoppers, Inspect and Service
15	Buoy Crane, Inspect And Service
21	Single Point Davit Winch, Replace
25	Molded Case Circuit Breakers, Inspect & Test
26	Power Circuit Breakers, Inspect, Maintain & Test

**PRINCIPAL CHARACTERISTICS - TENDER**

<b>175' WLM, BUOY TENDER</b>	
<b>PHYSICAL</b>	
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
<b>HULL</b>	
Hull material	Steel
<b>MACHINERY</b>	
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
<b>TANK CAPACITIES</b>	
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

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.**

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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

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

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

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

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

**NOTE**

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

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

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

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

3.5.1.1 USCG Generator status. The activity Generator Status for the Coast Guard Facility is Conditionally Exempt Small 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.

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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:

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

3.7.1 Change to 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/cm<sup>2</sup> or 90 ppm). Lead Based Paint (LBP) is an interchangeable term with PCL."

3.7.1.1 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))."

3.7.2 Change to Std Spec 5000, paragraph D2.2.1.1 bullet, "For running rigging, furnish class 6x37, uncoated, independent wire rope core (IWRC), right regular lay (RRL) wire rope or Dyform-18, rotation resistant wire rope," to "For running rigging, furnish class 6x36, uncoated, independent wire rope core (IWRC), right regular lay (RRL) wire rope or Dyform-18, rotation resistant wire rope."

3.7.2.1 Change to Std Spec 5000, page D-2, Table D-1 title from "DYFORM-18, 6X19 AND 6X37 IWRC RRL," to " DYFORM-18, 6X19 AND 6X36 IWRC RRL"

#### **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.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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

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

<b>CHECKPOINT 1 – COATING SYSTEM COMPLIANCE</b>			
	Ensure all coatings are in compliance with SFLC Std Spec 6310, Appendix C.		
<b>CHECKPOINT 2 - PAINT STORAGE</b>			
	Ensure all coatings are kept at a temperature of 65 to 85°F at all times, unless otherwise specified by the coating mfgr.		
<b>CHECKPOINT 3 - AMBIENT CONDITIONS</b>			
	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.		
<b>CHECKPOINT 4 - PRE-SURFACE PREPARATION</b>			
	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.		
<b>CHECKPOINT 5 - SURFACE PREPARATION</b>			
	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).		
<b>CHECKPOINT 6 - PRIMER COAT APPLICATION</b>			
	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.		
<b>CHECKPOINT 7 – STRIPE COAT APPLICATION</b>			
	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).		
<b>CHECKPOINT 8 – TOP COAT APPLICATION</b>			
	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.		
<b>CHECKPOINT 9 – FINAL INSPECTION</b>			
	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: ____/____/____		
<b>CHECKPOINT 10 – RECORD KEEPING</b>			
	Complete, sign, and submit all provided QA Inspection Forms.		
<b>NAME OF QP-1/NACE INSPECTOR</b>	<b>SIGNATURE</b>	<b>CERT. #</b>	<b>DATE / TIME</b>



USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019  
**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	<input type="checkbox"/>			
SSPC-SP WJ-1/NACE WJ-1	<input type="checkbox"/>			
SSPC-SP WJ-2/NACE WJ-2	<input type="checkbox"/>			
SSPC-SP WJ-3/NACE WJ-3	<input type="checkbox"/>			
SSPC-SP WJ-4/NACE WJ-4	<input type="checkbox"/>			
SSPC-SP-3	<input type="checkbox"/>			
SSPC-SP-11	<input type="checkbox"/>			
SSPC-SP-11 (inaccessible area)	<input type="checkbox"/>			
Brush-blasting (non-metallic substrate)	<input type="checkbox"/>			
ABRASIVE MANUFACTURER:		ABRASIVE SIEVE SIZE:		

**PLACE SURFACE PROFILE REPLICA TAPES IN THE SPACES PROVIDED BELOW, TO SERVE AS PERMANENT QA RECORD. MAINTAIN A SEPARATE LOG FOR EACH LOCATION. WHEN AN AREA IS DIVIDED INTO SEPARATE SECTIONS, MAINTAIN A SEPARATE LOG FOR EACH SECTION.**

Place Surface Profile Replica Tape Here	Place Surface Profile Replica Tape Here	Place Surface Profile Replica Tape Here
Reading (mils):	Reading (mils):	Reading (mils):
Place Surface Profile Replica Tape Here	Place Surface Profile Replica Tape Here	Place Surface Profile Replica Tape Here
Reading (mils):	Reading (mils):	Reading (mils):
Place Surface Profile Replica Tape Here	Place Surface Profile Replica Tape Here	Place Surface Profile Replica Tape Here
Reading (mils):	Reading (mils):	Reading (mils):
Place Surface Profile Replica Tape Here	Place Surface Profile Replica Tape Here	Place Surface Profile Replica Tape Here
Reading (mils):	Reading (mils):	Reading (mils):
Place Surface Profile Replica Tape Here	Place Surface Profile Replica Tape Here	Place Surface Profile Replica Tape Here
Reading (mils):	Reading (mils):	Reading (mils):
<b>MEAN MIL READING (IAW ASTM D4417-METHOD C) FOR ABOVE 15 READINGS:</b>		

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

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019  
**QA-3b - QUALITY ASSURANCE INSPECTION FORM**  
**(SURFACE PROFILE LOG FOR PROFILE MEASUREMENTS IAW ASTM D4417-METHOD-B)**

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

SURFACE PREPARATION METHOD		PROFILE ACHIEVED (MILS)		
		MIN	MAX	MEAN
SSPC-SP-10/NACE No. 2	<input type="checkbox"/>			
SSPC-SP WJ-1/NACE WJ-1	<input type="checkbox"/>			
SSPC-SP WJ-2/NACE WJ-2	<input type="checkbox"/>			
SSPC-SP WJ-3/NACE WJ-3	<input type="checkbox"/>			
SSPC-SP WJ-4/NACE WJ-4	<input type="checkbox"/>			
SSPC-SP-3	<input type="checkbox"/>			
SSPC-SP-11	<input type="checkbox"/>			
SSPC-SP-11 (inaccessible area)	<input type="checkbox"/>			
Brush-blasting (non-metallic substrate)	<input type="checkbox"/>			
<b>ABRASIVE MANUFACTURER:</b>		<b>ABRASIVE SIEVE SIZE:</b>		

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)					
<b>Mean Reading (mils) IAW ASTM DD4417).</b>					

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



USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

**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
2								
3							BEFORE ADJUSTMENTS	AFTER ADJUSTMENTS
AVG.								

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

LOCATION (FRAME REFERENCE):								
SPOT	1	2	3	4	5	OVERALL AVG. DFT	ADJUSTMENTS	
1								AVG. BMR
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 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)
EDG Service	02-77-1-F	245	25

1.2 Government-furnished property.

None.

### 2. REFERENCES

#### COAST GUARD DRAWINGS

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

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

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

#### COAST GUARD PUBLICATIONS

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

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:

- Fuel
- Piping
- Tank access cover

3.1.4.1 The Contractor shall remove up to a total of 500 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**

**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.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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. Renew any damaged or missing fasteners. Use MIL-DTL-1222 as guidance. Existing undamaged fasteners may be reused. For

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

purpose of bid, assume 10% of existing fasteners will require renewal. Renew all Nylock hex nuts.

**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 SFLC Std Spec 0740, Appendix C. Use Coast Guard Drawing 175-WLM\_601\_01, General Arrangements & 175-WLM\_801\_19, Rev C, Shell Expansion as guidance. Submit a CFR.

#### **4. NOTES**

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

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

## WORK ITEM 2: 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	NA
Void	3-52-0-V	5,000	NA
Cargo Hold Centerline Bilge	4-39-0-V	3,000	NA

1.2 Government-furnished property.

None.

### 2. REFERENCES

#### COAST GUARD DRAWINGS

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

#### COAST GUARD PUBLICATIONS

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

#### OTHER REFERENCES

ASTM International (ASTM) D1330, 2004, 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), 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.

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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). The Contractor shall renew up to 10% of missing or damaged 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.

## **4. NOTES**

This section is not applicable to this work item.

## **WORK ITEM 3: 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

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.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

Not applicable.

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

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

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

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

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

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

**NOTE**

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

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

3.5 Cleaning. The Contractor shall clean the interior surfaces of the exhaust piping and stack uptakes to the MDE, shown on Coast Guard Drawings 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,

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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

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

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

3.6.1 Following cleaning of the interior of each exhaust pipe system, the Contractor shall demonstrate completeness of the cleaning process to the Coast Guard Inspector, showing that the entire length of exhaust piping 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 4: 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

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.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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 disturbed flange connection gaskets with suitable high temperature, non-asbestos-containing gasket materials; and renew all disturbed 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 5: Vent Ducts (Engine And Motor Room All), Commercial Cleaning**

### **1. SCOPE**

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

1.2 Government-furnished property.

None.

### **2. REFERENCES**

#### **COAST GUARD DRAWINGS**

Coast Guard Drawing 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

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.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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.**

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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 6: 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

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.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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 conditions. 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.

**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 7: 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

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.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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 8: 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

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.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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, 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

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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 9: 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

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 SFLC Std Spec 0740, Appendix C, "Hydrostatic Test". Ensure zero leakage from or permanent deformation of pressure-containing parts by repairing all leaks, deformations, and discrepancies. Submit a CFR. 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.

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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 10: 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
8	Pad Eye and D-Ring, Flush Deck (S-A S113)	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
16	Pad Eye and D-Ring, Flush Deck (S-A S113)	Buoy Deck, 111" Off CL, P/S
16	Pad Eye and D-Ring, Flush Deck (S-A S113)	Buoy Deck, 51" Off CL, P/S
2	Pad Eye and D-Ring, Flush Deck (S-A S113)	Buoy Deck, CL between Frames 45 and 50
4	Pad Eye, Flush Deck (S-A S299)	Cargo Hold, Frame 28, P/S
6	Pad Eye, Flush Deck (S-A S299)	Cargo Hold, Frame 30, P/S
6	Pad Eye, Flush Deck (S-A S299)	Cargo Hold, Frame 32, P/S
6	Pad Eye, Flush Deck (S-A S299)	Cargo Hold, Frame 34, P/S

1.2 Government-furnished property.

None.

### 2. REFERENCES

#### COAST GUARD DRAWINGS

Coast Guard Drawing 175 WLM 573-8, Rev -, ATON Tie Downs

## COAST GUARD PUBLICATIONS

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

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2014,  
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

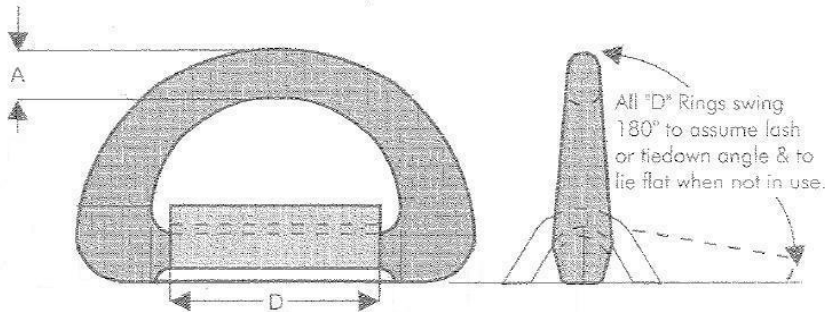
USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

center of bar of the S301 and S299 fittings. See Table 2 and the sketches provided in this work item as guidance, as applicable.

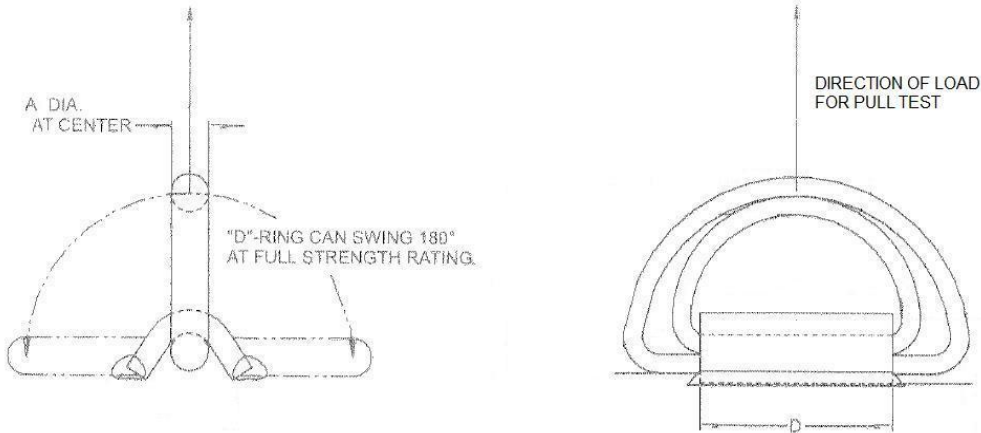
**TABLE 2. HULL FITTING MEASUREMENTS**

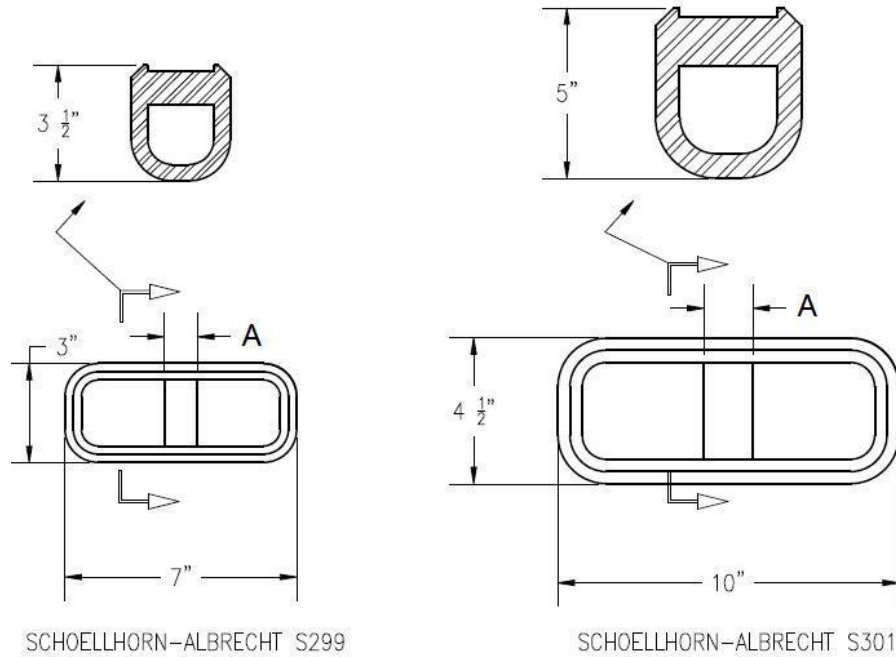
MANUFACTURER	MODEL/MANUFAC. PART NUMBER		RING/BAR DIAMETER (MEASUREMENT A) (INCHES)	
	DESIGNATOR	STRAP LENGTH (MEASUREMENT D) (INCHES)		
Schoellhorn-Albrecht	S113-50 (Generation 1)	5.0	1.00*	
	S113-50 (Generation 2)	4.00	1.08	
	S113-50 (Generation 3)	5.13	1.00	
		S301		1.5
		S299		1.0
Peck and Hale		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.



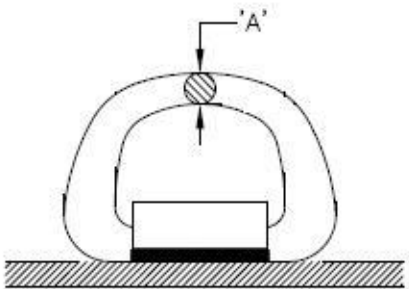
**Sketch 1. Schoellhorn-Albrecht S113-50 (Generation 1) D-Ring and Strap.**



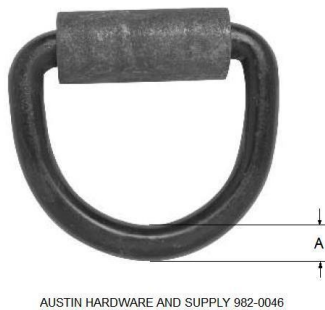


Sketch 2. Schoellhorn-Albrecht

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.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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

**4. NOTES**

This section is not applicable to this work item.

**WORK ITEM 11: 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.

<b>M T I</b>	<b>ITEM DESCRIPTION</b>	<b>NSN/PN</b>	<b>QTY</b>	<b>ESTIMAT ED COST (\$/UNIT)</b>
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	4 ea.	1,969.24

**2. REFERENCES****COAST GUARD DRAWINGS**

Coast Guard Fleet Drawing FL-2605-29, Rev L, 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 Modifications 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

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2014, 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

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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	Renew		Hose Assemblies	C2.2	
6	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 holdback blocks. 3. Submit a CFR.
7	Preserve	2	Hydraulic Chain	3.2.4 (Preservation)	Finish coat color:

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

				ADDITION REQUIREMENTS	
#	TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
			Stopper Assembly, including Foundation and Chain Stopper Pockets.		1. Chain stopper: Black (17038) 2. Foundation: Gray (16099).
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 12: 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
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 E, Onboard Lubrication Requirements

Coast Guard Drawing 175-WLM 573-001, Rev R, 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
- Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2014, 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.

Not applicable.

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

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

**NOTE**

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

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

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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**

<b>ADDITIONAL REQUIREMENTS</b>					
<b>#</b>	<b>TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)</b>	<b>QTY</b>	<b>COMPONENT OR ASSEMBLY</b>	<b>APPENDIX AND PARA. FROM SFLC STD SPEC 5000</b>	<b>OTHER</b>
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 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

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

ADDITIONAL REQUIREMENTS					
#	TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
					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 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

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

ADDITIONAL REQUIREMENTS					
#	TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
					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 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)	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

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

ADDITIONAL REQUIREMENTS					
#	TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
					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 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**

<b>ADDITIONAL REQUIREMENTS</b>					
<b>#</b>	<b>TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)</b>	<b>DESIGNATED TASK</b>	<b>COMPONENT OR ASSEMBLY</b>	<b>APPENDIX AND PARA. FROM SFLC STD SPEC 5000</b>	<b>OTHER</b>
	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 Externally Installed Hose Assemblies	C2.2 (Hose Assemblies)	

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

	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.
X	Disassemble and Inspect	1	Level Wind Arm Pivot Pin Assembly	3.2.3 (Disassemble and Inspect)	Submit a CIR.
	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.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

	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.

## WORK ITEM 13: 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

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

Coast Guard Technical Publication (TP) 3749, 26-APR-05, 1-7/8 Inch ATON Mechanical Chain Stopper

#### 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).

3.1.5 Breakdown GFP kit. Pin and bushing kits contain the following parts, typically: Spring assembly pin, SS washers, SS hex bolt, end hinge pins, middle hinge pins, lock hinge pin, grease fittings and five (5) bronze bushings. At the installation of each bronze pushing the Contractor shall drill a hole to line up with grease fitting in accordance with Coast Guard Drawing FL 2605-033 and FL 2605-034. Clean each pushing after drilling.

3.2 Repair particulars. The Contractor shall use Coast Guard Drawing FL2605-31, FL 2605-034 and TP-3749 for reference, and perform all tasks in TABLE 1.

**TABLE 1 – REPAIR TASKS**

				<b>ADDITIONAL REQUIREMENTS</b>	
<b>#</b>	<b>TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)</b>	<b>QTY</b>	<b>COMPONENT OR ASSEMBLY</b>	<b>APPENDIX AND PARA. FROM SFLC STD SPEC 5000</b>	<b>OTHER</b>
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.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

#	TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)	QTY	COMPONENT OR ASSEMBLY	ADDITIONAL REQUIREMENTS	
				APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
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 Lubricate	2	Mechanical Chain Stopper Assembly	3.2.6 (Groom and 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 14: Hull Fittings (Mooring and Towing), Inspect and Test

### 1. SCOPE

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

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

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

2	Chock, Deck Mounted, (PanamaType) 12" x 10"	01 Deck, Frame 72, P/S	Coast Guard Drawing 175 WLM 582
1	Bitt, Double, 12"	01 Deck, Frame 77, Port	Coast Guard Drawing 175 WLM 582
1	Towing Bitt, 14" Sch 120 Pipe	01 Deck, Frame 90, CL	Coast Guard Drawing 175 WLM 582
2	Chock, Deck Mounted, (PanamaType) 12" x 10"	01 Deck, Frame 93, P/S	Coast Guard Drawing 175 WLM 582
2	Bitt, Double, 12"	01 Deck, Frame 96, P/S	Coast Guard Drawing 175 WLM 582
2	Chock, Deck Mounted, (PanamaType) 12" x 10"	01 Deck, Frame 100, P/S	Coast Guard Drawing 175 WLM 582
1	Tow Rail and Posts, 8" Sch 120 pipe	01 Deck, Along Transom	Coast Guard Drawing 175 WLM 582

1.2 Government-furnished property.

None.

## 2. REFERENCES

### COAST GUARD DRAWINGS

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

### COAST GUARD PUBLICATIONS

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

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

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

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

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

### 4. NOTES

This section is not applicable to this work item.

## WORK ITEM 15: 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	Valve Assembly, Manifold	NSN: 4810-01-506-7738	1 ea.	19,892.60
N	Bushing, Heel	NSN: 5365-01-F12-2920	4 ea	81.00
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 and 234)	NSN: 3040-00-119-9848	2 ea	1,500.40
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	**Packing Assortment, Preformed	NSN: 5330-01-191-2622	1 ea.	10.94
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	100.00
Y	Master brake rebuild kit	NSN: 5330-01-F16-4572 PN: 98-015-3001 (Eskridge Inc)	3 ea	1,758.00
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

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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 T; Buoy Deck Arrangement  
Coast Guard Drawing 175-WLM 549-1, Rev C, 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  
Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2014,  
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 qualified 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.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

**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, 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. Renew all disturbed seals.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
6	Service and Inspect	1	Aux 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.
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.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

#	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)	
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	1	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.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
26	Fabricate and Install	1	Label plate	B2.9 (Label plates)	
27	Weatherize	All	Hose fittings	C2.2.1.2.2 (Weatherization).	

3.3 Filtering buoy crane hydraulic system using Contractor filter cart. The Contractor shall furnish a minimum 5gpm filtering cart/rig equipped with a three-micron absolute filter, a water separator, and a pressure differential gage across the filter element assembly. Connect the supply and discharge lines of the filtering cart/rig to the hydraulic system located in HPUs compartment.

**NOTE**

**The best connection points will minimize filtering time and will maximize the rate at which previously unfiltered fluid passes through the rig/cart. Select points at opposite ends of the reservoir if possible.**

3.3.1 Continuously circulate system hydraulic fluids through the filtering cart/rig for the period of a minimum of three complete cycles and then take hydraulic oil sample. Be aware that the Coast Guard Inspector shall be allowed to cycle the system actuators four separate times as described in the notice below during the filtering process.

**NOTE**

**To dislodge and suspend particulate contamination and to heat the fluid to a maximum, constant, steady state temperature, the Coast Guard inspector will cycle all actuators associated with the hydraulic system for a minimum of 20 minutes at the start of the filtering process. The Coast Guard Inspector will repeat this process a minimum of three additional times, equally spaced through the filtering period.**

3.3.2 The Contractor shall renew the filter element as required and whenever the pressure differential across the filter element exceeds the filter element manufacturer’s specifications.

3.3.3 The Contractor shall furnish a portable oil sample particle counting analyzer. All oil samples shall be immediately tested with the portable analyzer onboard the Cutter. Submit CFR.

3.3.4 Whenever a noticeable increase in the pressure drop across the filter cart is observed, the filter should be renewed. Be aware that this may occur as frequently as 15 min intervals.

3.3.5 During filtering, constant monitoring of the filtering oil must be maintained in order to determine the contamination level. Filtering shall continue until the fluid entering the return filter meets the particle population ISO cleanliness code of 19/17/14, in accordance with ISO 4406. In addition, the Contractor shall visually inspect return filter for contamination and submit CFR.

3.3.6 The Contractor shall furnish return filters as required. The Contractor shall dispose all used filters in accordance with all rules and regulations.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

3.3.7 Take a representative sample of oil from the hydraulic system in accordance with (SFLC Std Spec 5000) paragraph C2.1.3. Send sample out to a laboratory for oil analysis. Analysis shall include viscosity, moisture, total acid number, particle size and population in sufficient detail to determine ISO cleanliness code of 19/17/14, in accordance with ISO 4406. Submit CFR.

3.4 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**

<b>X</b>	<b>TASK TYPE</b>	<b>QTY</b>	<b>COMPONENT OR ASSEMBLY</b>	<b>APPENDIX AND PARA. FROM SFLC STD SPEC 5000</b>	<b>OTHER</b>
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
	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.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

<b>X</b>	<b>TASK TYPE</b>	<b>QTY</b>	<b>COMPONENT OR ASSEMBLY</b>	<b>APPENDIX AND PARA. FROM SFLC STD SPEC 5000</b>	<b>OTHER</b>
	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.
	Service and Inspect	1	Swing Angle Sensor, Boom Angle Sensor, and Rotary Limit Switch	3.2.3 (Service and Inspect)	Submit a CFR.
	Service and Inspect	2	Anti-Two-Block Limit Switches	3.2.3 (Service and Inspect)	Submit a CFR.
	Renew	1	AuxWinch 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 16: Grey Water Holding Tank(s), Clean and Inspect

### 1. SCOPE

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

**TABLE 1 – TANKS**

TYPE OF TANK	LOCATION	CAPACITY - 95% (Gallons)	LOW SUCTION (Gallons)
Grey Water Collection Tank	3-83-1-W	2,822	200
Grey Water Collection Tank	3-83-2-W	2,822	200

1.2 Government-furnished property.

None.

### 2. REFERENCES

#### COAST GUARD DRAWINGS

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

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

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

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

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

#### COAST GUARD PUBLICATIONS

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

## OTHER REFERENCES

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

## 3. REQUIREMENTS

### 3.1 General.

#### 3.1.1 CIR.

None.

#### 3.1.2 Tech Rep.

Not applicable.

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

3.1.3.1 Plug all inlet and outlet piping in the tank(s) to prevent contaminants from entering. Use plugs with an attached lanyard, ring or other system that will ensure plugs are not lost in the pipe openings. Maintain a plug accountability log outside the tank to prevent any of the installed temporary plugs from being lost inside the tank or forgotten inside at tank closure. Submit this log to the Coast Guard Inspector after completion of work item.

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

- Piping.
- Pump(s).
- 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.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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

3.4.2 Cleaning requirements. Remove manhole cover(s). Clean all tank structure's interior surfaces free of all foreign materials, sediment, and sludge. Remove all persistent residues, taking care not to damage the tank coating system. Remove cleaning media and residues continuously from the tank during the washing process. Remove any residual wash media and wipe up residual moisture with clean lint-free cloths. Collect, contain, and dispose of all wash media, residues, and cleaning materials in accordance with all Federal, state, and local regulations. Clean all tank vent lines. Remove and clean the eductors and level switches inside of the tank(s). Reinstall the eductors and level switches upon completion of tank cleaning. Use new gaskets and o-rings to install/reinstall all removed/disturbed components.

3.5 Inspection. The Contractor shall visually inspect all interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Submit the Tank and Void Inspection Form, and a CFR including the following, as applicable:

- Tank structural condition.
- Inaccessible areas.
- Condition of tank coating, including measurements taken, percentage, location, and type of coating failure (not applicable for stainless steel tanks).
- Tank level indicator (TLI), vacuum and/or float switch condition.
- Suction and discharge piping and vent line condition.
- Fastener material (stainless steel) and condition.
- Zinc anode condition (remaining percentage).

3.6 Control Panel Assembly. The Contractor shall open and vacuum clean the control panel assembly. Inspect the control panel assembly for any indications of overheating or loose wiring or connections. Submit a CFR

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

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

**NOTE**

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

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

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

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

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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

### **4. NOTES**

This section is not applicable to this work item.

## WORK ITEM 17: Sewage Holding Tank(s), Clean and Inspect

### 1. SCOPE

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

**TABLE 1 – TANKS**

TYPE OF TANK	LOCATION	CAPACITY - 95% (Gallons)	LOW SUCTION (Gallons)
Sewage Holding Tank	2-84-2-W	847	200
Vacuum Collection Tank	2-82-2-W	330	20

1.2 Government-furnished property.

None.

### 2. REFERENCES

#### COAST GUARD DRAWINGS

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

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

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

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

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

#### COAST GUARD PUBLICATIONS

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

#### OTHER REFERENCES

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

### 3. REQUIREMENTS

#### 3.1 General.

##### 3.1.1 CIR.

None.

##### 3.1.2 Tech Rep.

Not applicable.

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

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

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

- Piping.
- Pump(s).
- 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.

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

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

3.4.2 Cleaning requirements. Remove manhole cover(s). Clean all tank structure's interior surfaces free of all foreign materials, sediment, and sludge. Remove all persistent residues, taking care not to damage the tank coating system. Remove cleaning media and residues continuously from the tank during the washing process. Remove any residual wash media and wipe up residual moisture with clean lint-free cloths. Collect, contain, and dispose of all wash media, residues, and cleaning materials in accordance with all Federal, state, and local regulations. Clean all tank vent lines. Remove and clean the eductors and level switches inside of the tank(s). Reinstall the eductors and level switches upon completion of tank cleaning. Use new gaskets and o-rings to install/reinstall all removed/disturbed components.

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

- Tank structural condition.
- Inaccessible areas.
- Condition of tank coating, including measurements, percentage, location, and type of coating failure (not applicable for stainless steel tanks).
- Tank level indicator (TLI), vacuum and/or float switch condition.
- Suction and discharge piping and vent line condition.
- Fastener material (stainless steel) and condition.
- Zinc anode condition (remaining percentage).

3.4.4 Control panel assembly. Open and vacuum clean the control panel assembly. Inspect the control panel assembly for any indications of overheating or loose wiring or connections. Submit a CFR

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

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

**NOTE**

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

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

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

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

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

**4. NOTES**

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 18: 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 and Waste Water System Diagram

#### COAST GUARD PUBLICATIONS

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

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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

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

- Sewage pumps
- Toilets

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

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

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

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

### CAUTION

**Although the Coast Guard prefers pressurized water as the cleaning fluid, the Contractor may propose chemical cleaning as an alternative, providing that the proposed chemical cleaning agent 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.

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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

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

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

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

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

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

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

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

### NOTE

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

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

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

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

## 4. NOTES

This section is not applicable to this work item.

## WORK ITEM 19: Accessible Void(s), Preserve “Partial”

### 1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to prepare and coat the following:

**TABLE 1 – VOIDS**

TYPE OF STRUCTURE	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)	% OF TANK COATING REPAIR
Void	3-18-0-T	2,000	NA	33%
Void	3-52-0-V	5,000	NA	33%
Cargo Hold Centerline Bilge	4-39-0-V	3,000	NA	33%

1.2 Government-furnished property.

None.

### 2. REFERENCES

#### COAST GUARD DRAWINGS

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

#### COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, 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 8636 (SFLC Std Spec 8636), 2014, Temporary Hull Accesses

#### OTHER REFERENCES

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

### 3. REQUIREMENTS

3.1 General. The Contractor shall accomplish the following for the tanks designated in paragraph 1.1 (Intent). The Contractor shall refer to 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 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 Tank content removal. The Contractor shall remove and dispose of all tank contents in accordance with all applicable Federal, State, and local regulations.

3.2 Surface preservation. The Contractor shall remove and retain the manhole covers. Prepare and coat designated tank (see paragraph 1.1 (Intent)) interior surfaces using the system specified in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Paint Systems) and as follows:

- For voids use the system specified for “Tanks and Voids, General, Option I”.
- 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”.

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.

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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

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 CFR.
- Close tank manhole cover(s) with new gasket material conforming to ASTM D1330 and new cotton stud grommets (as applicable).
- Renew 100% of nylon insert/nylock nuts and washers.

3.6 Ultrasonic thickness (UT) measurement. If a Change Request has been authorized and released by the KO, the Contractor shall take a total of 100 UT measurements of the exposed void plating in locations designated by the Coast Guard Inspector, in accordance with SFLC Std Spec 0740, Appendix C. Submit a CFR.

## 4. NOTES

This section is not applicable to this work item.

## WORK ITEM 20: Single Point Davit Winch, Replace

### 1. SCOPE

1.1 Intent. The intent of this item is to replace Allied Single Point Davit (SPD) Winch P/N 42323 with Allied SPD winch PN 49396. The Allied SPD winch P/N 42323 has been declared obsolete.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST (\$/UNIT)
Y	Winch, Boat Davit	NSN: 2030-01-505-1581 PN: 49396	1 ea	\$22,366.77
N	Capscrews, 3/4 NC x 3.5" G8	PN: 221664W	4 ea	30.00
N	Locknuts, 3/4 NC G8	PN: 223188	4 ea	9.00
N	Wire Rope Assembly, 75', 5/8", 6x37, IWRC, EIPS	NSN: 4010-01-602-8365	1 ea	600.00

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

### 2. REFERENCES

#### COAST GUARD DRAWINGS

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

Coast Guard Drawing 175-WLM 601-1, Rev G, General Arrangement, Inboard and Outboard Profiles

#### COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3632, 07-JAN-97, Manufacturers Instruction Book-SWBS Group(s) 582-583

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

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

### 3. REQUIREMENTS

#### 3.1 General.

3.1.1 CIR. The Contractor shall submit a CIR for the inspections listed in the following locations:

- Table 1 Task 1

3.1.2 Tech Rep. The Contractor shall provide the services of a qualified Tech Rep who is familiar with the Allied SPD model D6000FCT to do the following, on site:

- Advise on manufacturer's proprietary information pertinent to the system.
- Assist with proper installation, calibration, and operation.
- Ensure compliance with manufacturer's procedures and standards during winch installation and operation.

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

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

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

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

**NOTE**

**Plastic bags may be used only when arrangement or configuration prevents the use of the other sealing methods specified above.**

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

- Piping
- Electrical wiring
- Small Boat

3.2 Tasks to be accomplished. The Contractor shall perform the tasks designated in Table 1 below in accordance with SFLC Std Spec 5000, TP-3632, CG Dwgs 175-WLM 549-1, and 175-WLM 601-1.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

**TABLE 1- TASKS**

#	TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
1	Operate and Inspect	1	SPD Assembly	3.2.1 (Operate and Inspect)	Submit a CIR.
2	Remove	1	Wire Rope Assembly 4010-01-602-8365		Remove wire rope and discard as scrap.
3	Remove	All	Winch Hard Piping		Remove all winch piping and discard as scrap.
4	Disconnect, remove, clean, and inspect	1	SPD Winch Assembly component		Remove the downstop control mechanism from the winch, clean and inspect for reuse. Submit CFR.
5	Unbolt, remove, and turn-in Installed Winch	1	SPD Winch PN 42323	3.1.6 (Turn-in)	Turn-in to the CG inspector for disposition.
6	Clean, and Inspect	1	SPD Winch foundation plate		Submit CFR.
7	Enlarge Holes	4	SPD Winch mounting holes/foundation		Drill mounting holes in the davit winch base plate to 0.810 inch to accept ¾ inch winch mounting bolts. Ensure that fleet angle will not change.
8	Check	1	SPD Winch P/N: 49396		Check Oil Levels
9	Partially preserve	1	SPD Winch foundation plate	3.2.4.2 (Partially Preserve)	
10	Install Replacement Winch	1	SPD Winch PN 49396		GFP, Torque each mounting bolt to 340 ft-lb, dry.
11	Install	1	SPD Winch Assembly component		Downstop Control Mechanism
12	Fabricate and Install	5	Hydraulic hoses Assembly	C2.2 (Hose assemblies)	Fabricate and install all hoses in accordance with Std Spec 5000.
13	Hydrostatic test	5	Hydraulic hoses Assembly		Hydrostatically test to 200% of working pressure.
14	Fabricate and Install	5	Hose Label Plate		Hose label plate in accordance with Std Spec 5000.
15	Partially preserve	1	SPD Assembly	3.2.4.2 (Partially Preserve)	Disturbed area.
16	Install Wire Rope	1	Wire Rope Assembly 4010-01-602-8365		GFP
17	Groom and Lubricate	1	SPD Assembly	3.2.6 (Groom and Lubricate)	
18	Operational test and	1	SPD Assembly	B2.7 (Davit)	No-load operational test. Static Load Test Weight:

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

#	TASK TYPE (SFLC STD SPEC 5000 PARA. REF.)	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND PARA. FROM SFLC STD SPEC 5000	OTHER
	Weight Test				6,000 (+300, -0) pounds Dynamic Load Test Weight: 5,000 (+250, -0) pounds Rated Load Test Weight: 4000 (+0, -200) pounds Submit CFR.)
19	Fabricate and Install	1	Label Plate	B2.9 (Label Plates)	
20	Weatherize	5	Hose fittings	C2.2.1.2.2 (Weatherization)	

**4. NOTES**

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

## WORK ITEM 21: 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)
Port, STBD, and Aft Bulkhead	3-88-0-E	200
FWD Bulkhead behind console	01-50-0-C	10
STBD bulkhead and Overhead	01-76-0-L	10
Overhead	01-83-2-L	10
Forward Bulkhead	1-52-1-L	10
Aft Bulkhead, Port side	2-52-0-C	10
Port bulkhead, Forward	3-61-0-E	150
Starboard Bulkhead	3-79-0-E	20
Overhead by Scuttle	3-42-0-Q	20
Overhead on centerline	3-24-0-AA	100
Port Bulkhead	3-15-0-E	100
All Insulation	1-70-1-Q	40

1.2 Government-furnished property.

None.

### 2. REFERENCES

#### COAST GUARD DRAWINGS

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

#### COAST GUARD PUBLICATIONS

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):

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 insulation identified in Table 1. Refer to the drawing listed in Section 2 for guidance.

3.2.1 Removal. Remove all existing insulation material.

3.2.2 Disposal. Dispose of all removed materials, in accordance with all applicable Federal, state, and local regulations.

3.2.3 Surface preservation. Prepare and coat all designated/exposed surfaces, including adjacent structural members, 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 SSLC-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 and acoustic insulation installation. Install new faced thermal and acoustic insulation material, over plating surfaces and structural members identified in Table 1, as shown on NAVSEA Drawing 804-5773931. 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 22: Deck Covering (Interior Wet/Dry), Renew**

### **1. SCOPE**

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

1.2 Government-furnished property.

None.

### **2. REFERENCES**

#### **COAST GUARD DRAWINGS**

Coast Guard Drawing 175-WLM\_635\_1, Rev F, Hull Thermal & Acoustic Insulation Schedule

#### **COAST GUARD PUBLICATIONS**

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, 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 6341 (SFLC Std Spec 6341), 2014, Install Interior Deck Covering 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 paragraph(s):

None.

3.1.2 Tech Rep.

Not applicable.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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.

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

NOTES
<p><b>1. The exposed deck surfaces are prepared and coated in accordance with SFLC Std Spec 6310. Refer to SFLC Std Spec 6341, Para 3.2.1.2 for additional information.</b></p> <p><b>2. Ensure the final surface condition of the deck is made “slip resistant” in accordance with manufacturer's installation procedures. Refer to SFLC Std Spec 6341, Para A2.1.2.2.</b></p>

**TABLE 1 - DECKING SYSTEM**

LOCATION	AREA (*SQFT)	DECK MTL (A/S**)	SYSTEM/ APPENDIX (SFLC STD SPEC 6341)	COVE BASE	SYSTEM COLOR	UNDERLAYMENT REQUIREMENT
CO's Head 01-66-1-L	30	S	Cosmetic Polymeric Epoxy Resin, Type III (One-Step Epoxy System)/Appendix A	N	See paragraph 3.4	Renew existing underlayment. {or} Retain existing underlayment.
EPO/XPO Head	50	S	Cosmetic Polymeric Epoxy Resin, Type III (One-Step Epoxy System)/Appendix A	N	See paragraph 3.4	Renew existing underlayment. {or} Retain existing underlayment.
First Class Head	56	S	Cosmetic Polymeric Epoxy Resin, Type III (One-Step Epoxy System)/Appendix A	N	See paragraph 3.4	Renew existing underlayment. {or} Retain existing underlayment.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

Second Class head	56	S	Cosmetic Polymeric Epoxy Resin, Type III (One-Step Epoxy System)/Appendix A	N	See paragraph 3.4	Renew existing underlayment. {or} Retain existing underlayment.
Third Class/ Non-Rate head	60	S	Cosmetic Polymeric Epoxy Resin, Type III (One-Step Epoxy System)/Appendix A	N	See paragraph 3.4	Renew existing underlayment. {or} Retain existing underlayment.
Female head	50	S	Cosmetic Polymeric Epoxy Resin, Type III (One-Step Epoxy System)/Appendix A	N	See paragraph 3.4	Renew existing underlayment. {or} Retain existing underlayment.

\*Approximated.

\*\*Note: A = Aluminum; S = Steel.

\*\*\*See SFLC Std Spec 6341 for definition of cove base.

3.3 Ultrasonic thickness (UT) measurement. The Contractor shall take a total of 50 UT measurements of decking, in locations designated by the Coast Guard Inspector, in accordance with SFLC Std Spec 0740, Appendix C. Use Coast Guard Drawing {175-WLM\_635\_1} as guidance. Submit a CFR.

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

#### 4. NOTES

This section is not applicable to this work item.

## WORK ITEM 23: Watertight Doors and Scuttles (External), Renew

### 1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew the external watertight doors and scuttles identified in Table 1.

**TABLE 1 - WATERTIGHT DOORS AND SCUTTLES LOCATIONS**

DESCRIPTION	LOCATION	DRAWING
Marine Weathertight, Steel, 26"x66" w/ 14"x18" LITE, WEAT 2 Dog w/ Lock	Crane Shack Port	NAV SEA DWG FL-1602-48 REV C Item 14
Marine Weathertight, Steel, 26"x66" w/ 14"x18" LITE, WEAT 2 Dog w/ Lock	Crane Shack STBD	NAV SEA DWG FL-1602-48 REV C Item 15

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST (\$/UNIT)
N	Marine Weathertight, Steel, 26"x66" w/ 14"x18" LITE, WEAT 2 Dog w/ Lock	PN: B-930812-11	1 ea.	
N	Marine Weathertight, Steel, 26"x66" w/ 14"x18" LITE, WEAT 2 Dog w/ Lock	PN: B-930812-11	1 ea.	

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

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

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

### 2. REFERENCES

#### COAST GUARD DRAWINGS

None.

#### COAST GUARD PUBLICATIONS

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

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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**

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

The Society for Protective Coatings (SSPC)/NACE International (NACE) 2006, Joint Surface  
Preparation Standard SSPC-SP 10/NACE No.2, Near-White Blast Cleaning

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.11 (SSPC-SP  
11), 2012, Power Tool Cleaning to Bare Metal

**3. REQUIREMENTS**

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

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

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

**NOTE**

**Geometric dimensioning and tolerance variances and minor hardware differences are to be expected with the Government-furnished closures. These variances and differences are not limited to the following: location and physical size of the hinge assemblies; location, physical size, and number of flush mounted pockets; location, size, and orientation of securing devices.**

3.2 Renewal. The Contractor shall crop, remove, and dispose of the doors and scuttles identified in Table 1 of this work item, including the associated coaming in accordance with SFLC Std Spec 0740.

3.2.1 Install GFP doors and scuttles in place of those removed. When GFP doors and scuttles are not provided, the Contractor shall fabricate and install a new door or scuttle.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

3.2.2 Perform all necessary modifications not limited to relocation, fabrication and installation of a new securing device, and modifications to ensure all renewed items properly fit and function.

3.2.3 At the direction of the Coast Guard Inspector, perform all necessary relocation and modification of securing latches.

3.2.4 Provide and install new gaskets and fasteners for each new installation identified in Table 1.

3.3 Testing. Upon complete renewal of each structural closure, the Contractor shall perform the following boundary tests and submit a CFR:

- chalk test
- water hose test

**NOTE**  
**Do not paint knife-edges, gaskets, or any moving parts; including dogs, nuts, wedges, spindles, yokes, packing, connecting rods and hinge pins.**

3.4 Preservation. The Contractor shall prepare and coat the surfaces of all installed items identified in Table 1 of this work item, and all disturbed surfaces to match existing adjacent area, in accordance with Table 2 and as determined by the surface material to be preserved.

**TABLE 2 – SURFACE PREPARATION AND COATING**

SURFACE	PREPARATION		COATING	
	STEEL	ALUMINUM	STEEL	ALUMINUM
DOOR EXTERIOR/ SCUTTLE TOP	SSPC-SP10/NACE No. 2, using grit conforming to MIL-A-22262 (1.5 to 2.5 mil anchor profile) -Or- SSPC-SP 11 (1.0 mil anchor profile)	Brush blast to bare metal with clean, fine aluminum oxide, garnet or equivalent inert material conforming CID A-A-59316, Type I & IV (1.0-1.5 mil anchor profile). -Or- Power tool clean, using non-metallic abrasive padding, to remove all coatings and contamination.	SFLC Std Spec 6310, Appendix A (Cutter and Boat Exterior Painting Systems)	
DOOR INTERIOR/ SCUTTLE BOTTOM	SSPC-SP 11 (1.0 mil anchor profile)	Power tool clean, using non-metallic abrasive padding, to remove all coatings and contamination.	SFLC Std Spec 6310 , Appendix B (Cutter and Boat Interior Painting Systems) “Door, Joiner, Option I”	

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

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

- Closures are properly secured, to prevent accidental or unintentional movement.
- Securing latches adequately engage closures and positively lock into place without excessive force or manipulation by the operator.

### **4. NOTES**

4.1 Damage control decals. Ship's force will apply damage control decals.

## **WORK ITEM 24: Molded Case Circuit Breakers, Inspect & Test**

### **1. SCOPE**

1.1 Intent. This work item describes the requirements for the Contractor to inspect and test molded case circuit breakers on the Ship Service and Emergency Switchboards that were designed and tested to UL 489 standards.

1.2 Government-furnished property.

None.

### **2. REFERENCES**

#### **COAST GUARD DRAWINGS**

Coast Guard Drawing 175-WLM 320-1, Rev AF, Electrical One-Line Diagram

#### **COAST GUARD PUBLICATIONS**

Surface Forces Logistics Center Standard Specification (SFLC Std Spec) 0000, 2012, General Requirements

Surface Forces Logistics Center Standard Specification (SFLC Std Spec) 3042, 2012, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation

Coast Guard Technical Publication (TP) 3619, Mar 2001 Switchboard, Ship Service & Emergency

#### **OTHER REFERENCES**

American National Standards Institute/National Electrical Manufacturers Association (ANSI/NEMA) AB 4, Mar 2011, Guidelines for Inspection and Preventive Maintenance of Molded Case Circuit Breakers Used in Commercial and Industrial Applications

American National Standards Institute/Underwriters Laboratories Inc. (ANSI/UL) 489, Molded Case Circuit Breakers, Molded-Case Switches and Circuit-Breaker Enclosures, Jan 2013

### **3. REQUIREMENTS**

3.1 General.

3.1.1 CIR. Submit a CIR for the inspections and test listed in the following paragraph(s):

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

- 3.3.1 (Inspection).
- 3.3.3 (Testing).

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. Handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.1.5 Notify the Coast Guard Inspector 48 hours prior to starting work on this item.

3.1.6 Outages. Coordinate the disconnection and removal of the circuit breakers listed in Table 1 below with the Coast Guard Inspector to ensure orderly shutdown of equipment. Providing temporary circuit breakers or temporarily relocating circuit breakers from non-essential circuits to essential circuits (same frame size and trip settings) are acceptable strategies to minimize outage durations. When power interruption is expected to exceed 15 minutes, secure uninterruptable power supplies and supported loads.

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

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

3.1.7.2 Fire (circuits F and SM), flooding (circuit FD), and general (circuit G) alarms.

3.1.7.3 Main announcing (circuit 1MC) and dial telephone (circuit J) systems.

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

3.1.7.5 Electric fire pump (unless temporary firefighting water supply is connected).

3.2 Removal.

3.2.1 For a circuit breaker that is locked out and/or tagged out (caution or danger tag), typically in support of another work item, complete the tasking requiring the isolation or shift the work isolation boundary so that the lock and/or tags may be cleared. When shifting the isolation boundary is the only feasible option, such is typically accomplished by opening a local disconnect switch or temporarily disconnecting the feeder cable in accordance with SFLC Std Spec 3042. Ensure that a new lock and/or tag are installed at the new isolation boundary prior to clearing those from the circuit breaker to be removed.

3.2.2 Prior to the removal of each circuit breaker listed in Table 1 below, record location (position or circuit identifier), wiring information, and if adjustable, as found pickup and time delay settings. Retain all mounting and connecting hardware for later reuse. Submit a CFR with all recorded data to the Coast Guard Inspector.

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

3.2.3 Disconnect and remove the circuit breakers (except spares) listed in Table 1 below. Temporarily cover or insulate switchboard or panel board openings created by the removal of circuit breakers to prevent personnel contact with energized conductors and the entry of debris from other ongoing industrial activities.

### 3.3 Shop Work.

3.3.1 Inspection. Perform the visual external inspections and preventive maintenance tasks of ANSI/NEMA AB 4, Sections 4 and 5, respectively. Note that the exposed face temperature check is performed with the circuit breaker load(s) energized to the maximum current encountered under normal operating condition.

3.3.1.1 Record any deficiencies found, including those corrected on the spot.

3.3.1.2 Submit a CFR with repair or renewal recommendations to the Coast Guard Inspector.

3.3.2 Repairs. When authorized by the COTR, repair deficient circuit breaker(s) that will not be renewed.

3.3.3 Testing. After satisfactory visual inspection and completion of any authorized repair work, test each circuit breaker listed in Table 1 as directed below. New circuit breakers, manufactured within 4 years of installation and obtained from OEM authorized distribution channels, need only be mechanically cycled five times and not tested further.

3.3.3.1 Perform the following tests of ANSI/NEMA AB 4, Section 6:

- Mechanical operation
- Insulation resistance
- Individual pole resistance (millivolts drop)
- Inverse-time overcurrent trip (not applicable to devices with instantaneous trip only)
- Instantaneous overcurrent trip
- Rated hold-in current

3.3.3.2 Short-time overcurrent trip. This test is applicable only if the circuit breaker is equipped with a short-time delay trip. This test should be conducted at an ambient air temperature of 25°C. The operation of the short-time delay unit should be within 90% and 125% of the overcurrent setting of the circuit breaker as shown on the manufacturer's time-current curves.

3.3.3.3 Dielectric test. Perform a dielectric test on each 480 or 600 volt rated circuit breaker where the case was opened for repair or the circuit breaker was obtained through non-OEM authorized supply channels. The dielectric test should be conducted at an AC test voltage of 1568 (480 volt rating) or 1760 volts (600 volt rating) or at 2500 volts DC for 1 minute withstand. Conduct the dielectric test for each of the following conditions:

- Each pole (line to load terminal) with the circuit breaker open
- Each pair of line to line terminals with the circuit breaker closed
- Each line terminal to ground with the circuit breaker open
- Each pole to ground with the circuit breaker closed

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

3.3.3.4 For each circuit breaker accessory, perform the applicable tests of ANSI/NEMA AB 4, Section 7.

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

- Circuit breaker model and serial number
- Circuit identifier or position
- Test data and results
- Test technician name and date of test
- Name and address of testing laboratory

### 3.4 Reinstallation.

3.4.1 Reinstall and reconnect each circuit breaker using information retained in paragraph 3.2.1 above. Ensure that all pickup and time delay settings are returned to the values recorded prior to removal unless such conflict with data in Table 1. Place all reinstalled circuit breakers in the open or off position.

3.4.2 Perform an energized operational test of all affected circuit breakers in the presence of the Coast Guard Inspector. Verify that all accessory devices are functioning. For circuit breakers supplying three phase motor loads, either directly or indirectly through intermediate panelboards, perform a phase rotation check if any power wiring was disconnected.

3.4.3 When isolation is no longer required, reconnect all cables disconnected in paragraph 3.2.1 above per SFLC Std Spec 3042.

## 4. NOTES

4.1 Renewal. Circuit breaker renewal is an acceptable alternative to the inspection and testing of this work item. Such may be more cost effective, especially for low amperage circuit breakers of small frame size.

4.2 In situ performance. For small frame devices and with appropriate portable test equipment, it may be possible to perform all required inspections and tests without removing the circuit breakers from the vessel.

4.3 Coordination. For cutters with insulated case, power, air, and/or vacuum circuit breakers, this work item is normally performed in conjunction with similar inspect and test work items for these types of devices.

**TABLE 1 – MOLDED CASE CIRCUIT BREAKER LIST (WLM)**

Function	Circuit	Trip (A)	Frame (A)	Special Notes	Manufacturer Part No.	Accessories
		Freq (Hz)	T <sub>cal</sub> (°C)			
No. 1 Fire Pump	1E-4EP-A (ALTN)	125	125		Siemens ED63M125	
		60	50			
No. 2 Fire Pump	1E-4EP-B (ALTN)	125	125		Siemens ED63M125	
		60	50			
Port Z-Drive Backup Hydraulic/Lube Oil Pump	1E-4EP-C (ALTN)	540 IT (settin g #2)	125	Motor protector – instantaneou s trip only	Siemens ED63A100	
		60	40			
Stbd Z-Drive Backup Hydraulic/Lube Oil Pump	1E-4EP-D (ALTN)	540 IT (settin g #2)	125	Motor protector – instantaneou s trip only	Siemens ED63A100	
		60	40			
Engine Room Vital Power Panel P1	1E-4EP- (3-62-5) (ALTN)	100	125		Siemens ED63M100	
		60	50			
Main Deck Vital Power Panel P8	1E-4EP- (1-79-7) (ALTN)	100	125		Siemens ED63M100	
		60	50			
Chart Room Vital Power Panel P15	1E-4EP- (02-68-4) (ALTN)	20	125		Siemens ED63M020	
		60	50			
1E Switchboard 120V Distribution	1E-4EP-EL (ALTN)	35	125		Siemens ED63M035	
		60	50			
Spare	1E-4EP-*	40	125		Siemens ED63M040	
		60	50			

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

Function	Circuit	Trip (A)	Frame (A)	Special Notes	Manufacturer Part No.	Accessories
		Freq (Hz)	T <sub>cal</sub> (°C)			
Spare	1E-4EP-*	125	125		Siemens ED63M125	
		60	50			
1S-1E Bus Tie	1S-4P-1E	400	400		Siemens JD63F400 Siemens JD63W400	
		60	50			
Engine Room Power Panel P2	1S-4P-(3-62-1)	100	125		Siemens ED63M100	
		60	50			
Engine Room Power Panel P5	1S-4P-(3-62-3)	100	125		Siemens ED63M100	
		60	50			
Pump Room Power Panel P4	1S-4P-(3-80-2)	80	125		Siemens ED63M080	Shunt Trip
		60	50			
First Platform Forward Power Panel P6	1S-4P-(3-52-2)	100	125		Siemens ED63M100	Shunt Trip
		60	50			
Main Deck Forward Power Panel P12	1S-4P-(1-12-1)	100	125		Siemens ED63M100	
		60	50			
02 Level Power Panel P19	1S-4P- (02-68-2)	80	125		Siemens ED63M080	Shunt Trip
		60	50			
Galley Power Panel P10	1S-4P-(1-62-2)	125	125		Siemens ED63M125	Shunt Trip
		60	50			
01 Level Vent/Heater Panel P17	1S-4P- (01.5-53-2)	200	250	If renewing, replace with FXD63M200	Siemens FXD63B200	Shunt Trip
		60	50			
Main Deck	1S-4P-(1-79-	50	125		Siemens	Shunt Trip

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

Function	Circuit	Trip (A)	Frame (A)	Special Notes	Manufacturer Part No.	Accessories
		Freq (Hz)	T <sub>cal</sub> (°C)			
Vent Power Panel P7	5)	60	50		ED63M050	Undervoltage Trip
Lower Deck Vent Power Panel P20	1S-4P-(2-53- 2)	50	125		Siemens ED63M050	Shunt Trip Undervoltage Trip
		60	50			
No. 1 Fire Pump	1S-4P-A (NORM)	125	125		Siemens ED63M125	
		60	50			
No. 2 Fire Pump	1S-4P-B (NORM)	125	125		Siemens ED63M125	
		60	50			
Port Z-Drive Backup Hydraulic/Lube Oil Pump	1S-4P-C (NORM)	540 IT (settin g #2)	125	Motor protector – instantaneou s trip only	Siemens ED63A100	
		60	40			
Stbd Z-Drive Backup Hydraulic/Lube Oil Pump	1S-4P-D (NORM)	540 IT (settin g #2)	125	Motor protector – instantaneou s trip only	Siemens ED63A100	
		60	40			
Galley 240V Power Panel P11	1S-4P-(1-63- 2)	25	125		Siemens ED63M025	Shunt Trip
		60	50			
1S Switchboard 120V Distribution	1S-4P-E	100	125		Siemens ED63M100	
		60	50			
Engine Room Vital Power Panel P1	1S-4P-(3-62- 5) (NORM)	100	125		Siemens ED63M100	
		60	50			
Main Deck Vital Power Panel P8	1S-4P-(1-79- 7) (NORM)	100	125		Siemens ED63M100	
		60	50			
Chart Room	1S-4P-	20	125		Siemens	

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

Function	Circuit	Trip (A)	Frame (A)	Special Notes	Manufacturer Part No.	Accessories
		Freq (Hz)	T <sub>cal</sub> (°C)			
Vital Power Panel P15	(02-68-4) (NORM)	60	50		ED63M020	
1E Switchboard 120V Distribution	1S-4P-EL (NORM)	35	125		Siemens ED63M035	
		60	50			
Spare	1S-4P-*	100	125		Siemens ED63M100	
		60	50			
Spare	1S-4P-*	80	125		Siemens ED63M080	
		60	50			
Spare	1S-4P-*	50	125		Siemens ED63M050	
		60	50			
Spare	1S-4P-*	125	125		Siemens ED63M125	
		60	50			
Aft Capstan	3S-4P-B	50	125		Siemens ED63M050	Shunt Trip
		60	50			
Rigid Hull Inflatable Boat Davit Hydraulic Power Unit	3S-4P-C	100	125		Siemens ED63M100	Shunt Trip
		60	50			
Forward Deck Machinery Hydraulic Power Units	3S-4P-D	400	400		Siemens JD63F400 Siemens JD63W400	Shunt Trip
		60	50			
Spare	3S-4P-*	400	400		Siemens JD63F400 Siemens JD63W400	Shunt Trip
		60	50			

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

Function	Circuit	Trip (A)	Frame (A)	Special Notes	Manufacturer Part No.	Accessories
		Freq (Hz)	T <sub>cal</sub> (°C)			
Spare	3S-4P-*	30	125		Siemens ED63M030	
		60	50			

## **WORK ITEM 25: Power Circuit Breakers, Inspect, Maintain & Test**

### **1. SCOPE**

1.1 Intent. This work item describes the requirements for the Contractor to inspect, maintain, and test power circuit breakers located on the Ship Service and Emergency Switchboards that were designed and tested to UL 1066 standards.

1.2 Government-furnished property.

None.

### **2. REFERENCES**

#### **COAST GUARD DRAWINGS**

Coast Guard Drawing 175-WLM 320-1, Rev AL, Electrical One-Line Diagram

#### **COAST GUARD PUBLICATIONS**

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

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

Coast Guard Technical Publication (TP) 3619, SWBS 324, Sep 2012, Manufacturer's Instruction Book

#### **OTHER REFERENCES**

American National Standards Institute/National Electrical Manufacturers Association (ANSI/NEMA) AB 4, Mar 2011, Guidelines for Inspection and Preventive Maintenance of Molded Case Circuit Breakers Used in Commercial and Industrial Applications

Underwriters Laboratories Inc. (UL) 1066, Low-Voltage AC and DC Power Circuit Breakers Used in Enclosures, Apr 2012

### 3. REQUIREMENTS

#### 3.1 General.

3.1.1 CIR. Submit a CIR for the inspections and test listed in the following paragraph(s):

- 3.2 (Operational assessment).
- 3.4.2 (Inspection).
- 3.4.3 (Testing).

3.1.2 Tech Rep. Technicians performing shipboard assessments and inspection, maintenance, and testing ashore shall be employed by the original equipment manufacturer or a firm accredited by the InterNational Electrical Testing Association (NETA). An accredited firm shall use only NETA certified technicians (<http://www.netaworld.org/>) with calibrated test equipment during the performance of this work item.

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. Handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.1.5 Notify the Coast Guard Inspector 48 hours prior to starting work on this item.

3.1.6 Outages. Coordinate the disconnection and removal of the circuit breakers listed in the table below with the Coast Guard Inspector to ensure orderly shutdown of equipment. Providing temporary circuit breakers or temporarily relocating circuit breakers from non-essential circuits to essential circuits (same frame size and trip settings) are acceptable strategies to minimize outage durations. When power interruption is expected to exceed 15 minutes, secure uninterruptable power supplies and supported loads.

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

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

3.1.7.2 Fire (circuits F and SM), flooding (circuit FD), and general (circuit G) alarms.

3.1.7.3 Main announcing (circuit IMC) and dial telephone (circuit J) systems.

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

3.1.7.5 Electric fire pump (unless temporary firefighting water supply is connected).

3.2 Operational assessment. Perform an operational assessment of each circuit breaker listed in the table below prior to removal from the switchboard. Submit an operational assessment report via CFR.

3.2.1 General.

3.2.1.1 Ship's Force shall operate all equipment, as well as remove and reinstall control power fuses.

3.2.1.2 For cutters with stationary mounted circuit breakers or draw-out type with no TEST position, Ship's Force shall run generators or operate shore power, as necessary, to establish safe plant conditions for the operational assessment and provide circuit breaker control power. Ensure that water cooled prime movers are furnished with adequate normal or temporary raw water supplies and that required auxiliaries such as batteries, exhaust, ventilation, start air, fuel oil, jacket water, and lube oil are available.

3.2.1.3 When practicable, operate draw-out type circuit breakers in the TEST position such that the primary contacts (stabs) are disconnected from the switchboard bus but all secondary (control) contacts are still connected to switchboard circuits. For generator circuit breakers, remove the control power transformer secondary winding fuses. Taking appropriate electrical safety precautions, connect a Contractor-furnished temporary control power supply, fused to an ampacity no greater than the normal control power supply, to the vacated load side fuse clips.

3.2.1.4 For a circuit breaker that is locked out and/or tagged out (caution or danger tag), typically in support of another work item, complete the tasking requiring the isolation or shift the work isolation boundary so that the lock and/or tags may be cleared. When shifting the isolation boundary is the only feasible option, such is typically accomplished by opening a local disconnect switch or temporarily disconnecting the feeder cable in accordance with SFLC Std Spec 3042. Ensure that a new lock and/or tag are installed at the new isolation boundary prior to clearing those from the circuit breaker to be removed.

3.2.2 Initial conditions. The circuit breaker to be operationally assessed is assumed to be open with the closing spring charged and control power available.

3.2.3 Manual operation. For a circuit breaker with mechanical closing and opening controls on the frame, perform the following:

3.2.3.1 Manually close the circuit breaker. Verify that the mechanical flag for circuit breaker position, if installed, changes state satisfactorily. Confirm that circuit breaker position indicating lights and machinery control system display, if applicable, also toggle. If installed, verify that the spring charging motor recompresses the closing spring and automatically drops out shortly after the spring is fully charged. If no spring charging motor is installed or it fails to operate, manually recompress the closing spring.

3.2.3.2 Manually trip the circuit breaker. Verify that the mechanical flag for circuit breaker position, if installed, changes state satisfactorily. Confirm that circuit breaker position indicating lights and machinery control system display, if applicable, also toggle.

3.2.3.3 If the circuit breaker is equipped with a mechanical or electrical lockout, activate each lockout device one at a time and verify that the circuit breaker cannot be closed manually.

3.2.3.4 If the circuit breaker is equipped with an undervoltage release coil, secure power to the coil by removing a secondary control power fuse or securing the temporary control power supply. Attempt to manually close the circuit breaker. Observe indicators and flags to ensure that the main contacts do not close (even momentarily). Discharge of the closing spring is acceptable. Reenergize the undervoltage release coil.

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

3.2.3.5 For circuit breakers without an undervoltage release coil or for those where the closing spring did not discharge while testing the undervoltage release closing interlock, secure control power to the spring charging motor, ensuring that the undervoltage release coil, if installed, remains energized. Some circuit breaker designs have an internal spring charging motor switch for this purpose; otherwise a control power lead to the motor must be temporarily disconnected at the secondary terminal block. Manually close the circuit breaker and then manually open it to discharge the closing spring.

3.2.3.6 Verify that the mechanical flag for closing spring status, if installed, changes state during this step. Manually charge the closing spring, observing the ratchet mechanism and pawls for signs of damage, such as binding or excessive wear.

3.2.3.7 Reenergize any circuit breaker control circuits that were deenergized in paragraph 3.2.3.5 above.

3.2.4 Electrical operation. For a circuit breaker with electrical closing and opening controls on the switchboard, perform the following:

3.2.4.1 Electrically close the circuit breaker. Verify that the mechanical flag for circuit breaker position and closing spring status, if installed, change state satisfactorily. Confirm that circuit breaker position indicating lights and machinery control system display, if applicable, also toggle. If installed, verify that the spring charging motor recompresses the closing spring and automatically drops out shortly after the spring is fully charged. If no spring charging motor is installed or it fails to operate, manually recompress the closing spring.

3.2.4.2 Electrically trip the circuit breaker. Verify that the mechanical flag for circuit breaker position, if installed, changes state satisfactorily and that the shunt trip coil remains deenergized while the control switch is held in the TRIP position. Confirm that circuit breaker position indicating lights and machinery control system display, if applicable, also toggle.

3.2.4.3 If the circuit breaker is equipped with a mechanical or electrical lockout, activate each lockout device one at a time and verify that the circuit breaker cannot be closed electrically.

3.2.4.4 If the circuit breaker is equipped with an undervoltage release coil, secure power to it by temporarily disconnecting the associated lead at the secondary terminal block; ensure that power to the closing coil and position indicating circuit remains available. Attempt to electrically close the circuit breaker and observe indicators and flags to ensure that the main contacts do not close (even momentarily). Discharge of the closing spring is acceptable.

3.2.4.5 Reenergize any circuit breaker control circuits that were deenergized in paragraph 3.2.4.4 above.

3.2.4.6 If the circuit breaker is equipped with an anti-pump mechanism, electrically close the circuit breaker and continue to hold the control switch in the CLOSE position. If practicable, trip the circuit breaker on fault by simulating an overcurrent condition at the trip unit; otherwise defer this test until the circuit breaker arrives at the maintenance facility. Verify that the circuit breaker does not reclose until the control switch is released and another closing operation is attempted. Open the circuit breaker.

3.2.5 Bell alarm switch. For a circuit breaker with a bell alarm switch, perform the following:

3.2.5.1 Close the circuit breaker using mechanical or electrical control.

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

3.2.5.2 If practicable, automatically trip the circuit breaker by simulating an overcurrent condition at the trip unit or by momentarily deenergizing control power to activate the undervoltage release; otherwise defer this test until the circuit breaker arrives at the maintenance facility. Verify that the bell alarm switch contacts are in the tripped state.

3.2.5.3 Manually reset the tripped circuit breaker using mechanical or electrical control. Verify that the bell alarm switch contacts are in the normal state.

3.2.6 Draw-out interlock. For a circuit breaker with a draw-out interlock, perform the following:

3.2.6.1 De-energize both sets of primary contacts (stabs) in the switchboard.

3.2.6.2 If the circuit breaker is equipped with an undervoltage release or can only be operated electrically and temporary control power is not already installed:

3.2.6.2.1 Remove the control power transformer secondary winding fuses.

3.2.6.2.2 Taking appropriate electrical safety precautions, connect a Contractor-furnished temporary control power supply, fused to an ampacity no greater than the normal control power supply, to the vacated load side fuse clips.

3.2.6.3 Ensure that the circuit breaker is withdrawn to the TEST position such that the primary contacts (stabs) are disconnected from the switchboard bus but all secondary (control) contacts are still connected to switchboard circuits.

3.2.6.4 Close the circuit breaker using mechanical or electrical control.

3.2.6.5 Attempt to rack in the closed circuit breaker to the CONNECTED position. Verify that such an operation is physically impossible or confirm that the circuit breaker automatically trips before the stabs reach the primary contacts in the switchboard.

3.2.6.6 If not already tripped, open the circuit breaker using mechanical or electrical control and fully insert it to the CONNECTED position.

3.2.6.7 Close the circuit breaker using mechanical or electrical control.

3.2.6.8 Attempt to rack out the closed circuit breaker to the TEST or DISCONNECTED position. Verify that such an operation is physically impossible or confirm that the circuit breaker automatically trips before the stabs separate from the primary contacts in the switchboard.

3.2.6.9 If not already tripped, open the circuit breaker using mechanical or electrical control.

3.2.7 Spring discharge interlock. For a circuit breaker with a spring discharge interlock, perform the following:

3.2.7.1 If not already compressed, charge the closing spring.

3.2.7.2 Rack out the open circuit breaker to the DISCONNECTED position. Verify that such an operation is physically impossible or confirm that the closing spring automatically discharges between the TEST and DISCONNECTED positions.

3.2.8 Restoration.

3.2.8.1 Ensure that the circuit breaker is open.

3.2.8.2 If not already accomplished, remove the circuit breaker control power transformer secondary winding fuses and disconnect any temporary control power supply.

3.2.8.3 If compressed, discharge the closing spring.

3.3 Removal.

3.3.1 Prior to the removal of each circuit breaker listed in the table below, record location (position or circuit identifier), wiring information, and if adjustable, as found pickup and time delay settings. Retain all mounting and connecting hardware for later reuse. Submit a CFR with all recorded data to the Coast Guard Inspector.

3.3.2 Disconnect and remove the circuit breakers listed in the table below.

3.3.3 Inspect the primary and secondary disconnects in the switchboard for wear and erosion. Check the torques of all primary disconnect studs to the bus work or power cable lugs. Inspect for broken control wiring lugs and check the tightness of wiring at the secondary disconnect terminal blocks. Renew any broken lugs and tighten any loose connections to wiring or bus.

3.3.4 Temporarily cover or insulate switchboard openings created by the removal of circuit breakers to prevent personnel contact with energized conductors and to block the entry of debris from other ongoing industrial activities.

3.4 Shop Work.

3.4.1 Cleaning and lubrication. Clean circuit breaker internals with manufacturer's approved solvents and lint free cloths. Do not use high pressure air or wire brushes. Lubricate all components in accordance with manufacturer's instructions.

3.4.2 Inspection. Perform the inspections and take the measurements described below. Report all results, including any adjustments made, on a CFR.

3.4.2.1 Remove and inspect the arc chutes. Note if an arc chute is severely burned, cracked, or excessively eroded.

3.4.2.2 Visually inspect all primary intermediate (if installed), main, and arcing contacts for erosion and evidence of overheating. Inspect associated insulators for cracks and degradation. Determine whether the condition of one or more contacts or insulators meets the criteria for renewal in accordance with manufacturer's guidelines.

3.4.2.3 Set up the circuit breaker for maintenance or slow closing. Check alignment and measure the contact force, spring tension, air gap, and wipe on each contact in accordance with manufacturer's instructions and make adjustments, as necessary, to set these values within specification.

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

3.4.2.4 Check contact closure sequencing to ensure that the differences in the making of the arcing contacts on the same pole and between poles is within manufacturer's tolerances. Also verify that the opening sequencing is satisfactory in the same manner.

3.4.2.5 Reinstall the arc chutes and torque all fasteners in accordance with manufacturer's instructions.

3.4.2.6 Inspect the primary and secondary disconnects (stabs) for wear and erosion. For a circuit breaker with finger type primary disconnects, check that the proper force is applied when a dummy bar, representative of the mating stationary disconnect, is inserted.

3.4.2.7 Inspect mechanical linkages, bearings, pawls, gears, cams, rollers, rods, and shafts for excessive wear and damage. Identify incorrectly assembled components. Note all missing and improperly installed fasteners.

3.4.2.8 Inspect electrical switches, solenoids, relays, wiring, and motors for excessive wear and damage. Perform an insulation resistance check of all control wiring using a 500 VDC test voltage. Isolate and identify any wiring or component with insulation resistance of less than 1 M $\Omega$  to ground.

3.4.2.9 For a circuit breaker equipped with a spring charging motor, verify that the motor cutoff switch is aligned in accordance with manufacturer's instructions.

3.4.3 Testing. After satisfactory visual inspection and completion of any authorized repair work, test each circuit breaker listed in the table below as directed in this section.

3.4.3.1 Perform the following tests of ANSI/NEMA AB 4, Section 6:

- Mechanical operation
- Insulation resistance
- Individual pole resistance (millivolts drop)
- Inverse-time overcurrent trip (not applicable to non-automatic switches)
- Instantaneous overcurrent trip
- Rated hold-in current

3.4.3.2 Short-time overcurrent trip. This test is applicable only if the circuit breaker is equipped with a short-time delay trip. The operation of the short-time delay unit should be within 90% and 125% of the overcurrent setting of the circuit breaker as shown on the manufacturer's time-current curves.

3.4.3.3 Ground fault trip. The circuit breaker should not be equipped with a ground fault trip. If such is installed, submit a CFR noting the discrepancy.

3.4.3.4 Dielectric test. Perform a dielectric test on each 480 or 600 volt rated circuit breaker where the case was opened for repair or the circuit breaker was obtained through non-OEM authorized supply channels. The dielectric test should be conducted at an AC test voltage of 1568 (480 volt rating) or 1760 volts (600 volt rating) or at 2500 volts DC for 1 minute withstand. Conduct the dielectric test for each of the following conditions:

- Each pole (line to load terminal) with the circuit breaker open
- Each pair of line to line terminals with the circuit breaker closed
- Each line terminal to ground with the circuit breaker open

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

- Each pole to ground with the circuit breaker closed

3.4.3.5 For each circuit breaker accessory, perform the applicable tests of ANSI/NEMA AB 4, Section 7. Review the Table 1 configuration below for each circuit breaker and submit a CFR for model number discrepancies as well as any missing or extra accessory. When performing ANSI/NEMA AB 4, Section 7.3, use a variable voltage control power source and voltmeter to measure dropout and pickup voltages of the undervoltage release coil. Dropout voltage shall be between 15% and 60% of the coil voltage rating; pickup shall occur between 30% and 85%.

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

- Circuit breaker model and serial number
- Circuit identifier or position
- Test data and results
- Test technician name and date of test
- Name and address of testing laboratory

3.4.3.7 Update the label on the circuit breaker case, as necessary, so that it accurately describes the circuit breaker configuration and installed accessories. Apply a sticker showing the name of the testing laboratory along with the date of the test.

### 3.5 Reinstallation.

3.5.1 Vacuum out the circuit breaker enclosure and completely remove any foreign material.

3.5.2 Lubricate primary and secondary disconnects in accordance with manufacturer's instructions.

3.5.3 Reinstall and reconnect each circuit breaker using information retained in paragraph 3.2.1 above.

3.5.4 Perform an energized operational test of all affected circuit breakers in the presence of the Coast Guard Inspector. Verify that all accessory devices are functioning. For circuit breakers supplying three phase motor loads, either directly or indirectly through intermediate panelboards, perform a phase rotation check if any power wiring was disconnected.

3.5.5 When isolation is no longer required, reconnect all cables disconnected per paragraph 3.2.1.4 above per SFLC Std Spec 3042.

## 4. NOTES

4.1 Inspection periodicity. Circuit breakers are normally maintained, tested, and lubricated at 48 month intervals; however, such should also be performed when the following number of open-close cycles with main contact current flow are exceeded since the last inspection:

4.1.1 800 ampere frame and below – 2800 cycles

4.1.2 900-2500 ampere frame – 800 cycles

4.1.3 3000 ampere frame and above – 400 cycles

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

4.2 High current fault. When a circuit breaker interrupts a high current fault, perform the arc chute and primary contact inspections before returning the device to operation. Also inspect the associated switchboard bus work for deformation and possible derangement.

**TABLE 1 – CIRCUIT BREAKER LIST (WLM)**

<b>Accessories</b>	<b>Draw-Out with TEST Position</b>	X	X	X	X	X
	<b>Undervoltage Release</b>	Time delay	Time delay	Time delay	Time delay	Time delay
	<b>Shunt Trip Coil</b>	X	X	X	X	X
	<b>Lockout Device, Mech or Elec</b>					
	<b>Closing Coil, Anti-Pump</b>	CC & AP	CC & AP	CC & AP	CC & AP	CC & AP
	<b>Spring Charging Method(s)</b>	Man/Auto	Man/Auto	Man/Auto	Man/Auto	Man/Auto
	<b>Auxiliary Switch</b>	3NO/3NC	3NO/3NC	3NO/3NC	3NO/3NC	3NO/3NC
	<b>Bell Alarm Switch</b>					
<b>Settings</b>	<b>Instantaneous Pickup (A [<math>\times I_r</math>])</b>					
	<b>Short Time Delay</b>					
	<b>Short Time Pickup (A) [<math>\times I_L</math>]</b>					
	<b>Long Time Delay</b>					
	<b>Long Time Pickup <math>I_L</math> (A) [<math>\times I_r</math>]</b>	400 [1.0]	380 [0.95]	510 [0.85]	510 [0.85]	510 [0.85]
<b>Withdrawal Interlock</b>	X	X	X	X	X	
<b>Spring Discharge Interlock</b>	X	X	X	X	X	
<b>Rating Plug or Sensor <math>I_r</math> (A)</b>	400	400	600	600	600	
<b>Part Number</b>	Siemens RL- AS8EAFXBA06DU4 with Static Trip III	Siemens RL- AS8EAFXBA06DU4 with Static Trip III	Siemens RL- AS8EAFXBA06DU4 with Static Trip III	Siemens RL- AS8EAFXBA06DU4 with Static Trip III	Siemens RL- AS8EAFXBA06DU4 with Static Trip III	
<b>Frame (A)</b>	800	800	800	800	800	
<b>Circuit</b>	1EG-4EP-1E	1S-4P-1E	1SG-4P-1S	2SG-4P-2S	3SG-4P-3S	

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

Function & Location	Emergency Diesel Generator (1E Switchboard)	1E-1S Bus Tie (1E Switchboard)	No. 1 Ship Service Diesel Generator (1S)	No. 2 Ship Service Diesel Generator (2S)	No. 3 Ship Service Diesel Generator (3S)
<b>Accessories</b>	<b>Draw-Out with TEST Position</b>	X	X	X	X
	<b>Undervoltage Release</b>			Time delay	
	<b>Shunt Trip Coil</b>	X	X	X	X
	<b>Lockout Device, Mech or Elec</b>				
	<b>Closing Coil, Anti-Pump</b>	CC & AP	CC & AP	CC & AP	CC & AP
	<b>Spring Charging Method(s)</b>	Man/Auto	Man/Auto	Man/Auto	Man/Auto
	<b>Auxiliary Switch</b>	3NO/3NC	3NO/3NC	3NO/3NC	3NO/3NC
	<b>Bell Alarm Switch</b>				
<b>Settings</b>	<b>Instantaneous Pickup (A) [<math>\times I_r</math>]</b>				
	<b>Short Time Delay</b>	—	—		
	<b>Short Time Pickup (A) [<math>\times I_L</math>]</b>	—	—		
	<b>Long Time Delay</b>	—	—		
	<b>Long Time Pickup <math>I_L</math> (A) [<math>\times I_r</math>]</b>	—	—	400 [1.0]	680 [0.85]
<b>Withdrawal Interlock</b>	X	X	X	X	
<b>Spring Discharge Interlock</b>	X	X	X	X	
<b>Rating Plug or Sensor <math>I_r</math> (A)</b>	—	—	400	800	
<b>Part Number</b>	Siemens RL-AS8EXXBXXXE Non-automatic switch	Siemens RL-AS8EXXBXXXE Non-automatic switch	Siemens RL- AS8EAXBA06DU4 with Static Trip III	Siemens RL-AS8EAGXBA06E with Static Trip III	
<b>Frame (A)</b>	800	800	800	800	
<b>Circuit</b>	1S-4P-2S	2S-4P-3S	PS -4P-1S	3S-4P-A	

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

<p><b>Function &amp; Location</b></p>	<p>1S-2S Bus Tie (1S Switchboard)</p>	<p>2S-3S Bus Tie (2S Switchboard)</p>	<p>Shore Power (1S Switchboard)</p>	<p>Bow Thruster SCR Drive (3S Switchboard)</p>	
-----------------------------------------------	-----------------------------------------------	-----------------------------------------------	---------------------------------------------	------------------------------------------------------------	--

## WORK ITEM 26: Z-Drive Hydraulic Oil Drain Piping, Renew

### 1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew approximately eight (8) feet of 1 ¼” steel hydraulic oil drain piping servicing the Z-Drives located in the Propulsion Thruster Room (3-88-0-E).

**NOTE**

**Piping to be renewed consists of approximately four (4) feet of piping, each located outboard on the port and starboard bulkhead in the vicinity of Frame 90.**

1.2 Government-furnished property.

None.

### 2. REFERENCES

#### COAST GUARD DRAWINGS

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

Coast Guard Drawing 175-WLM 561-003, Rev H, Z-Drive Hydraulic System A/D, Block 940 & 950

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

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:

- Deck plates.
- Piping.
- Bulkhead insulation.
- Piping fluid contents.

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

3.3 Renewal. The Contractor shall renew approximately 8 feet of 1 ¼” steel hydraulic oil drain piping servicing the Z-Drives (4 feet on each side), referring to the references listed in Section 2 “References” for additional information.

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.)

3.5 Hydrostatic test. After all authorized repairs, the Contractor shall hydrostatically test all new and disturbed piping and components of the hydraulic oil drain piping system in accordance with SFLC Std Spec 0740, Appendix C, Hydrostatic Test. Ensure zero leakage from or permanent deformation of pressure-containing parts by repairing all leaks, deformations, and discrepancies. Submit a CFR.

### 4. NOTES

This section is not applicable to this work item.

## WORK ITEM 27: Oil Containment Coamings, Repair

### 1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to repair the 03 Level Deck beneath the Fuel Service tank oil containment coamings and within the Exhaust Stack.

1.2 Government-furnished property.

None.

### 2. REFERENCES

#### COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM 506-008, Rev C, Oil Containment Coamings

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

Coast Guard Drawing 175-WLM 601-001, Rev N, General Arr, Inboard and Outboard Profiles

Coast Guard Drawing 175-WLM 801-017, Rev B, Scantlings, Superstructure

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

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

#### COAST GUARD PUBLICATIONS

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

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

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2014, Preserve Ship Structures

#### OTHER REFERENCES

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.11 (SSPC-SP 11), 2012, Power Tool Cleaning to Bare Metal

### 3. REQUIREMENTS

3.1 General.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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 - 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.

**NOTE**  
**Open, ventilate, and clean all spaces and components necessary to accomplish this work item as required to certify them as "SAFE FOR PERSONNEL" and/or "SAFE FOR HOT WORK."**

3.1.4 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 Service Tank (02-77-1-F), piping and oil tank vent.
- Stack access cover and gasket.
- Insulation, below deck overhead.
- Deck covering.

3.2 Work Location. The concerned work area is 03 Level Deck coaming shown in TABLE 3.1 below, and the port aft corner of the 03 Level deck inside smoke stack. See **PHOTO 1, 2 and 3** below and the CG Dwgs above, for guidance and details.

**TABLE 3.1**

ITEM	COAMING#	VENT DESCRIPTION	DECK	FRAME#
1	S3	Fuel Service tank (02-77-1-F)	03	79

3.3. Coaming deck repair particulars. The contractor shall accomplish the following using Coast Guard Drawings 175-WLM 801-017, 175-WLM 506-001 and 175-WLM 506-008, and the drawings referenced above as guidance.

3.3.1 Visually inspect the areas described in paragraph 3.2 to include the deck, coaming and tank vent, and prepare the cited areas in accordance with SSPC-SP 11. The Contractor shall take a total of 40 UT measurements of the deck plating and coaming, in locations designated by the Coast Guard Inspector, in accordance with SFLC Std Spec 0740, Appendix C. Use Coast Guard Drawings 175-WLM 801-017 and 175-WLM 506-008 as guidance. Chalk out the boundary of the corroded plating where the remaining thicknesses are less than 75% of the original thickness. Submit a CFR.

3.3.2 Before removing any plating, obtain verification from the Coast Guard Inspector of the chalked out boundary. Provide a sketch of the intended cut to the Coast Guard Inspector.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

3.3.3 Upon verification from the Coast Guard Inspector, crop and renew the chalked out boundaries, approximately 100-square feet total of deck and coaming plating in the area described in paragraph 3.2, in accordance with Coast Guard Drawings 175-WLM 801-017 and 175-WLM 506-008, and SFLC Std Spec 0740.

3.3.4 Renew the Fuel oil overflow vent in accordance with Coast Guard Drawing 175-WLM 506-008.

3.3.5 New plating shall be of similar material and mechanical properties as the adjacent material. Submit a Condition Found Report to the Coast Guard Inspector if additional repairs or additional plating removal are required.

3.4 NDI. The Contractor shall perform NDI of the plate renewal in accordance with SFLC Std Spec 0740, Appendix C. Submit a CFR.

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

3.6 Insulation. Furnish and re-install disturbed, overhead insulation in accordance with Coast Guard Drawing 175-WLM 635-1. Coat newly installed insulation in accordance with NAVSEA Drawing 804-5773931 and Coast Guard Drawing 175-WLM 635-1.



**PHOTO 1, WORK LOCATION STACK AND COAMING**



**PHOTO 2, COAMING, FUEL SERVICE TANK (02-77-1-F)**



**PHOTO 3, 03 DECK IN STACK**

**4. NOTES**

This section is not applicable to this work item.

## WORK ITEM 28: Auxiliary Seawater (ASW) System Valves, Renew

### 1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew the Auxiliary Seawater System (ASW) valves listed in Table 1 (31 total).

**TABLE 1 – VALVES TO BE RENEWED**

QTY	SIZE (INCHES)	TYPE	SYSTEM / LOCATION	MATERIAL	CONNECTION
1 ea	1-1/4	Gate	Heat Pump 1A & 1B/ Engine Room	Bronze/Monel	Union
5 ea	1/2	Gate	Heat Pump 1A & 1B Engine Room	Bronze/Monel	Union
2 ea	3/4	Globe	Heat Pump 1A & 1B Engine Room	Bronze/Monel	Union
1 ea	3/4	WRV	Heat Pump 1A & 1B Engine Room	Bronze/Monel	Union
2 ea	3/4	Strainer	Heat Pump 1A & 1B Engine Room	Bronze/Monel	Union
1	1 -1/2	Gate	Heat Pump 3 & 4 Pump Room	Bronze/Monel	Union
3	3/4	Gate	Heat Pump 3& 4 Pump Room	Bronze/Monel	Union
4	1/2	Gate	Heat Pump 3 & 4 Pump Room	Bronze/Monel	Union
1	1/2	WRV	Heat Pump 3& 4 Pump Room	Bronze/Monel	Union
1	3/4	WRV	Heat Pump 3 & 4 Pump Room	Bronze/Monel	Union
2	3/8	Gate	Heat Pump 3& 4 Pump Room	Bronze/Monel	Union
1	1-1/2	Strainer	Heat Pump 3 & 4 Pump Room	Bronze/Monel	Union
2	1	Gate	HPU	Bronze/Monel	Union
1	1	TRV	HPU	Bronze/Monel	Union

1.2 Government-furnished property.

None.

## 2. REFERENCES

### COAST GUARD DRAWINGS

- 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 Frame 61 FWD, Blocks 910, 920, & 930
- Coast Guard Drawing 175-WLM 256-004, Rev J, Seawater Cooling System A&D, Hull Blocks 940-970
- Coast Guard Drawing 175-WLM 256-012, Rev B, ASW System Piping Modifications

### COAST GUARD PUBLICATIONS

- Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2014, General Requirements
- 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, 2004, Valves-Flanged, Threaded, and Welding End
- ASTM International (ASTM) F992, 2006, Standard Specification for Valve Label Plates
- Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-61, 2003 Edition, Pressure Testing Of Steel Valves
- Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-67, 2002 Edition, Butterfly Valves
- Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) SP-72, 1999 Edition, Ball Valves with Flanged or Butt-Welding Ends for General Service
- Manufacturers' Standardization Society of the Valve and Fittings Industry (MSS) SP-80, 2008 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

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

equipment, components, and spaces to original condition of cleanliness.

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

- Deck plates
- Piping
- Insulation
- Piping fluid contents

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

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

3.4 Renewal. The Contractor shall renew all removed valves identified in Table 1, referring to CG Drawing 175-WLM 256-001 for additional information.

3.4.1 Equivalency. The Contractor shall ensure all renewed valves, including Mil-Std valves, are commercial-standard type valves conforming to the applicable standard listed in Section 2 "References". The Contractor shall ensure each new valve is of identical material and equivalent to the valve it is replacing.

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

3.4.3 Installation. Upon completion of all authorized work, the Contractor shall install all renewed valve(s) with new gaskets.

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

3.4.5 Secure. The Contractor shall secure each valve installation with new bolting hardware.

3.5 Labeling. The Contractor shall renew all missing and damaged valve label plates, and install new valve label plates on new valves, in accordance with ASTM F992.

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

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

**4. NOTES**

This section is not applicable to this work item.

## WORK ITEM 29: Goose Neck Vent Pipes, Renew

### 1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew the Goose Neck Vent Pipe on the weather decks.

1.2 Government-furnished property.

None

### 2. REFERENCES

#### COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM 506-1, Rev G, Overflows, Air Escapes & Sounding Tubes Diagrams

Coast Guard Drawing 175-WLM 506-7, Rev D, Vents & Sounding Tubes Main Deck & Above a & D, Hull Block 970

#### COAST GUARD PUBLICATIONS

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

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.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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 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):

- Ventilation ducting.
- Piping.
- Deck drains.
- Electrical wiring.

3.2 Goose Neck Vent Pipes Renew. The Contractor shall perform all tasks specified in SFLC Std Spec 074 and herein, to renew the vent in the locations specified in Coast Guard Drawings 175-WLM 506-1 and 175-WLM 506-7.

VENTS	LOCATIONS	COFFERDAM/COAMING	SIZE (INCH)
2" Grey Water	01 Deck	Starboard Grey Water Tank	2

3.2.1 Where possible, cut all edges along existing seams. Corners shall intersect plating seams at 90 degree angles. Corners that are not formed by designed plating seams shall have a minimum radius of, three inches, or one-eighth of the transverse dimension of the cut, whichever is greater.

3.2.2 Ensure that welding does not warp or cause any distortion to adjacent plating.

3.2.3 Work areas are in location 01 and buoy decks.

3.3 Crop out and retain the vent for used as templates in accordance SFLC Std Spec 0740.

3.4 Crop out and scrap approximately 8' of each vent and its vent closure in accordance with SFLC Std Spec 0740 and Coast Guard Drawing 175-WLM 506-1 and 175-WLM 506-7.

3.5 Install new vent and vent closure with material type and size in according to Coast Guard Drawing 175-WLM 506-1 and 175-WLM 506-7.

3.6 Weld Joint Inspections

3.6.1 In the presence of the Coast Guard Inspector, visually inspect and perform a magnetic particle test on 10% all new welds in accordance with AWS D1.1. Test acceptance standards shall be in accordance with AWS D1.1. Repair all weld deficiencies and retest.

3.6.2 Upon completion of all welding, perform a liquid film bubble emission test on all water tight boundaries (hull plating welds) in accordance with SFLC Std Spec 000.

3.7 Provide a written report of all nondestructive test findings to the Coast Guard Inspector.

3.8 Surface Preparation – Upon completion of successful nondestructive testing, prepare all new and disturbed exterior areas in accordance with SSPC-SP 10. Prepare all new and disturbed interior areas in

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

accordance with SSPC-SP 11. Feather the surrounding surfaces to obtain a 3-inch wide smoothly tapered boundary from the existing paint to the prepared surface.

### NOTE

**Where applicable, prepare all affected steel surfaces, including areas designated for UT inspections, to “bare metal” (SSPC-SP 11, with a minimum 1.0 mil anchor profile).**

3.8.1 Prior to applying any paint, remove all dust, grease, oil, or other contaminants from all prepared areas in accordance with applicable local, state, and federal laws and regulations.

3.8.2 The Coast Guard Inspector will verify all surface preparation.

3.8.3 Upon verification from the Coast Guard Inspector on all surface preparation, prime and coat all prepared surfaces to match existing adjacent surfaces in accordance with the applicable sections of General Requirements. For surfaces to be covered with insulation, apply primer coats only.

3.9 Coat newly installed insulation in accordance with General Requirements.

3.10 Restore all interferences to their original condition in accordance with the General Requirements.

## 4. NOTES

This section is not applicable to this work item.

## **WORK ITEM 30: Buoy Chain Port(s) Renew**

### **1. SCOPE**

1.1 Intent. This work item describes the requirements for the Contractor to renew the Buoy Chain Port.

1.2 Government-furnished property.

None.

### **2. REFERENCES**

#### **COAST GUARD DRAWINGS**

Coast Guard Drawing 175-WLM 601-001, Rev N, General Arrangement, Inbd and Outbd Profiles

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

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

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

#### **COAST GUARD PUBLICATIONS**

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

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

#### **OTHER REFERENCES**

The Society for Protective Coatings (SSPC) Surface Preparation Specification No.11 (SSPC-SP 11), 2012, Power Tool Cleaning to Bare Metal

### **3. REQUIREMENTS**

3.1 General.

3.1.1 CIR. None.

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

3.1.2 Technical Representative. Not applicable.

3.1.3 Protective measures. The Contractor shall furnish and install suitable covering to seal off and protect all non-affected surfaces/equipment and spaces in the vicinity of the work area against contamination during the performance of work. Upon completion of work, remove protective material and inspect for the presence of contamination. Clean all equipment and spaces, contaminated due to improper protection, to original condition of cleanliness.

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

- Insulation;
- Buoy chain handling system;
- Buoy Chain Port cover;
- Portable chain bins.

3.2 Work Location. The concerned work areas are the Main deck, frame-26½, 12-3/16" off-centerline port, and the Cargo Hold (3-24-0-AA). See the Coast Guard Drawings above, for guidance and details.

3.3 Buoy Chain Port Renew. Renew the Buoy Chain Port and deck cover, in accordance with SFLC Std Spec 0740 and Coast Guard Drawings 175-WLM 920-001 and 175-WLM 130-001.

3.3.1. The contractor shall install new hardware and gasket material in the buoy chain port cover.

3.4 NDI. The Contractor shall perform NDI of the renewed buoy chain ports weld joints in accordance with SFLC Std Spec 0740, Appendix C. Submit a CFR.

3.5 Insulation. Furnish and install new insulation, removed for this installation in the cargo hold overhead, in accordance with Coast Guard Drawing 175-WLM 635-001. Coat newly installed insulation in accordance with NAVSEA Drawing 804-5773931.

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

## 4. NOTES

This section is not applicable to this work item.

## WORK ITEM 31: Engine Room Vent Louver, Repair

### 1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew the Vent Systems on the Weather Deck and Engine Room.

1.2 Government-furnished property.

None

### 2. REFERENCES

#### COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM 512-9, Rev A, HVAC a &D, Frame 88-61, Platform, Hull Block 940

Coast Guard Drawing 175-WLM 512-11, Rev D, HVAC a & D, FR 70-50, Main Deck & Above, Hull Block 960

Coast Guard Drawing 175-WLM 512-12, Rev C, HVAC a & D, Frame 70-88 Main Deck & Above, Hull Block 970

Coast Guard Drawing 175-WLM 512-13, Rev A, HVAC Std Details & General Instructions

#### COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), Jan 2012, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), Jan 2012, Welding and Allied Processes

#### OTHER REFERENCES

The Society for Protective Coatings (SSPC)/NACE Joint Surface Preparation Standard SSPC-SP 10/NACE No.2, 2004, Near-White Blast Cleaning

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

### 3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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 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):

- Ventilation ducting.
- Piping.
- Deck drains.
- Electrical wiring.

3.2 Vents Renew. The Contractor shall perform all tasks specified in SFLC Std Spec 074 and herein, to renew the duct in the locations specified in Coast Guard Drawing 175-WLM 512-9, 512-12, 512-13.

**TABLE 1 – DUCT RENEWAL**

DUCT SYSTEM	LOCATIONS	APPROX. FRAME/SIZE
Engine Room vent and Louver S1-71-1	STBD 01 deck	20 square feet of vent duct/ bulkhead

3.2.1 Where possible, cut all edges along existing seams. Corners shall intersect plating seams at 90 degree angles. Corners that are not formed by designed plating seams shall have a minimum radius of, three inches, or one-eighth of the transverse dimension of the cut, whichever is greater.

3.2.2 Ensure that welding does not warp or cause any distortion to adjacent plating.

3.2.3 Work areas are in location Starboard 01 / Main decks and to Engine Room.

3.3 Crop out and retain the duct, diffuser for used as templates in accordance SFLC Std Spec 0740.

3.4 On Engine Room Vent and Louver: Crop out 20 square feet of vent duct, above and below the installed supply fan, with similar material type and size and according to Coast Guard Drawing 175-WLM 512-11, 512-12, 512-13.

3.5 Weld Joint Inspections

3.5.1 In the presence of the Coast Guard Inspector, visually inspect and perform a magnetic particle test on 10% all new welds in accordance with AWS D1.1. Test acceptance standards shall be in accordance with AWS D1.1. Repair all weld deficiencies and retest.

3.5.2 Upon completion of all welding, perform a liquid film bubble emission test on all water tight boundaries (hull plating welds) in accordance with SFLC Std Spec 000.

3.6 Provide a written report of all nondestructive test findings to the Coast Guard Inspector.

**NOTE:**

**This louver is part of the Firefighting system, and interlock with damage control system.**

3.7 Surface Preparation – Upon completion of successful nondestructive testing, prepare all new and disturbed exterior areas in accordance with SSPC-SP 10. Prepare all new and disturbed interior areas in accordance with SSPC-SP 11. Feather the surrounding surfaces to obtain a 3-inch wide smoothly tapered boundary from the existing paint to the prepared surface.

3.7.1 Prior to applying any paint, remove all dust, grease, oil, or other contaminants from all prepared areas in accordance with applicable local, state, and federal laws and regulations.

3.7.2 The Coast Guard Inspector will verify all surface preparation.

3.7.3 Upon verification from the Coast Guard Inspector on all surface preparation, prime and coat all prepared surfaces to match existing adjacent surfaces in accordance with the applicable sections of General Requirements. For surfaces to be covered with insulation, apply primer coats only.

#### **4. NOTES**

This section is not applicable to this work item.

## WORK ITEM 32: Sounding Caps, Repair

### 1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to repair the Sounding Caps.

1.2 Government-furnished property.

None

### 2. REFERENCES

#### COAST GUARD DRAWINGS

Coast Guard Drawing 175-WLM 506-1, Rev G, Overflows, Air Escapes & Sounding Tubes Diagrams

Coast Guard Drawing 175-WLM 506-3, Rev D, Vents & Sounding Tubes A & D Frame 6 Forward, Hull Block 901

#### COAST GUARD PUBLICATIONS

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

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

#### OTHER REFERENCES

The Society for Protective Coatings (SSPC)/NACE Joint Surface Preparation Standard SSPC-SP 10/NACE No.2, 2004, Near-White Blast Cleaning

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

### 3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Protective measures. The Contractor shall furnish and install suitable covering to seal off and protect all non-affected surfaces/equipment and spaces in the vicinity of the work area against

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

contamination during the performance of work. Upon completion of work, remove protective material and inspect for the presence of contamination. Clean all equipment and spaces, contaminated due to improper protection, to original condition of cleanliness.

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

- Ventilation ducting.
- Piping.
- Electrical wiring.

3.2 Sounding tube caps renewal particulars. Using Coast Guard Drawing 175-WLM 506-3 as guidance, the Contractor shall crop and renew the exiting sounding tube caps for the following systems, and also including associated brackets.

3.3 Ballast tank Sounding Caps. The Contractor shall break free 3 Sounding Caps on buoy deck, frame 40. See Coast Guard Drawing 175-WLM 506-1 for more details.

3.3.1 Re-tap and clean all threats, renew all associated fasteners.

SOUNDING TUBE	LOCATION/SPACE/TANK
3-0-0-V	Forward Ballast Tank / Main Deck
3-35-6-V	Port Ballast Tank
3-35-1-V	Starboard Ballast Tank

3.3.2 Repair reach rod valve assembly for the forward ballast Tank 3-0-0-V.

3.4 Surface Preparation – Upon completion of successful nondestructive testing, prepare all new and disturbed exterior areas in accordance with SSPC-SP 10. Prepare all new and disturbed interior areas in accordance with SSPC-SP 11. Feather the surrounding surfaces to obtain a 3-inch wide smoothly tapered boundary from the existing paint to the prepared surface.

3.4.1 Upon verification from the Coast Guard Inspector on all surface preparation, prime and coat all prepared surfaces to match existing adjacent surfaces in accordance with the applicable sections of General Requirements.

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

**4. NOTES**

This section is not applicable to this work item.

## **WORK ITEM 33: Upper Propulsion Thruster Space Deck, Preserve**

### **1. SCOPE**

1.1 Intent. This work item describes the requirements for the Contractor to preserve the deck of the Propulsion Thruster Space Upper Level (3-88-0-E, approximately 250 sqft.).

1.2 Government-furnished property.

None.

### **2. REFERENCES**

#### **COAST GUARD DRAWINGS**

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

#### **COAST GUARD PUBLICATIONS**

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

- Potable water tank.
- Z-drive head tanks.
- Shelves/storage.

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

3.3 Surface preservation. The Contractor shall prepare and coat the designated deck surfaces, using the system specified for “Metal Decks – No applications of deck coverings” in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). Apply finish/top coat color as follows: match existing adjacent surfaces.

3.3.1 Select power tool cleaning to “bare metal” (SSPC-SP 11) with a minimum 1.0 mil anchor profile as the method of surface preparation.

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

#### **4. NOTES**

This section is not applicable to this work item.

## WORK ITEM 34: 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 and Waste Water System Diagram

#### COAST GUARD PUBLICATIONS

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

#### OTHER REFERENCES

### 3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

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

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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

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

- Grey water pumps
- 

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

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

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

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

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

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

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

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

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

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

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

USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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

3.5.5 Clean until all of the following conditions are met:

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

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

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

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

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

**CAUTION**

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

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

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

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

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

**NOTE**

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

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

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

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

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

- 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 35: HVAC Systems (Chartroom and ECC), Upgrade

### 1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to upgrade the HVAC system in the Chartroom and ECC Spaces, Compartments 2-52-0-C & 02-61-0-C, respectively.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST (\$/UNIT)
N	4 Ton Heat Pumps	NSN: 4120-01-F17-5298	2 ea.	3,100.00
N	13,500 BTU AC Unit	NSN: 4120-01-614-6103	1 ea.	1,000.00
N	Ceiling Mounted Fan Coil Unit	NSN: 4120-01-F18-5565	1 ea.	1,000.00

### 2. REFERENCES

#### COAST GUARD DRAWINGS

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

Coast Guard Drawing 175 WLM 320-003, Rev L, Power System Deck Plan, Fr 61-24, Below Main Deck

Coast Guard Drawing 175 WLM 320-004, Rev F, Power System Deck Plan, ER and Pump Room

Coast Guard Drawing 175 WLM 320-007, Rev R, Power System Deck Plan, 01 Level and Above

Coast Guard Drawing 175 WLM 437-008, Rev G, HVAC Control System; Block, ISO & Elem W.D.

Coast Guard Drawing 175 WLM 512-017, Rev C, HVAC Mods to Compartments 2-52-0-C & 02-61-0-C.

#### COAST GUARD PUBLICATIONS

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

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

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

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:

- Insulation.
- Ventilation ducting.

3.1.5 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.

3.2 Requirements. The Contractor shall perform the following as shown on Coast Guard Drawings 175 WLM 320-001, 175 WLM 320-003, 175 WLM 320-004, 175 WLM 320-007, 175 WLM 437-008, and 175 WLM 512-017:

#### 3.2.1 Removals.

3.2.1.1 Disconnect and remove the #1 AC Unit serving the ECC and make all associated modifications.

3.2.1.2 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.

## USCGC MARIA BRAY (WLM-175) DOCKSIDE AVAILABILITY FY2019

3.2.1.3 Remove and turn over the existing #1 AC Unit to the Coast Guard PA as a MTI item.

### 3.2.2 Installations.

3.2.2.1 Fabricate and install all foundations to support new equipment installation.

3.2.2.2 Install two new heat pumps, new air handler, and new AC unit.

3.2.2.3 Install and modify all new and existing piping and wiring to suit equipment installation.

3.2.2.4 Furnish and install a nameplate label onto all new AC equipment. Ensure that the nameplate is made of the melamine type material, with engraved black letters on white background or vice versa; or metal photo type material with black letters photographically sealed onto an aluminum surface.

3.3 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.

### 3.4 Quality assurance.

3.4.1 Pressure testing and dehydration. The Contractor shall dehydrate the refrigerant circuits using triple evacuations. Pull a vacuum of 5 mmHg and hold for 1 hour. Charge with dry nitrogen to approximately 2 psig. After 1/2 hour, pull a vacuum of 5 mmHg and hold for 1 hour. Recharge with dry nitrogen to approximately 2 psig. After 1/2 hour, pull a vacuum of 5 mmHg and hold for 6 hours. Any increase in pressure, corrected for ambient temperature changes greater than 3 mmHg, shall be cause for rejection. Check for leakage, repair and retest. Place system under a deep vacuum for 24 hours. System must attain a vacuum of 25 mmHg. Charge the systems with R-22 as indicated in the unit's tech manuals upon completion. Submit a CFR.

3.4.2 Hydrostatic test. After all authorized repairs, the Contractor shall hydrostatically test all new and disturbed piping and components of the Air Conditioning system in accordance with SFLC Std Spec 0740, Appendix C, "Hydrostatic Test". Ensure zero leakage from or permanent deformation of pressure-containing parts by repairing all leaks, deformations, and discrepancies. Submit a CFR.

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

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

## 4. NOTES

This section is not applicable to this work item.