

PAMBANSANG PUNONGHIMPILAN TANOD BAYBAYIN NG PILIPINAS

(National Headquarters Philippine Coast Guard) **Technical Working Group for Ships Repair/Maintenance**139 25th Street, Port Area, 1018 Manila

SUPPLEMENTAL/BID BULLETIN NO. 08-2024

This Supplemental/Bid Bulletin No. 08-2024 is issued to include the following clarification/changes raised by the prospective bidders, as an integral part of the Bidding Documents for the Supply and Delivery of Services and Parts for One (1) Year Integrated Logistics Support (ILS) Intended for Ten (10) 44-Meter Multi-Role Response Vessels (MRRVs) detailed as follows: Section VII. Technical Specifications

Section VII. Technical Specifications is hereby amended to read as and additional item/s must be included as required:

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A. Dr	ydockin	g Works (1 vessel per Quarter)	4	Vessels	
A.1	DRYDC	OCKING SERVICES			
	A.1.1	Docking and Undocking of Vessel	1 lot		
	A.1.2	Drydock Lay Days Rental	60 days		
	A.1.3	Mooring and Unmooring - prior to movements			
		Mooring during arrival/ beaching Unmooring before docking Mooring after undocking. Unmooring prior pull-out to anchorage.	4 movements		
	A.1.4	Tug Assistance during Docking/Undocking			
		a.) Using Two (2) Tugboat to assist the vessel for beaching from anchorage area to slipway.	1 lot		
		b.) Mobilization/demobilization to assist the vessel for beaching from anchorage area to slipway.	1 lot		
		c.) Using Two (2) Tugboat to assist the vessel pull-out to anchorage from slipway.	1 lot		
		d.) Mobilization/demobilization of tug boat to `assist the vessel pull-out to anchorage from slipway.	1 lot		
	A.1.5	Shoreline Handlers - prior to movements:	4 movements		
		a.) Mooring during arrival/ beaching			
		c.) Unmooring before docking			
		d.) Mooring after undocking.			
		e.) Unmooring prior pull-out to anchorage.		* .	
	A.1.6	Dock Preparation and Block Arrangement			

[&]quot;Serving our Nation by Ensuring Safe, Clean and Secure Maritime Environment" BAGONG PILIPINAS

b.) Hull Side Block Port & Stbd c.) Reblocking of Keel prior lift-up. 56 sets c.) Reblocking of Keel prior lift-up. 56 sets A.1.7 Dock Master during movements docking & 1 lot undock A.1.8 Wharfage 1 lot General Services A.2.1 Wharfage - to provide berth side for afloat Gangway for access during vessel stay at yard A.2.2 Shore line Power a.) Connect and disconnect; 220V, 3phase, 60 Hz b.) Electrical power consumption 1 lot A.2.3 Fire line Supply a.) Connect and disconnect fireline onboard. 1 time b.) Daily maintained pressure supply 1 lot A.2.4 Fresh Water Supply a.) Connect and disconnect 1 time b.) Fresh Water Supply, Minimum of 5 Tons A.2.5 Garbage Disposal 1 lot Provide Barge/bin for disposal of sludge and other gaseous/non-gaseous and toxic/non-toxic substances/materials (1 cu.m per day) A.2.6 Gas Free Inspection Conduct gas free inspection onboard of tanks by yard's safety personnel prior to vessel's entry of tanks for any works/activities. A.2.7 Ventilation / Blower provides Ventilation / Blower provides Ventilation / Blower for Air circulation, Temperature Control, Furne and Dust control for the enclose room and Tanks while conducting activities/works while in Dry-Dock A.2.8 Temporary Lighting Provide temporary lighting during the period of dry docking to provide adequate illumination where permanent fixtures are unavailable or impractical to ensures safety and visibility during nightime work or in areas lacking natural light. A.2.9 Security Watchmen vessel and vessels materials during the period of frepair. at least 1 Security Watchmen per day A.2.10 Safety Firewatch with firefighting equipment and provision for safety for the duration of repair. at least 1 Safety Firewatch per day A.2.11 Yard's Equipment Usage a.) Forkifit usage b.) Cranage usage 1 lot b.) Cranage usage			a.) Hull Keel Block	28 sets		
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			b.) Cranage usage	1 lot		

		Mobilization/Demobilization	1 lot] 	
		c.) Cherry Picker	1 lot		
		d.) Scissor Lift for blasting and painting access	1 lot		
		e.) Service boat for crew usage	1 lot		
		f.) Service boat for supply of water in anchorage near yard	1 lot		
	A.2.12	Scaffold / Staging for access			
		a.) External Staging :	1 lot		
		b.) Internal Staging :	1 lot		
	A.2.13	Hull Scupper chutes prior of painting works	20 pcs		
	A.2.14	Various Testing	•		
		Vacuum Testing (Non-Destructive Testing)	1 lot		
	A.2.15	Temporary Accommodation			
		Provide house and service car accommodation.	3 months		
A.3	HULL P	RESERVATION WORKS			
	A.3.1	Hull Washing			
		a.) Hull FW high pressure Jet washing from Keel to DLL.	700.88 m²		
		b.) Hull FW low pressure Washdown prior second coat from Keel to Deckline.	907.06 m ²		
	A.3.2	Scrapping			
		Hull Scraping of barnacles	490.61m ²		
	A.3.3	Manual Chipping			
		Hull Manual Chipping, if required excluded	m²		
	A.3.4	Hull Blasting			
		Keel to DLL = 700.88 sqm			
		Spot Blasting (SA 2.0)	210.26 m ²		
		Sweep Blasting (SA 1.0)	490.61m²		
		DLL to Deckline = 206.18 sqm			
		Spot Blasting (SA 2.0)	61.86 m ²		
		Sweep Blasting (SA 1.0)	144.33 m ²		
		Super Structure Included Railings = 297.62 sqm			
		Spot Blasting (SA 2.0)	89.29 m ²		
-		Sweep Blasting (SA 1.0)	208.33 m ²		
	A.3.5	Hull Painting (Shipyard paint & thinners)			
		Keel to DLL = 700.88 sqm			
		One (1) Full coat Primer	700.88 m ²		
		One (1) Full coat 2nd Coat	700.88 m ²		
		One (1) Full coat Anti-Corrosive	700.88 m ²		
		Supply of Paints and <mark>Lacquer</mark> Thinner			
		Paints	421 Liters		
		Thinner	43 Liters		
		DLL to Deckline = 206.18 sqm			
		One (1) Full coat Primer	206.18 m ²		
		One (1) Full coat 2nd Coat	206.18 m ²	* * *	
		One (1) Full coat Top Coat	206.18 m ²		

Paints 124 Liters Thinner 13 Liters 15 Liters 16 Decks, Superstructure, Railings = 297.62 sqm 18 Stairway Preservation and Deck Appendages Preservation 297.62 m² 297.			Supply of Paints and Lacquer Thinner]	
Thinner Decks, Superstructure, Railings = 297.62 sqm Stairway Preservation and Deck Appendages Preservation One (1) Full coat Primer One (1) Full coat Top Coat One (1) Full coat Top Coat Supply of Paints and Lacquer Thinner Paint including Anti-Skid Thinner Hull Painting Load line Separation load line in between DLL & topsides W LBP Seachest box/ grids 1) Remove sea chest gratings (clean, blast, paint, refit in good order) 2) Blasting and painting of sea chest boxes Hull Markings Repaint Re-Paint with Shipyard's paint on hull markings Draft Marks: Fwd, Mid, Aft, Port and starboard Ship's Name, Fwd. Port and starboard Plimsoll, Port and starboard Ship's CoGO, PCG name and on Side Shell (Port and starboard) A.3.6 Zinc Anode Removed wasted anodes and renewed using Shipyard's furnished materials. Plain removal of anode Anode Installation Yards supply zinc anodes Cover/Protection in way of painting Locations A.4.1 Ultrasonic Thickness Gauging (UTG) Conduct ultrasonic gauging on the following locations; a) Bottom & Side Shell Plate Gauging allow b) Hammer test, inspect hull & marked suspected areas before dook c) Hull survey/inspection prior undocking A.4.2 Structural Works Hull external replating using blasted High Tensile Steel (KA36) 6 00mm Thick or equivalent grade such as ABS Grade A). Renewal of Deteriorated Pipelines and A.4.3 Renewal of Deteriorated Pipelines and Fittings Locations Lo				124 Liters		
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a) Bottom & Side Shell Plate Gauging allow b) Hammer test, inspect hull & marked suspected areas before dock c) Hull survey/inspection prior undocking 1 occasion A.4.2 Structural Works Hull external replating using blasted High Tensile Steel (KA36) 6.00mm Thick or equivalent grade such as ABS Grade A). Renewal of Deteriorated Pipelines and 1 Lot A.4.3 Fittings						
b) Hammer test, inspect hull & marked suspected areas before dock c) Hull survey/inspection prior undocking A.4.2 Structural Works Hull external replating using blasted High Tensile Steel (KA36) 6.00mm Thick or equivalent grade such as ABS Grade A). Renewal of Deteriorated Pipelines and 1 Lot Fittings			,	500 points		
areas before dock c) Hull survey/inspection prior undocking A.4.2 Structural Works Hull external replating using blasted High Tensile Steel (KA36) 6.00mm Thick or equivalent grade such as ABS Grade A). Renewal of Deteriorated Pipelines and A.4.3 Fittings				•		
A.4.2 Structural Works Hull external replating using blasted High Tensile Steel (KA36) 6.00mm Thick or equivalent grade such as ABS Grade A). Renewal of Deteriorated Pipelines and A.4.3 Fittings			1 ,			
Hull external replating using blasted High Tensile Steel (KA36) 6.00mm Thick or equivalent grade such as ABS Grade A). Renewal of Deteriorated Pipelines and A.4.3 Fittings			,	1 occasion		
Steel (KA36) 6.00mm Thick or equivalent grade such as ABS Grade A). Renewal of Deteriorated Pipelines and 1 Lot A.4.3 Fittings		A.4.2	Structural Works			
Renewal of Deteriorated Pipelines and 1 Lot A.4.3 Fittings			Steel (KA36) 6.00mm Thick or equivalent grade	1 lot		
1. Flange to flange		A.4.3	Renewal of Deteriorated Pipelines and	1 Lot	*	
			1. Flange to flange		AN WA	

		BI Pipe Size Sch 80			
		25mm			
		38mm			
		50mm			
		75mm			
		100mm			
		125mm			
		150mm			
		200mm			
		250mm			
		300mm			
		2. Elbows, flanges, fasteners, sleeves, reducer-			
		extra			
		3. Testing, air testing, pickling, flushing			
		4. Pipes inside confined spaces and tanks			
A.5	TANK V				
	A.5.1	Servicing (Opening/reclosing) of Manhole	•		
		1. Fuel Oil Tank (P&S)	2set		
		- Pull-out bolts and nuts			
		2. Fuel Oil Tank (P&S)	2set		
		- Clean Manhole Cover			
		 Renew deteriorated bolts and nuts 			
		- Renew Manhole Rubber Gasket			
		- Install Manhole cover and tighten the			
		nuts			
	A.5.2	Cleaning of Fuel Oil Tank (P&S)			
		Pump-out of fuel on tank and transfer to temporary storage.	40 m³		
		Scrape off remaining oil and sludge.	4 m³		
		Provide temporary storage for fuel.	1 lot		
		Pump-in of fuel on temporary storage and transfer to tank after work.	40 m³		
	A.5.3	Cleaning of Fresh Water Tank (P&S)			
	A.J.3	Pump-out of FW on tank and transfer to	40 m³		
		temporary storage.			
		Scrape off remaining water and mud.	4 m³		
		Provide temporary storage for fresh water.	1 lot		
		Pump-in of FW on temporary storage and transfer	40 m³		
	1 - 1	to tank after work.			
	A.5.4	Cleaning of Engine Room Bilge	45 3		
	1	Pump-out of residual oily water.	15 m ³		
	1	Scrape off remaining oily water and sludge.	3 m ³		
	1	Clean, wipe and dry of Engine Room Bilge	1 lot		
	4	Repaint Engine Room Bilge	1 lot		
	A.5.5	Cleaning of Auxiliary Room Bilge	45 . 2		
		Pump-out of residual oily water.	15 m³	*	
	1	Scrape off remaining oily water and sludge.	3 m³		

		Cloop wine and dry of Auxiliany Boom Dilac	1 104	1	I
	1	Clean, wipe and dry of Auxiliary Room Bilge	1 lot		
		Repaint Auxiliary Room Bilge	1 lot		
	A.5.6	Cleaning of ANCHOR/CHAINS AND LOCKER WORKS			
		Range out/in anchor chain from chain locker & lay-out to dock floor	2sets		
		a. Crane usage	16 hours		
		b. Crane mobilization/demobilization	2 time		
		De-rust chain slagblasting to SA 2.0	2sets		
		Calibrate anchor and chain & issue certificate	2sets		
		Disconnect/reconnect bitter ends.	2 per set		
		Apply one coat (chain & anchor) - Yards' paint	2 per set		
		Power tooling of chain locker room.	2 lockers		
		Apply paint/coating to chain locker - Yards' paint	2 lockers		
		Supply of Coal Tar	1 lot		
A.6	PROPU	1			
	A.6.1	TAILSHAFT WORKS (P&S)			
		Shaft Details: 168 mm-D x 8,279 mm-L, Stainless Steel (Grade 1)			
		Seal Type: EVK2RV-150-150SRPT, Water Panel			
		Bearing Type: Teflon Rubber Coated Bearing			
		Check bearing clearance of tailshaft on Inboard, Outboard and Strut.	6 locations		
		Decouple/re-couple, jump-off tailshaft coupling.	2 pcs		
		Draw out Tailshaft	2 shafts		
		Transport tailshaft to shop for works	2 shafts		
		Transport coupling to shop for works	2 pcs		
		Clean and polish tailshaft.	2 shafts		
		Recondition coupling bolts and nuts.	16 pcs		
		Disconnect/Reconnect of seawater cooling line.	2 sets		
		Disconnect/Reconnect of airline.	2 sets		
		Removal/ Renewal of back up seal.	2 pcs		
		Removal/ Reinstallation of matting ring.	2 pcs		
		Removal/Renewal of seal housing.	2 sets		
		Transport seal housing to shop and back to vessel after works.	2 sets		
		Dismantle, recondition and reassemble of seal housing.	2 sets		
		Renew shaft seals and O-rings. (Yard Supply)	2 pcs		
		Supply of seals and O-ring.	2 pcs		
		Conduct air test on EVK balloon.	2 sets		
		Mount tailshaft to lathe machine and check straightness.	2 shafts		
		Check radial/ axial alignment of tailshaft.	2 shafts		
		Check and calibrate tailshaft sleeve of outboard, inboard and strut (fwd. & aft) before and after	8 readings		
		execution of tailshaft works.		* * *	
	•				

			T	1	1
		Check and calibrate tailshaft bearing of outboard	8 readings		
		inboard and strut (fwd. & aft) before and after			
		execution of tailshaft works.			
		Dye check tailshaft tapered ends @ coupling and	4 tapered		
		propeller side.			
		Conduct Honing/blue fitting of port and starboard	4 shafts		
		side propeller taper cone both propeller side and			
		coupling sides.	0.4550		
		Servicing of shaft lock/ Stopper Assy	2 Assy		
		Conduct manual rotation test.	2 shafts		
	A.6.2	PROPELLER WORKS (P&S)			
		Prop. Details: 1,450 mm-D x 5 Blades,			
		Fix Pitch Propeller Aluminum Bronze			
		Unfreeze, remove, polish & reinstall propeller cap	7 pcs		
		nut.			
		Remove and reinstall propeller lock.	2 pcs		
		Removal/reinstallation of propeller blades.	2 pcs		
		Transport propeller to shop for works and vice	2 pcs		
		versa.			
		For the supply of labor, tools, materials,	2 sets		
		equipment and other facilities including strict			
		supervision and quality control using DYNAMIC			
		Precision Electronic Pitch Meter in the			
		reconditioning of Aluminum Bronze Propeller, Right and Left Hand Rotation			
		Right and Left Hand Rotation Reconditioning includes straightening dented			
		portions, aligning uniform pitch at 0.7 radius on all			
		blades, equal blade spacing, aligning			
		leading/trailing edges, dye penetrant test at 0.2			
		radius and 0.7 to 1.0 radius			
	A.6.3	RUDDER WORKS (P&S)			
	7.0.0	Prop. Details: 150 mm-D x 1,836.50 mm-L,			
		Stainless Steel (Grade 1)			
		Check clearance of lower & upper bearing.	4 locations		
		Disassemble/re-assemble steering gear.	2 sets		
		Remove/re-installation of rudder shaft with blade.	2 shafts		
		Conduct swing test on rudder blade, prior after	2 occasions		
		docking and before undocking.	2 00000.01.0		
A.7	VALVES	S & MACHINERY WORKS			
	A.7.1	Valve Works			
		1. Disassemble and re-assemble all valves,			
		sandblast valve housings, lap and grind valves			
		from disk to seat clean all exposed parts, testing			
		bedding and reassemble with new cover joint and			
		repack gland with conventional soft packing and			
		replace deteriorated basket of strainers and all			
		defective internal parts of the following:			
	A.7.1.1	Main Engine Sea Chest (P)		*	
		a. 5k150Butterfly Valve	1 pc		
					

			4	–	
	1	b. 5k40Gate/ Globe Valve	1 pc		
	1	c. D200Basket Type Strainer	1 pc		
	A.7.1.2				
		a. 5k150Butterfly Valve	1 pc		
		b. 5k40Gate/ Globe Valve	1 pc		
		c. D200Basket Type Strainer	1 pc		
	A.7.1.3				
		a. 5k50 Angle Valve	2 pcs		
		b. 5k40Angle Valve	1 pc		
		c. 5k20Globe Valve	1 pc		
	A.7.1.4				
		a. 5k50 Angle Valve	2 pcs		
		b. 5k20Angle Valve	1 pc		
	A.7.1.5	Air-condition Sea Chest (P)			
		a. 5k150Butterfly Valve	1 pc		
		b. 5k40Angle Valve	1 pc		
		c. 5k25Angle Valve	3 pcs		
	A.7.1.6	Fire Hydrant Sea Chest (S)			
		a. 5k65Butterfly Valve	2 pcs		
		b. 5k40Angle Valve	1 pc		
		c. 5k20Globe Valve	1 pc		
	A.7.1.7	Conduct hydrotest of newly repaired and	22 pcs		
		replaced valves with at least 150% operating pressure.	•		
	A.7.1.8	Blast valve body and apply 1coat primer paint.	22 pcs		
A.8	MISCEL	LANEOUS AND ADDITIONAL WORKS			
	A.8.1	Shell Expansion Plan and Ship Repair Services documentation			
		Provided Four (4) copies of Shell Expansion Plan indicating the work done in the vessel, w/	1 lot		
		reference plan.			
	A.8.2	Electrical Megger Testing			
	AIOIL	26-50 Kw megger test motor	1 lot		
		51-100 Kw megger test motor	1 lot		
	A.8.3	Sea Trial	1 100		
	A.0.3	Provide technical crew during sea trial including	1 trial		
		service boat. Engine trial @ anchorage	i tilai		
B. N	_	4000 M93L PREVENTIVE MAINTENANCE ATRIX for Port and Starboard Main Engine of	14	Engines	
A. M	RRV-440	1, B. MRRV-4403, C. MRRV-4404, D. MRRV- /-4409, F. MRRV-4410 and G. MRRV-4411.			
B. 1		Inning Hours			
	B.1.1	Centrifugal Filter			
	 	Check thickness of oil residue layer. Clean. Fit			
		new sleeve, at the latest, each time the engine oil is changed.			
	B.1.2	Oil Indicator Filter		* .	
		Check and clean oil indicator filter.			
<u> </u>	1				

B.1.3	Valve Gear		
	Check valve clearance, adjust if required.		
	ATTENTION! Initial adjustment after 1,000		
	operating hours and subsequently 1,000		
	operating hours after each cylinder-head		
B.1.4	overhaul Turbochargers		
D.1.4			
	Clean compressor wheel.		
	Overhaul turbochargers.		
D 4.5	Fit new turbine wheels for turbochargers.		
B.1.5	Air Filter		
5.4.0	Fit new air filters.		
B.1.6	Fuel Injectors		
	Replace fuel injectors.		
B.1.7	Engine Governor		
	Injector: reset drift compensation parameters (CDC).		
B.1.8	Combustion Chamber		
	Inspect cylinder chambers using endoscope.		
B.1.9	Crankcase Breather		
	Replace impactor.		
	Clean cyclone-type filter element.		
B.1.10	Battery Charging alternator		
	Check condition of coupling.		
B.1.11	Preheat / Jacket water heater		
	Overhaul preheater / jacket water heater.		
	Replace circulating pump.		
B.1.12	Engine Mounts		
	Check buffer clearance of resilient mounts		
	Check proper seating of securing screws.		
	Fit new engine mounts.		
B.1.13	Cylinder Head		
	Overhaul cylinder heads. Visually inspect piston		
	crowns and wear pat- tern on cylinder liner running surfaces.		
B.1.14	Component Maintenance		
<i>D.11.14</i>	Before starting maintenance work, carry out test		
	run and record operating parameters. Then drain		
	coolant and flush cooling systems.		
	Inspect rocker arms and valve bridge for wear.		
	Insert an endoscope through the pushrod bore to		
	visually inspect swing followers and cam- shaft		
	running surfaces.		
	Clean air ducting		
	Clean intercooler and inspect for leakage.		
	Fit new high-pressure fuel sensor.		
	Check engine coolant thermostat and fit new thermal actuator.	* * *	
	Inspect centrifugal oil filter for wear.		
	mopeot centinugai on inter for wear.		

		Overhaul starter.		
		Clean engine coolant cooler and inspect it for		
		leaks.		
		Clean engine oil cooler and inspect it for leaks.		
		Check operation of diverter valve.		
		Fit new seals sealing materials for all		
		disassembled components.		
		Overhaul engine coolant pump.		
		Overhaul raw-water pump.		
		Overhaul bilge pump.		
	B.1.15	Rubber Sleeves		
		Replace all rubber sleeves.		
	B.1.16	Hose Lines		
		Replace all hose lines.		
	B.1.17	Automatic Engine Oil Filter		
		Remove filter housing and clean. Fit new filter		
		candles.		
	B.1.18	Extended Component Maintenance		
		Completely disassemble the engine. Inspect		
		engine components as per assembly instructions		
		and repair or fit new components as re- quired.		
		Replace all elastomeric parts and seals with new ones.		
		Fit new piston rings.		
		Fit new conrod bearings.		
		Fit new crankshaft bearings.		
		Fit new cylinder liners.		
		Fit new fuel delivery pump.		
		Fit new actuating cylinders for air flow control		
		flaps.		
		Fit new actuator cylinders for exhaust flaps.		
		Fit new exhaust flap bearings.		
		Fit new camshaft bearings and camshaft thrust		
		bearings.		
		Fit new pressure relief valve in high-pressure fuel		
		system.		
		Overhaul battery-charging generator.		
		Check gear train for cracks, replace bushings,		
		check axles and replace if necessary.		
		Fit new engine oil pump.		
		Fit new rubber elements of engine mounts.		
		Replace swing followers and swing-follower shafts.		
		Replace oil replenishment pump.		
		Check vibration damper, fit new one if necessary.		
	B.1.19	HP Fuel Filter		
		Check vibration damper, fit new one if necessary.	•	
B.2		ry 500 Running Hours, after conducting 4,500 g Hours		

	B.2.1	Centrifugal Filter		
	<i>D.</i> 211	Check thickness of oil residue layer. Clean. Fit		
		new sleeve, at the latest, each time the engine oil		
		is changed.		
	B.2.2	Oil Indicator Filter		
		Check and clean oil indicator filter.		
B.3		ery 1,000 Running Hours, after conducting 4,500		
	1	g Hours		
	B.3.1	Engine Mounts		
		Carry out visual inspection of engine mounts for		
	5.00	general condition. Fuel Filter		
	B.3.2			
		Fit new fuel filter or new fuel filter insert.		
	B.3.3	Fuel Prefilter		
		Fit new fuel prefilter or new fuel prefilter insert.		
	B.3.4	Intermediate Fuel Filter		
		Replace intermediate fuel filter of filter element of intermediate fuel filter.		
	B.3.5	Valve Gear		
	<i>D.</i> 3.3	Check valve clearance, adjust if required.		
		ATTENTION! Initial adjustment after 1,000		
		operating hours and subsequently 1,000		
		operating hours after each cylinder-head		
		overhaul		
B.4		ery 1,500 Running Hours, after conducting 4,500 g Hours		
	B.4.1	Centrifugal Filter		
		Check thickness of oil residue layer. Clean. Fit		
		new sleeve, at the latest, each time the engine oil is changed.		
	B.4.2	Oil Indicator Filter		
		Check and clean oil indicator filter.		
B.5		000 Running Hours, after conducting 4,500		
		g Hours Engine Mounts		
	B.5.1	Carry out visual inspection of engine mounts for		
		general condition.		
	B.5.2	Fuel Filter		
	<i>D.</i> 0.2	Fit new fuel filter or new fuel filter insert.		
	B.5.3	Fuel Prefilter		
	<i>D.</i> 0.0	Fit new fuel prefilter or new fuel prefilter insert.		
	B.5.4	Intermediate Fuel Filter		
	<i>D.</i> 0.7	Replace intermediate fuel filter of filter element of		
		intermediate fuel filter.		
B.6	For 2,5	500 Running Hours, after conducting 4,500		
		g Hours	 	
	B.6.1	Centrifugal Filter		
		Check thickness of oil residue layer. Clean. Fit	 *	
		new sleeve, at the latest, each time the engine oil		
	<u> </u>	is changed.		

	B.6.2	Oil Indicator Filter		
	5.0.2	Check and clean oil indicator filter.		
C. Re	powering	g of all Genset of MRRV 44-meter	20	Genset
	`	Specification		
	Ochiset	Rating: Minimum of 118 KW		
		Rated Speed: 1800 rpm		
		Bore & Stroke: Minimum of 105 mm x 127 mm		
		Displacement, liters: Minimum of 4.4Li		
	-	Cycle: 4 cycle		
		Dry Mass, kg: Minimum of 1,537 kg		
		Aspiration: Turbocharged		
		Electrical System: 24V starter motor		
		Brake Specific Fuel Consumption: Minimum of 32 Li/Hr at 129 kWm		
		Generator: IP23 water protection		
	Extracti	on of Old Genset		
		Provision of access opening in way of extraction of old genset		
		Disconnection of all electrical attachments from panel to alternator		
		Disconnection of sea water cooling pipe lines exhaust pipes and fuel lines		
	1	Extraction of existing genset from base platform		
		to outside engine room		
	Installat			
		Modification of new base platform as per the new		
		above-mentioned genset requirements.		
		Rigging in and mounting genset onboard vessel.		
		Pull-out and replace with new mounting rubber damper.		
		Closing of in-way opening		
		Install new exhaust cladding		
		Install new Monitoring and Controls (Engine Display)		
		Termination of wires from genset to vessel panel board		
	-	Synchronization		
	-	Testing and commissioning		
Mach Comr Acces	inery, E munication ssories F	Maintenance Inspection (PMI) on Deck Ingine Room Machinery, Navigational and On Equipment, Airconditioning Plant and Per Vessel.		
D.1 B	RP TUBE	BATAHA (MRRV-4401)		
	D.1.1	REVERSE OSMOSIS DESALINATOR	1 lot	
		a. Overhaul Desalination Plant Sea Water Supply Pump - change oil, replace bearings, shaft seal, packing, O-ring, suction/ discharge valve assembly and impeller, if necessary;		* *
<u> </u>	1	<u>.</u>		

	b. Overhaul Desalination Plant Sea Water Supply Pump - replace bearings and oil seal, check insulation and reinsulate with electrical insulating varnish, if necessary;			
	c. Overhaul Desalination Plant High Pressure Pump - replace bearings, shaft seal, packing, O- ring and piston, if necessary;			
	d. Overhaul Desalination Plant High Pressure Pump - replace bearings, check insulation and reinsulate with electrical insulating varnish, if necessary;			
	e. Inspect and clean Desalination Plant Pretreatment Unit;			
	f. Replace Filter Element, O-rings and Brine Seal of Reverse Osmosis Module Assembly;			
	g. Inspect, clean and calibrate sensors and wiring connections of Salinity Indicator; and			
	h. Supply 4 pcs Seawater Reverse Osmosis Membrane (SW-2540)			
	Flow Rate: 700 GPD (2.6 M3/D)Stabilized Salt Rejection: 99.40 %Applied Pressure: 800 psig (55 bar)			
	I. Supply 10 bottles of Sodium Hydrogen - 1st Grade, 58.50% (as SO2) 500 grams.			
D.1.2	WORKING BOAT [5.4m length Rigid-Hulled Inflatable Boat (RHIB) type]	1 lot		
	General Overhauling of Outboard Motor replacement of worn out parts and reconditioning of reusable parts on cylinder head assembly, piston and piston rod assembly, crankshaft assembly, camshaft assembly, cylinder block/liner assembly, exhaust manifold, electrical and ignition system (magneto and sparkplug), electronic system (sensors), fuel oil supply pump, carburetor, cooling sea water pump assembly, electric starting motor, output shaft and propeller shaft assembly, zinc anodes replacement of fuel filters, air filters, change gear oil, renew 2T oil and replacement of worn out parts;			
	good operational condition of rotating searchlight		*	

	Build up fiber glass on dilapidated parts on hull, boat deck, transom, gunwale, fender and bow;		
	Repaint hull with antifouling paint;		
	Repaint boat deck, transom, gunwale, bow with anti-skid paint;		
	Repaint rubber tube Philippine Coast Guard marks;		
	Inspect/ clean wiring connections and hoses; and		
	Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses		
	Conduct sea trial operational test		
D.1.3	ECHO SOUNDER	1 lot	
<i>D.1.</i> 3	Check, Update, Repair/Replace as required to	1 101	
	support the good operational condition of ECHO SOUNDER		
D.1.4		1 lot	
	Check, Repair/Replace of unit and its components such as, but not limited to electronic ballast, ICBT, search light starter, xenon lamp, transistor as required to support the good		
	operational condition of XENON SEARCH LIGHT		
D.1.5	AIR CONDITIONING UNIT	1 lot	
<i>D.1.</i> 3	Tag, disconnect electrical wirings and all	1 100	
	interferences in way of servicing;		
	Pull-out and replace number 3 compressor;		
	Pull-out and replace replacement of flow heat exchanger;		
	Check test the condition of air conditioning system		
	Replace defective copper tubing and insulations with polyethylene tape;		
	Inspect/repair/replace valves and piping. Clean filters, evaporator/chiller tubes;		
	Conduct vacuum/flushing with nitrogen and repair all leakages of centralized air conditioning unit and charge with correct amount of refrigerant gas;		
	Check the contacts of motor contactors and control devices. Check the adjustment and		

	operation of each control devices. Correct noted deficiencies;		
	Secure tagging and all interferences and restore to operational condition; and		
	Conduct operational test for satisfactory completion of work.		
	No. 1 AIR CONDITIONING UNIT (Nav/Bridge Deck)		
	No. 2 AIR CONDITIONING UNIT (Upper Deck) No. 3-1 AIR CONDITIONING UNIT (2nd Deck) No. 3-2 AIR CONDITIONING UNIT (Crew's Mess)		
	No. 4 AIR CONDITIONING UNIT (Upper Deck) 1 x Heat Pump Chilling Unit 1 x Sea Water Pump 1 x Circulation Pump		
D.1.6	RECONDITIONING OF DECK CRANE	1 lot	
	Servicing/Overhauling of Deck Crane- replacement of worn out parts and reconditioning of reusable parts including hydraulic cylinders, hydraulic control valve, powerpack and accessories such as cable wires, battery of over-		
D.1.7	winding alarm. LIFERAFT	1 lot	
<i>D.1.7</i>	Pull-out and Renew Port and Starboard life raft by qualified technician.	1100	
D.1.8	SANITARY PUMP #1 AND #2	1 lot	
	Check, Repair/Replace as required to support the good operational condition of SANITARY PUMP #1 AND #2		
D.2 BRP MALI	BRIGO (MRRV-4402)		
D.2.1	REVERSE OSMOSIS DESALINATOR	1 lot	
	a. Overhaul Desalination Plant Sea Water Supply Pump - change oil, replace bearings, shaft seal, packing, O-ring, suction/ discharge valve assembly and impeller, if necessary;		
	b. Overhaul Desalination Plant Sea Water Supply Pump - replace bearings and oil seal, check insulation and reinsulate with electrical insulating varnish, if necessary;		
	c. Overhaul Desalination Plant High Pressure Pump - replace bearings, shaft seal, packing, O- ring and piston, if necessary;		
	d. Overhaul Desalination Plant High Pressure Pump - replace bearings, check insulation and		

	reinsulate with electrical insulating varnish, if necessary;			
	e. Inspect and clean Desalination Plant Pretreatment Unit;			
	f. Replace Filter Element, O-rings and Brine Seal of Reverse Osmosis Module Assembly; and			
	g. Inspect, clean and calibrate sensors and wiring connections of Salinity Indicator.			
	h. Supply 4 pcs Seawater Reverse Osmosis Membrane (SW-2540)			
	Flow Rate: 700 GPD (2.6 M3/D)Stabilized Salt Rejection: 99.40 %Applied Pressure: 800 psig (55 bar)			
	I. Supply 10 bottles of Sodium Hydrogen - 1st Grade, 58.50% (as SO2) 500 grams.			
D.2.2	FATHOMETER/ECHO SOUNDER	1 lot		
	Check, Repair/Replace as required to support the good operational condition of FATHOMETER/ECHO SOUNDER			
D.2.2	SEARCH LIGHTS	1 lot		
J.2.2	Check, Repair/Replace of unit and its components such as, but not limited to electronic ballast, ICBT, search light starter, xenon lamp, transistor as required to support the good operational condition of XENON SEARCH LIGHT			
D.2.3	Emergency Position Indicating Radio Beacon (EPIRB) /SEARCH AND RESCUE TRANSPONDER (SART)	1 lot		
	Check, Update, Repair/Replace as required to support the good operational condition			
D.2.4	PORT & STBD SANITARY PUMP	1 lot		
	Check, Repair/Replace as required to support the good operational condition of SANITARY PUMP #1 AND #2			
D.2.5	PORTABLE FIRE PUMP (P250 2STROKE)	1 lot		
	Check, Repair/Replace of unit and its components as required to support the good operational condition of PORTABLE FIRE PUMP (P250 2STROKE)			
D.2.6	RECONDITIONING OF DECK CRANE	1 lot		
	Servicing/Overhauling of Deck Crane- replacement of worn out parts and reconditioning of reusable parts including hydraulic cylinders, hydraulic control valve, powerpack and		***	

	accessories such as cable wires, battery of over-		
	winding alarm.		
D.2.		1 lot	
	Remove interferences and conduct servicing on hydraulic system of CAPSTAN aboard ship.		
	Service and repair directional valves (hoisting mechanism) and control mechanism of CAPSTAN.		
	Reinstall interferences and refill the system with hydraulic fluid.		
	Conduct load test/operational test by lifting ensuring no oil leakage noted on gear boxes, directional valves, hydraulic cylinders and control system during operations		
D.2.	8 HATCH COVER	1 lot	
	Conduct Water Tightness and Gas Tightness Test in Water Tight, Gas Tight and Weather Tight Doors and Hatches		
	Replace Insulation, Water Tight and/ or Gas Tight Packing in Water Tight, Gas Tight and Weather Tight Doors, and Hatches if necessary;		
	Replace Worn-Out Clip Wedges and fabricate new clip wedges;		
	Recondition or replace worn out clevis pins, bolts and nuts of ventilation and goose necks covers; WORKING BOAT [5.4m length Rigid-Hulled]	1 lot	
D.2.		1 100	
D.2.	General Overhauling of Outboard Motor replacement of worn out parts and reconditioning of reusable parts on cylinder head assembly, piston and piston rod assembly, crankshaft assembly, camshaft assembly, cylinder block/ liner assembly, exhaust manifold, electrical and ignition system (magneto and sparkplug), electronic system (sensors), fuel oil supply pump, carburetor, cooling sea water pump assembly, electric starting motor, output shaft and propeller shaft assembly, zinc anodes replacement of fuel filters, air filters, change gear oil, renew 2T oil and replacement of worn out parts; Check, Repair/Replace as required to support the good operational condition of rotating searchlight;		
	Build up fiber glass on dilapidated parts on hull, boat deck, transom, gunwale, fender and bow;		

		Repaint hull with antifouling paint;			
		Repaint boat deck, transom, gunwale, bow with anti-skid paint,			
		Repaint rubber tube Philippine Coast Guard marks,			
		Inspect/ clean wiring connections and hoses; and			
		Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses			
		Conduct sea trial operational test			
	D.2.10	CHAIN STOPPER CABLE & SUPPORT	1 lot		
		Crop-out and Replate corroded Anchor Chain Guide on port and starboard, welding and painting of new Anchor Chain Guide			
		Materials Supply by Shipyard for the Anchor Chain Guide on port and starboard			
		Metal Sheet (anchor chain guide) - 6mm thickness x 100 cm length x 100 cm width			
		Hard Plastic (anchor chain guide) - 5mm thickness x 100 cm length x 100 cm width			
		Welding Rod for Aluminum			
		Welding Rod for Iron			
	D.2.11	LIFE RAFT	1 lot		
		Pull-out and Renew Port and Starboard life raft by qualified technician.			
	D.2.12	CLEAR VIEW SCREEN	1 lot		
		Check, Servicing, Repair/Replace of unit and its			
		components as required to support the good			
D 3 B	PP MAL	operational condition of CLEAR VIEW SCREEN APASCUA (MRRV-4403)			
D.3 D	D.3.1	REVERSE OSMOSIS DESALINATOR	1 lot		
	D.3.1	a. Overhaul Desalination Plant Sea Water Supply			
		Pump - change oil, replace bearings, shaft seal,			
		packing, O-ring, suction/ discharge valve assembly and impeller, if necessary;			
		b. Overhaul Desalination Plant Sea Water Supply			
		Pump - replace bearings and oil seal, check			
		insulation and reinsulate with electrical insulating			
		varnish, if necessary;		* * *	

	Reinstall interferences and refill the system with hydraulic fluid.		* * *	
	Service and repair directional valves (hoisting mechanism) and control mechanism of CAPSTAN.			
	Remove interferences and conduct servicing on hydraulic system of CAPSTAN			
D.3.4	CAPSTAN	1 lot		
D 2 1	hydraulic control valve, powerpack and accessories such as cable wires, battery of overwinding alarm.	4 lot		
	Servicing/Overhauling of Deck Crane- replacement of worn out parts and reconditioning of reusable parts including hydraulic cylinders,			
D.3.3	RECONDITIONING OF DECK CRANE	1 lot		
	Check, Repair/Replace of unit and its components such as, but not limited to electronic ballast, ICBT, search light starter, xenon lamp, transistor as required to support the good operational condition of XENON SEARCH LIGHT			
D.3.2	SEARCH LIGHT	1 lot		
	I. Supply 10 bottles of Sodium Hydrogen - 1st Grade, 58.50% (as SO2) 500 grams.			
	- Flow Rate: 700 GPD (2.6 M3/D) - Stabilized Salt Rejection: 99.40 % - Applied Pressure: 800 psig (55 bar)			
	h. Supply 4 pcs Seawater Reverse Osmosis Membrane (SW-2540)			
	g. Inspect, clean and calibrate sensors and wiring connections of Salinity Indicator.			
	f. Replace Filter Element, O-rings and Brine Seal of Reverse Osmosis Module Assembly; and			
	e. Inspect and clean Desalination Plant Pretreatment Unit;			
	d. Overhaul Desalination Plant High Pressure Pump - replace bearings, check insulation and reinsulate with electrical insulating varnish, if necessary;			
	c. Overhaul Desalination Plant High Pressure Pump - replace bearings, shaft seal, packing, O- ring and piston, if necessary;			

Conduct load test/operational test by lifting ensuring no cil leakage noted on gear boxes, directional valves, hydraulic cylinders and control system during operations D.3.5 HATCH COVER Conduct Water Tightness and Gas Tightness Test in Water Tight, Gas Tight and Weather Tight Doors and Hatches Replace Insulation, Water Tight and/ or Gas Tight Packing in Water Tight, Gas Tight and Weather Tight Doors, and Hatches if necessary; Replace Worn-Out Clip Wedges and fabricate new clip wedges; Recondition or replace worn out clevis pins, bolts and nuts of ventilation and goose necks covers; WORKING BOAT [5.4m length Rigid-Hulled Inflatable Boat (RHIB) type] General Overhauling of Outboard Motor replacement of worn out parts and reconditioning of reusable parts on cylinder head assembly, piston and piston rod assembly, crankshaft assembly, camshaft assembly, camshaft assembly, cand sparkplugh, electronic system (ensors), fuel oil supply pump, carburetor, cooling sea water pump assembly, electroric system (magneto and sparkplugh, electroric system (ensors), fuel oil supply pump, carburetor, cooling sea water pump assembly, electric starting motor, output shaft and propeller shaft assembly, zinc anodes replacement of fuel filters, air filters, change gear oil, renew 2T oil and replacement of worn out parts; Check, Repair/Replace as required to support the good operational condition of rotating searchlight; Build up fiber glass on dilapidated parts on hull, boat deck, transom, gunwale, fender and bow; Repaint hull with antifouling paint; Repaint boat deck, transom, gunwale, bow with anti-skid paint, Repaint rubber tube Philippine Coast Guard marks, Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-fring packing, and hydraulic hoses Conduct sea trial operational test				<u> </u>	
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Test in Water Tight, Gas Tight and Weather Tight Doors and Hatches Replace Insulation, Water Tight and/or Gas Tight Packing in Water Tight, Gas Tight and Weather Tight Doors, and Hatches if necessary; Replace Worn-Out Clip Wedges and fabricate new clip wedges; Recondition or replace worn out clevis pins, bolts and nuts of ventilation and goose necks covers; WORKING BOAT [5.4m length Rigid-Hulled Inflatable Boat (RHIB) type] General Overhauling of Outboard Motor replacement of worn out parts and reconditioning of reusable parts on cylinder head assembly, piston and piston rod assembly, crankshaft assembly, camshaft assembly, camshaft assembly, cankshaft assembly, camshaft assembly, cankshaft assembly, cankshaft assembly, cankshaft assembly, electrical and ignition system (magneto and sparkplug), electronic system (sensors), fuel oil supply pump, carburetor, cooling sea water pump assembly, electric starting motor, output shaft and propeller shaft assembly, zinc anodes replacement of fuel filters, air filters, change gear oil, renew 2T oil and replacement of worn out parts; Check, Repair/Replace as required to support the good operational condition of rotating searchlight; Build up fiber glass on dilapidated parts on hull, boat deck, transom, gunwale, fender and bow; Repaint hull with antifouling paint; Repaint boat deck, transom, gunwale, bow with anti-skid paint, Repaint rubber tube Philippine Coast Guard marks, Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test	D.3.5	HATCH COVER	1 lot		
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WORKING BOAT [5.4m length Rigid-Hulled Inflatable Boat (RHIB) type] General Overhauling of Outboard Motor replacement of worn out parts and reconditioning of reusable parts on cylinder head assembly, piston and piston rod assembly, crankshaft assembly, camshaft assembly, cylinder block/ liner assembly, exhaust manifold, electrical and ignition system (magneto and sparkplug), electronic system (sensors), fuel oil supply pump, carburetor, cooling sea water pump assembly, electric starting motor, output shaft and propeller shaft assembly, zinc anodes replacement of fuel filters, air filters, change gear oil, renew 2T oil and replacement of worn out parts; Check, Repair/Replace as required to support the good operational condition of rotating searchlight; Build up fiber glass on dilapidated parts on hull, boat deck, transom, gunwale, fender and bow; Repaint hull with antifouling paint; Repaint boat deck, transom, gunwale, bow with anti-skid paint, Repaint rubber tube Philippine Coast Guard marks, Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test					
D.3.6 Inflatable Boat (RHĪB) type] General Overhauling of Outboard Motor replacement of worn out parts and reconditioning of reusable parts on cylinder head assembly, piston and piston rod assembly, crankshaft assembly, camshaft assembly, cylinder block/ liner assembly, exhaust manifold, electrical and ignition system (magneto and sparkplug), electronic system (sensors), fuel oil supply pump, carburetor, cooling sea water pump assembly, electric starting motor, output shaft and propeller shaft assembly, zinc anodes replacement of fuel filters, air filters, change gear oil, renew 2T oil and replacement of worn out parts; Check, Repair/Replace as required to support the good operational condition of rotating searchlight; Build up fiber glass on dilapidated parts on hull, boat deck, transom, gunwale, fender and bow; Repaint hull with antifouling paint; Repaint boat deck, transom, gunwale, bow with anti-skid paint, Repaint rubber tube Philippine Coast Guard marks, Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test			4 1-4		
General Overhauling of Outboard Motor replacement of worn out parts and reconditioning of reusable parts on cylinder head assembly, piston and piston rod assembly, crankshaft assembly, camshaft assembly, cylinder block/ liner assembly, exhaust manifold, electrical and ignition system (magneto and sparkplug), electronic system (sensors), fuel oil supply pump, carburetor, cooling sea water pump assembly, electric starting motor, output shaft and propeller shaft assembly, zinc anodes replacement of fuel filters, air filters, change gear oil, renew 2T oil and replacement of worn out parts; Check, Repair/Replace as required to support the good operational condition of rotating searchlight; Build up fiber glass on dilapidated parts on hull, boat deck, transom, gunwale, fender and bow; Repaint hull with antifouling paint; Repaint boat deck, transom, gunwale, bow with anti-skid paint, Repaint rubber tube Philippine Coast Guard marks, Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test	D 2 2		1 lot		
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of reusable parts on cylinder head assembly, piston and piston rod assembly, crankshaft assembly, camshaft assembly, cylinder block/ liner assembly, exhaust manifold, electrical and ignition system (magneto and sparkplug), electronic system (sensors), fuel oil supply pump, carburetor, cooling sea water pump assembly, electric starting motor, output shaft and propeller shaft assembly, zinc anodes replacement of fuel filters, air filters, change gear oil, renew 2T oil and replacement of worn out parts; Check, Repair/Replace as required to support the good operational condition of rotating searchlight; Build up fiber glass on dilapidated parts on hull, boat deck, transom, gunwale, fender and bow; Repaint hull with antifouling paint; Repaint boat deck, transom, gunwale, bow with anti-skid paint, Repaint rubber tube Philippine Coast Guard marks, Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test		<u> </u>			
piston and piston rod assembly, crankshaft assembly, camshaft assembly, cylinder block/ liner assembly, exhaust manifold, electrical and ignition system (magneto and sparkplug), electronic system (sensors), fuel oil supply pump, carburetor, cooling sea water pump assembly, electric starting motor, output shaft and propeller shaft assembly, zinc anodes replacement of fuel filters, air filters, change gear oil, renew 2T oil and replacement of worn out parts; Check, Repair/Replace as required to support the good operational condition of rotating searchlight; Build up fiber glass on dilapidated parts on hull, boat deck, transom, gunwale, fender and bow; Repaint hull with antifouling paint; Repaint boat deck, transom, gunwale, bow with anti-skid paint, Repaint rubber tube Philippine Coast Guard marks, Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test		, ,			
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liner assembly, exhaust manifold, electrical and ignition system (magneto and sparkplug), electronic system (sensors), fuel oil supply pump, carburetor, cooling sea water pump assembly, electric starting motor, output shaft and propeller shaft assembly, zinc anodes replacement of fuel filters, air filters, change gear oil, renew 2T oil and replacement of worn out parts; Check, Repair/Replace as required to support the good operational condition of rotating searchlight; Build up fiber glass on dilapidated parts on hull, boat deck, transom, gunwale, fender and bow; Repaint hull with antifouling paint; Repaint boat deck, transom, gunwale, bow with anti-skid paint, Repaint rubber tube Philippine Coast Guard marks, Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test					
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shaft assembly, zinc anodes replacement of fuel filters, air filters, change gear oil, renew 2T oil and replacement of worn out parts; Check, Repair/Replace as required to support the good operational condition of rotating searchlight; Build up fiber glass on dilapidated parts on hull, boat deck, transom, gunwale, fender and bow; Repaint hull with antifouling paint; Repaint boat deck, transom, gunwale, bow with anti-skid paint, Repaint rubber tube Philippine Coast Guard marks, Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test		carburetor, cooling sea water pump assembly,			
filters, air filters, change gear oil, renew 2T oil and replacement of worn out parts; Check, Repair/Replace as required to support the good operational condition of rotating searchlight; Build up fiber glass on dilapidated parts on hull, boat deck, transom, gunwale, fender and bow; Repaint hull with antifouling paint; Repaint boat deck, transom, gunwale, bow with anti-skid paint, Repaint rubber tube Philippine Coast Guard marks, Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test		electric starting motor, output shaft and propeller			
replacement of worn out parts; Check, Repair/Replace as required to support the good operational condition of rotating searchlight; Build up fiber glass on dilapidated parts on hull, boat deck, transom, gunwale, fender and bow; Repaint hull with antifouling paint; Repaint boat deck, transom, gunwale, bow with anti-skid paint, Repaint rubber tube Philippine Coast Guard marks, Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test					
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boat deck, transom, gunwale, fender and bow; Repaint hull with antifouling paint; Repaint boat deck, transom, gunwale, bow with anti-skid paint, Repaint rubber tube Philippine Coast Guard marks, Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test		3 7			
boat deck, transom, gunwale, fender and bow; Repaint hull with antifouling paint; Repaint boat deck, transom, gunwale, bow with anti-skid paint, Repaint rubber tube Philippine Coast Guard marks, Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test		Build up fiber glass on dilapidated parts on hull.			
Repaint hull with antifouling paint; Repaint boat deck, transom, gunwale, bow with anti-skid paint, Repaint rubber tube Philippine Coast Guard marks, Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test		·			
Repaint boat deck, transom, gunwale, bow with anti-skid paint, Repaint rubber tube Philippine Coast Guard marks, Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test		, , , , , , , , , , , , , , , , , , , ,			
Repaint boat deck, transom, gunwale, bow with anti-skid paint, Repaint rubber tube Philippine Coast Guard marks, Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test		Repaint hull with antifouling paint:			
anti-skid paint, Repaint rubber tube Philippine Coast Guard marks, Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test		,			
anti-skid paint, Repaint rubber tube Philippine Coast Guard marks, Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test		Repaint boat deck, transom, gunwale, bow with			
Repaint rubber tube Philippine Coast Guard marks, Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test		•			
Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test		3.1.1. 3.1.1. p,			
Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test		Repaint rubber tube Philippine Coast Guard			
Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test					
Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test		mano,			
Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test		Inspect/ clean wiring connections and hoses; and			
bearing, O-ring packing, and hydraulic hoses Conduct sea trial operational test		· •			
Conduct sea trial operational test					
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U.S./ AIR CONDITIONING UNIT	D 2 7		1 104	* * *	
	υ.3./	AIR CONDITIONING UNIT	1 101		

	Welding Rod for Aluminum			
	Hard Plastic (anchor chain guide) - 5mm thickness x 100 cm length x 100 cm width		* * *	
	Metal Sheet (anchor chain guide) - 6mm thickness x 100 cm length x 100 cm width			
	Materials Supply by Shipyard for the Anchor Chain Guide on port and starboard			
	Guide on port and starboard, welding and painting of new Anchor Chain Guide			
- 2	STARBOARD Crop-out and Replate corroded Anchor Chain	-		
D.3.8	1 x Circulation Pump ANCHOR CHAIN GUIDE ON PORT AND	1 lot		
	1 x Heat Pump Chilling Unit 1 x Sea Water Pump			
	Mess) No. 4 AIR CONDITIONING UNIT (Upper Deck)			
	No. 2 AIR CONDITIONING UNIT (Upper Deck) No. 3-1 AIR CONDITIONING UNIT (2nd Deck) No. 3-2 AIR CONDITIONING UNIT (Crew's			
	No. 1 AIR CONDITIONING UNIT (Nav/Bridge Deck)			
	Conduct operational test for satisfactory completion of work.			
	Secure tagging and all interferences and restore to operational condition; and			
	control devices. Check the adjustment and operation of each control devices. Correct noted deficiencies;			
	Check the contacts of motor contactors and			
	Conduct vacuum/flushing with nitrogen and repair all leakages of centralized air conditioning unit and charge with correct amount of refrigerant gas;			
	Inspect/repair/replace valves and piping. Clean filters, evaporator/chiller tubes;			
	Check test the condition of air conditioning system Replace defective copper tubing and insulations with polyethylene tape;			
	Tag, disconnect electrical wirings and all interferences in way of servicing;			

	Welding Rod for Iron		
D.3.9	LIFE RAFT	1 lot	
	Pull-out and Renew Port and Starboard life raft by qualified technician		
D.3.10	WATER CANNON	1 lot	
	Check, Servicing, Repair/Replace of unit and its fittings as required to support the good operational condition of WATER CANNON		
D.3.12	SHIPS HORN	1 lot	
	Check, Servicing, Repair/Replace of unit and its components as required to support the good operational condition of SHIPS HORN		
D.3.13	Emergency Position Indicating Radio Beacon (EPIRB)	1 lot	
	Check, Update, Repair/Replace as required to support the good operational condition		
D.3.14	CLEAR VIEW SCEERN	1 lot	
	Check, Servicing, Repair/Replace of unit and its components as required to support the good operational condition of CLEAR VIEW SCEERN		
D.3.15	SANITARY PUMP	1 lot	
	Check, Repair/Replace as required to support the good operational condition of SANITARY PUMP #1 AND #2		
D.4 BRP CAP	ONES (MRRV-4404)		
D.4.1	REVERSE OSMOSIS DESALINATOR	1 lot	
	a. Overhaul Desalination Plant Sea Water Supply Pump - change oil, replace bearings, shaft seal, packing, O-ring, suction/ discharge valve assembly and impeller, if necessary;		
	b. Overhaul Desalination Plant Sea Water Supply Pump - replace bearings and oil seal, check insulation and reinsulate with electrical insulating varnish, if necessary;		
	c. Overhaul Desalination Plant High Pressure Pump - replace bearings, shaft seal, packing, O- ring and piston, if necessary;		
	d. Overhaul Desalination Plant High Pressure Pump - replace bearings, check insulation and reinsulate with electrical insulating varnish, if necessary;		
	e. Inspect and clean Desalination Plant Pretreatment Unit;		
	f. Replace Filter Element, O-rings and Brine Seal of Reverse Osmosis Module Assembly; and		

	g. Inspect, clean and calibrate sensors and wiring connections of Salinity Indicator.			
	h. Supply 4 pcs Seawater Reverse Osmosis Membrane (SW-2540)			
	 Flow Rate: 700 GPD (2.6 M3/D) Stabilized Salt Rejection: 99.40 % Applied Pressure: 800 psig (55 bar) 			
	I. Supply 10 bottles of Sodium Hydrogen - 1st Grade, 58.50% (as SO2) 500 grams.			
D.4.2	SEARCH LIGHTS	1 lot		
	Check, Repair/Replace of unit and its components such as, but not limited to electronic ballast, ICBT, search light starter, xenon lamp, transistor as required to support the good operational condition of XENON SEARCH LIGHT			
D.4.3	WORKING BOAT [5.4m length Rigid-Hulled Inflatable Boat (RHIB) type]	1 lot		
	General Overhauling of Outboard Motor replacement of worn out parts and reconditioning of reusable parts on cylinder head assembly, piston and piston rod assembly, crankshaft assembly, camshaft assembly, cylinder block/ liner assembly, exhaust manifold, electrical and ignition system (magneto and sparkplug), electronic system (sensors), fuel oil supply pump, carburetor, cooling sea water pump assembly, electric starting motor, output shaft and propeller shaft assembly, zinc anodes replacement of fuel filters, air filters, change gear oil, renew 2T oil and replacement of worn out parts; Check, Repair/Replace as required to support the good operational condition of rotating searchlight; Build up fiber glass on dilapidated parts on hull, boat deck, transom, gunwale, fender and bow; Repaint hull with antifouling paint; Repaint boat deck, transom, gunwale, bow with anti-skid paint, Repaint rubber tube Philippine Coast Guard marks, Inspect/ clean wiring connections and hoses; and Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses		* * *	

		Conduct sea trial operational test		
	D.4.4	PORTABLE FIRE PUMP (P250 2STROKE)	1 lot	
		Check, Repair/Replace of unit and its components as required to support the good operational condition of PORTABLE FIRE PUMP (P250 2STROKE)		
	D.4.5	SANITARY PUMP #1 AND #2	1 lot	
		Check, Repair/Replace as required to support the good operational condition of SANITARY PUMP #1 AND #2		
D.5 BF	RP SULU	JAN (MRRV-4406)		
	D.5.1	REVERSE OSMOSIS DESALINATOR	1 lot	
	<i>D.</i> 0.1	 a. Overhaul Desalination Plant Sea Water Supply Pump - change oil, replace bearings, shaft seal, packing, O-ring, suction/ discharge valve assembly and impeller, if necessary; b. Overhaul Desalination Plant Sea Water Supply Pump - replace bearings and oil seal, check insulation and reinsulate with electrical insulating varnish, if necessary; c. Overhaul Desalination Plant High Pressure Pump - replace bearings, shaft seal, packing, O-ring and piston if necessary; d. Overhaul Desalination Plant High Pressure Pump - replace bearings, check insulation and reinsulate with electrical insulating varnish, if necessary; e. Inspect and clean Desalination Plant Pretreatment Unit; 		
		f. Replace Filter Element, O-rings and Brine Seal of Reverse Osmosis Module Assembly; and g. Inspect, clean and calibrate sensors and wiring		
		connections of Salinity Indicator.		
		h. Supply 4 pcs Seawater Reverse Osmosis Membrane (SW-2540)		
		Flow Rate: 700 GPD (2.6 M3/D)Stabilized Salt Rejection: 99.40 %Applied Pressure: 800 psig (55 bar)		
		I. Supply 10 bottles of Sodium Hydrogen - 1st Grade, 58.50% (as SO2) 500 grams.		
	D.5.2	THROTTLE CONTROL	1 lot	



	1	0			
		Check, Repair/Replace of DEFECTIVE TFT			
		MONITOR as required to support the good			
		operational condition of THROTTLE CONTROL			
	D.5.3	PORTABLE FIRE PUMP (P250 2STROKE)	1 lot		
		Check, Repair/Replace of unit and its			
		components as required to support the good			
		operational condition of PORTABLE FIRE PUMP			
		(P250 2STROKE)			
	D.5.4	INFLATABLE LIFERAFT	1 lot		
		Pull-out and Renew Port and Starboard life raft by			
		qualified technician,			
		EMERGENCY POSITION INDICATING RADIO	1 lot		
	D.5.5	BEACON (EPIRB)			
	2.0.0	Check, Update, Repair/Replace as required to			
		support the good operational condition			
	DEG	NAVIGATIONAL LIGHTS	1 lot		
	D.5.6		1 101		
		Check, Recalibrate, Repair/Replace of unit and			
		its components as required to support the good			
		operational condition of NAVIGATIONAL			
Deb	DD GIVID	LIGHTS ANGAN (MRRV-4407)			
Б.6 В		·	4 1-4		
	D.6.1	REVERSE OSMOSIS DESALINATOR	1 lot		
		a. Overhaul Desalination Plant Sea Water Supply			
		Pump - change oil, replace bearings, shaft seal,			
		packing, O-ring, suction/ discharge valve			
		assembly and impeller, if necessary;			
		b. Overhaul Desalination Plant Sea Water Supply			
		Pump - replace bearings and oil seal, check			
		insulation and reinsulate with electrical insulating			
		varnish, if necessary;			
		c. Overhaul Desalination Plant High Pressure			
		Pump - replace bearings, shaft seal, packing, O-			
		ring and piston, if necessary;			
		d. Overhaul Desalination Plant High Pressure			
		Pump - replace bearings, check insulation and			
		reinsulate with electrical insulating varnish, if			
		necessary;			
		la language and land B. P. C. St.			
		e. Inspect and clean Desalination Plant			
		Pretreatment Unit;			
		f. Replace Filter Element, O-rings and Brine Seal			
		of Reverse Osmosis Module Assembly; and			
		g. Inspect, clean and calibrate sensors and wiring			
		connections of Salinity Indicator.			
		h. Supply 4 pcs Seawater Reverse Osmosis		*	
		Membrane (SW-2540)			

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		- Flow Rate: 700 GPD (2.6 M3/D)			
		- Stabilized Salt Rejection: 99.40 %			
		- Applied Pressure: 800 psig (55 bar)			
		I. Supply 10 bottles of Sodium Hydrogen			
		- 1 st Grade, 58.50% (as SO2) 500 grams.			
	D.6.1	SEARCH LIGHT	1 lot		
		Check, Repair/Replace of unit and its			
		components such as, but not limited to electronic			
		ballast, ICBT, search light starter, xenon lamp,			
		transistor as required to support the good operational condition of XENON SEARCH LIGHT			
	D.6.2	SHIPS HORN	1 lot		
	D.U.Z	Check, Servicing, Repair/Replace of unit and its	1 101		
		components as required to support the good			
		operational condition of SHIPS HORN			
	D.6.3	FIRE FIGHTING ENGINE	1 lot		
		Check, Pull-out, Repair/Replace of pipings and its			
		fittings as required to support the good			
		operational condition of FIRE FIGHTING ENGINE			
	D.6.4	NAVIGATIONAL LIGHTS/BULBS	1 lot		
	<i>D</i> .0.4	Check, Recalibrate, Repair/Replace of unit and	1 101		
		its components as required to support the good			
		operational condition of NAVIGATIONAL			
		LIGHTS			
D.7 BF		SAN AGUSTIN (MRRV-4408)			
	D.7.1	REVERSE OSMOSIS DESALINATOR	1 lot		
		a. Overhaul Desalination Plant Sea Water Supply Pump - change oil, replace bearings, shaft seal,			
		packing, O-ring, suction/ discharge valve			
		assembly and impeller, if necessary;			
		b. Overhaul Desalination Plant Sea Water Supply			
		Pump - replace bearings and oil seal, check			
		insulation and reinsulate with electrical insulating varnish, if necessary;			
		varriisti, ii flecessary,			
		c. Overhaul Desalination Plant High Pressure			
		Pump - replace bearings, shaft seal, packing, O-			
		ring and piston, if necessary;			
		d. Overhaul Desalination Plant High Pressure			
		Pump - replace bearings, check insulation and			
		reinsulate with electrical insulating varnish, if			
		necessary;			
		e. Inspect and clean Desalination Plant			
		Pretreatment Unit;		*	
				1 * * *	<u> </u>

	f. Replace Filter Element, O-rings and Brine Seal of Reverse Osmosis Module Assembly; and		
	g. Inspect, clean and calibrate sensors and wiring connections of Salinity Indicator.		
	h. Supply 4 pcs Seawater Reverse Osmosis Membrane (SW-2540)		
	 Flow Rate: 700 GPD (2.6 M3/D) Stabilized Salt Rejection: 99.40 % Applied Pressure: 800 psig (55 bar) 		
	I. Supply 10 bottles of Sodium Hydrogen - 1st Grade, 58.50% (as SO2) 500 grams.		
D.7.2	SEARCH LIGHT	1 lot	
	Check, Repair/Replace of unit and its components such as, but not limited to electronic ballast, ICBT, search light starter, xenon lamp, transistor as required to support the good operational condition of XENON SEARCH LIGHT		
D.7.3	SANITARY PUMP #1 AND #2	1 lot	
	Check, Repair/Replace as required to support the good operational condition of SANITARY PUMP #1 AND #2		
D.7.4	AIR CONDITIONING UNIT	1 lot	
	Tag, disconnect electrical wirings and all interferences in way of servicing; Check test the condition of air conditioning system Replace defective copper tubing and insulations with polyethylene tape; Inspect/repair/replace valves and piping. Clean filters, evaporator/chiller tubes; Conduct vacuum/flushing with nitrogen and repair all leakages of centralized air conditioning unit and charge with correct amount of refrigerant gas; Check the contacts of motor contactors and control devices. Check the adjustment and operation of each control devices. Correct noted deficiencies; Secure tagging and all interferences and restore to operational condition; and Conduct operational test for satisfactory		
	Conduct operational tool for cationactory		
	completion of work.		

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	No. 1 AIR CONDITIONING UNIT (Nav/Bridge			
	Deck)			
	No. 2 AIR CONDITIONING UNIT (Upper Deck)			
	No. 3-1 AIR CONDITIONING UNIT (2nd Deck)			
	No. 3-2 AIR CONDITIONING UNIT (Crew's			
	Mess)			
	No. 4 AIR CONDITIONING UNIT (Upper Deck)			
	1 x Heat Pump Chilling Unit			
	1 x Sea Water Pump			
	1 x Circulation Pump			
D.7.5	'	1 lot		
D.7.5		1 100		
	Servicing/Overhauling of Deck Crane-			
	replacement of worn out parts and reconditioning			
	of reusable parts including hydraulic cylinders,			
	hydraulic control valve, powerpack and			
	accessories such as cable wires, battery of over-			
	winding alarm.			
D.7.6	·	1 lot		
	Check, Repair/Replace of unit and its			
	components as required to support the good			
	operational condition of PORTABLE FIRE PUMP			
	(P250 2STROKE)			
	EMERGENCY POSITION INDICATING RADIO	1 lot		
	BEACON (EPIRB) and SEARCH AND RESCUE			
D.7.7				
	Check, Update, Repair/Replace as required to			
	support the good operational condition			
	WORKING BOAT [5.4m length Rigid-Hulled	1 lot		
D.7.8		1 100		
	General Overhauling of Outboard Motor -			
	replacement of worn out parts and reconditioning			
	of reusable parts on cylinder head assembly,			
	piston and piston rod assembly, crankshaft			
	assembly, camshaft assembly, cylinder block/			
	liner assembly, exhaust manifold, electrical and			
	ignition system (magneto and sparkplug),			
	electronic system (sensors), fuel oil supply pump,			
	carburetor, cooling sea water pump assembly,			
	electric starting motor, output shaft and propeller			
	shaft assembly, zinc anodes replacement of fuel			
	filters, air filters, change gear oil, renew 2T oil and			
	replacement of worn out parts;			
	Check, Repair/Replace as required to support the			
	good operational condition of rotating searchlight;			
	Build up fiber glass on dilapidated parts on hull,			
	boat deck, transom, gunwale, fender and bow;			
	Repaint hull with antifouling paint;			
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	Repaint boat deck, transom, gunwale, bow with		* * *	
	anti-skid paint,			
<u> </u>	p,	<u> </u>		

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		Repaint rubber tube Philippine Coast Guard marks,			
		Inspect/ clean wiring connections and hoses; and			
		Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses			
		Conduct sea trial operational test			
	D.7.9	SEARCH LIGHT	1 lot		
		Check, Repair/Replace of unit and its components such as, but not limited to electronic ballast, ICBT, search light starter, xenon lamp, transistor as required to support the good operational condition of XENON SEARCH LIGHT			
D.8 BI	RP CABE	RA (MRRV-4409)			
	D.8.1	RECONDITIONING OF DECK CRANE	1 lot		
		Servicing/Overhauling of Deck Crane- replacement of worn out parts and reconditioning of reusable parts including hydraulic cylinders, hydraulic control valve, powerpack and accessories such as cable wires, battery of over- winding alarm.			
	D.8.2	CAPSTAN	1 lot		
	D.8.3	Remove interferences and conduct servicing on hydraulic system of CAPSTAN aboard ship. Service and repair directional valves (hoisting mechanism) and control mechanism of CAPSTAN. Reinstall interferences and refill the system with hydraulic fluid. Conduct load test/operational test by lifting ensuring no oil leakage noted on gear boxes, directional valves, hydraulic cylinders and control system during operations HATCH COVER	1 lot		
	D.o.3		1 100		
		Conduct Water Tightness and Gas Tightness Test in Water Tight, Gas Tight and Weather Tight Doors and Hatches Replace Insulation, Water Tight and/ or Gas Tight Packing in Water Tight, Gas Tight and Weather Tight Doors, and Hatches if necessary; Replace Worn-Out Clip Wedges and fabricate			
		new clip wedges;		*	

	Recondition or replace worn out clevis pins, bolts			
	and nuts of ventilation and goose necks covers;			
	WORKING BOAT [5.4m length Rigid-Hulled	1 lot		
D.8.4	Inflatable Boat (RHIB) type]			
	General Overhauling of Outboard Motor -			
	replacement of worn out parts and reconditioning			
	of reusable parts on cylinder head assembly,			
	piston and piston rod assembly, crankshaft			
	assembly, camshaft assembly, cylinder block/			
	liner assembly, exhaust manifold, electrical and			
	ignition system (magneto and sparkplug),			
	electronic system (sensors), fuel oil supply pump,			
	carburetor, cooling sea water pump assembly, electric starting motor, output shaft and propeller			
	shaft assembly, zinc anodes replacement of fuel			
	filters, air filters, change gear oil, renew 2T oil and			
	replacement of worn out parts;			
	Check, Repair/Replace as required to support the			
	good operational condition of rotating searchlight;			
	Build up fiber glass on dilapidated parts on hull,			
	boat deck, transom, gunwale, fender and bow;			
	Repaint hull with antifouling paint;			
	Repaint boat deck, transom, gunwale, bow with			
	anti-skid paint,			
	Repaint rubber tube Philippine Coast Guard			
	marks,			
	Inspect/ clean wiring connections and hoses; and			
	Recondition steering pump and replace oil seal,			
	bearing, O-ring packing, and hydraulic hoses			
	gramming, and my and and modes			
	Conduct sea trial operational test			
D.8.5	LIFERAFT	1 lot		
	Pull-out and Renew Port and Starboard life raft by			
	qualified technician.	41.4		
D.8.6	SEARCH LIGHT	1 lot		
	Check, Repair/Replace of unit and its			
	components such as, but not limited to electronic			
	ballast, ICBT, search light starter, xenon lamp, transistor as required to support the good			
	operational condition of XENON SEARCH LIGHT			
D.8.7	WATER CANNON	1 lot		
	Check, Servicing, Repair/Replace of unit and its	-		
	fittings as required to support the good			
	operational condition of WATER CANNON			
D.8.8	SHIPS HORN	1 lot	* 1	

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	Check, Servicing, Repair/Replace of unit and its		
	components as required to support the good		
	operational condition of SHIPS HORN		
	EMERGENCY POSITION INDICATING RADIO	1 lot	
D.8.9	BEACON (EPIRB)		
	Check, Update, Repair/Replace as required to		
	support the good operational condition		
D.8.10	SANITARY PUMP	1 lot	
	Check, Repair/Replace as required to support the good operational condition of SANITARY PUMP #1 AND #2		
D.8.11	REVERSE OSMOSIS DESALINATOR	1 lot	
	a. Overhaul Desalination Plant Sea Water Supply		
	Pump - change oil, replace bearings, shaft seal, packing, O-ring, suction/ discharge valve assembly and impeller, if necessary;		
	b. Overhaul Desalination Plant Sea Water Supply Pump - replace bearings and oil seal, check insulation and reinsulate with electrical insulating varnish, if necessary;		
	c. Overhaul Desalination Plant High Pressure Pump - replace bearings, shaft seal, packing, O- ring and piston, if necessary;		
	d. Overhaul Desalination Plant High Pressure Pump - replace bearings, check insulation and reinsulate with electrical insulating varnish, if necessary;		
	e. Inspect and clean Desalination Plant Pretreatment Unit;		
	f. Replace Filter Element, O-rings and Brine Seal of Reverse Osmosis Module Assembly; and		
	g. Inspect, clean and calibrate sensors and wiring connections of Salinity Indicator.		
	h. Supply 4 pcs Seawater Reverse Osmosis Membrane (SW-2540)		
	 Flow Rate: 700 GPD (2.6 M3/D) Stabilized Salt Rejection: 99.40 % Applied Pressure: 800 psig (55 bar) 		
	I. Supply 10 bottles of Sodium Hydrogen - 1st Grade, 58.50% (as SO2) 500 grams.		
D.8.12	FIRE LINE	1 lot1 lot	
	Check, Repair/Repipe and its fittings as required to support the good operational condition of FIRE LINE		

	D.8.13	FO TRANSFER PUMP CIRCUIT BOARD	1 lot		
	D.0.13	Check, Repair/Replace of its components as	1 100		
		required to support the good operational			
		condition of FO TRANSFER PUMP CIRCUIT			
		BOARD			
	D.8.14	CLEAR VIEW SCEERN	1 lot		
		Check, Servicing, Repair/Replace of unit and its			
		components as required to support the good			
		operational condition of CLEAR VIEW SCEERN			
D.9 B	RP BAG	ACAY (MRRV-4410)			
	D.9.1	REVERSE OSMOSIS DESALINATOR	1 lot		
		a. Overhaul Desalination Plant Sea Water Supply			
		Pump - change oil, replace bearings, shaft seal,			
		packing, O-ring, suction/ discharge valve			
		assembly and impeller, if necessary;			
		h Overhaud Deselination Blant Cos Water Commb			
		b. Overhaul Desalination Plant Sea Water Supply			
		Pump - replace bearings and oil seal, check insulation and reinsulate with electrical insulating			
		varnish, if necessary;			
		variion, ii noococary,			
		c. Overhaul Desalination Plant High Pressure			
		Pump - replace bearings, shaft seal, packing, O-			
		ring and piston, if necessary;			
		d. Overhaul Desalination Plant High Pressure			
		Pump - replace bearings, check insulation and			
		reinsulate with electrical insulating varnish, if			
		necessary;			
		e. Inspect and clean Desalination Plant			
		Pretreatment Unit;			
		Trottouthorit orint,			
		f. Replace Filter Element, O-rings and Brine Seal			
		of Reverse Osmosis Module Assembly; and			
		•			
		g. Inspect, clean and calibrate sensors and wiring			
		connections of Salinity Indicator.			
		h. Supply 4 pcs Seawater Reverse Osmosis			
		Membrane (SW-2540)			
		- Flow Rate: 700 GPD (2.6 M3/D)			
		- Stabilized Salt Rejection: 99.40 %			
		- Applied Pressure: 800 psig (55 bar)			
		I. Supply 10 bottles of Sodium Hydrogen			
		- 1 st Grade, 58.50% (as SO2) 500 grams.			
	D.9.2	SANITARY PUMP	1 lot		
		Check, Repair/Replace as required to support the			
		good operational condition of SANITARY PUMP		*	
D 40		#1 AND #2			
ט.זט ו	BKP CAP	PE ENGANO (MRRV-4411)			

D.10.1	REVERSE OSMOSIS DESALINATOR	1 lot	
	a. Overhaul Desalination Plant Sea Water Supply Pump - change oil, replace bearings, shaft seal, packing, O-ring, suction/ discharge valve assembly and impeller, if necessary;		
	b. Overhaul Desalination Plant Sea Water Supply Pump - replace bearings and oil seal, check insulation and reinsulate with electrical insulating varnish, if necessary;		
	c. Overhaul Desalination Plant High Pressure Pump - replace bearings, shaft seal, packing, O- ring and piston, if necessary;		
	d. Overhaul Desalination Plant High Pressure Pump - replace bearings, check insulation and reinsulate with electrical insulating varnish, if necessary;		
	e. Inspect and clean Desalination Plant Pretreatment Unit;		
	f. Replace Filter Element, O-rings and Brine Seal of Reverse Osmosis Module Assembly; and		
	g. Inspect, clean and calibrate sensors and wiring connections of Salinity Indicator.		
	h. Supply 4 pcs Seawater Reverse Osmosis Membrane (SW-2540)		
	Flow Rate: 700 GPD (2.6 M3/D)Stabilized Salt Rejection: 99.40 %Applied Pressure: 800 psig (55 bar)		
	I. Supply 10 bottles of Sodium Hydrogen - 1 st Grade, 58.50% (as SO2) 500 grams.		
D.10.2	SEARCH LIGHT	1 lot	
	Check, Repair/Replace of unit and its		
	components such as, but not limited to electronic		
	ballast, ICBT, search light starter, xenon lamp, transistor as required to support the good		
	operational condition of XENON SEARCH LIGHT		
D.10.3	PORTABLE FIRE PUMP (P250 2STROKE)	1 lot	
	Check, Repair/Replace of unit and its components as required to support the good operational condition of PORTABLE FIRE PUMP (P250 2STROKE)		
D.10.4	WORKING BOAT [5.4m length Rigid-Hulled Inflatable Boat (RHIB) type]	1 lot	
	General Overhauling of Outboard Motor - replacement of worn out parts and reconditioning		

of reusable parts on cylinder head assembly, piston and piston rod assembly, crankshaft assembly, camshaft assembly, cylinder block/liner assembly, exhaust manifold, electrical and ignition system (magneto and sparkplug), electronic system (sensors), fuel oil supply pump, carburetor, cooling sea water pump assembly, electric starting motor, output shaft and propeller shaft assembly, zinc anodes replacement of fuel filters, air filters, change gear oil, renew 2T oil and replacement of worn out parts;

Check, Repair/Replace as required to support the good operational condition of rotating searchlight;

Build up fiber glass on dilapidated parts on hull, boat deck, transom, gunwale, fender and bow;

Repaint hull with antifouling paint;

Repaint boat deck, transom, gunwale, bow with anti-skid paint,

Repaint rubber tube Philippine Coast Guard marks,

Inspect/ clean wiring connections and hoses; and

Recondition steering pump and replace oil seal, bearing, O-ring packing, and hydraulic hoses

Conduct sea trial operational test

REQUIREMENTS, IF AWARDED THE CONTRACT:

- A. Delivery and Inspection Site:
 - 1. **Project Completion Period:** Supply and Delivery of Services and Parts for One (1) Year Integrated Logistics Support (ILS) Intended for Ten (10) 44-Meter Multi-Role Response Vessels (MRRVs) Three Hundred Sixty-Five (365) calendar days from receipt of Notice to Proceed.
 - 2. **Project Delivery Site:** The winning bidder's owned Dry-Docking facility.
- B. During Post Qualification:
 - 1. The winning **CONTRACTOR** having the Lowest or Single Calculated Responsive Bid (L/SCRB) shall present the original submitted documents for verification and validation in accordance with the Implementing Rules and Regulations (IRR) of Republic Act (RA) 9184.

- C. Inspection and Acceptance:
 - 1. The **CONTRACTOR** shall conduct sea trials for satisfactory result prior acceptance.
 - 2. The **CONTRACTOR** must be capable of providing tug services to tow the vessel during sea trials conducted by PCG TIAC and subject vessel.
 - 3. Upon satisfactory completion of works and testing, a Certificate of Acceptance on all completed works shall be properly signed by members of the PCG TIAC.
- D. Warranty Period/ Coverage of Warranty:

Warranty:

- 1. Three (3) months or Ninety (90) days warranty validity period shall be reckoned from the date of issuance of the certificate of acceptance of particular requirements within the covered period for the *replaced parts*. (e.g. 1st Quotation. replaced/repaired parts but found later defective will be still covered by warranty. For the Fourth (4th) or last Quotation replaced/ repaired parts will be covered for ninety (90) days after the ILS period).
- 2. One (1) year warranty validity period shall be reckoned from the date of issuance of the certificate of acceptance for the replaced <u>equipment</u>. However, if the same defects occurred for two (2) consecutive times within the warranty period on a particular equipment, the warranty period shall be automatically extended for a period of six (6) months after the expiration of the original warranty period. The said item should be repaired and/or replaced within 15 days from the receipt notice.

For Newly Installed Generator Sets.

- 3. Two (2) years warranty after issuance of the Certificate of Final Acceptance.
- 4. The two (2) years warranty period shall be reckoned from the date of issuance of the certificate of final acceptance. However, if the same defects occurred for two (2) consecutive times within the warranty period on a particular part/item and its attendant part, the warranty period shall be automatically extended for a period of six (6) months after the expiration of the original warranty period. The said item should be repaired and/or replaced within fifteen (15) days from the receipt notice.
- 5. Conduct Preventive Maintenance Schedule (PMS) of inclusive 1,500 running hours.
- 6. At least ten (10) years guarantee of engine spare parts and service availability.

- 7. The following factory installed parts and equipment Warranty Period is two (2) years from the date of delivery against factory defects. Items are covered by the warranty as outlined below:
 - Gensets
 - Newly Installed associate piping
 - Newly Installed associate electrical wirings and alarms
 - Newly Installed Monitoring and Controls (Genset Display)

E. Payment:

1. Payment should be made every Quarter after the receipt the Notice to Proceed after completion,, inspection and acceptance of the services and replaced spare parts undertaken every quarter for the contract of the Supply and Delivery of Services and Parts for One (1) Year Integrated Logistics Support (ILS) intended for Ten (10) 44-Meter Multi-Role Response Vessels (MRRVs)

ADDITIONAL DOCUMENTARY REQUIREMENTS TO BE SUBMITTED DURING THE SUBMISSION AND OPENING OF BIDS

As evidence of the compliance of the bidders to the legal, technical and financial requirements of the project and proof of their compliance to the statements of compliance to all parameters of the technical specifications, the bidders shall submit the following documentary requirements as part of the First (1st) Bid Envelope (Eligibility Documents and Technical Component) on or before the deadline for the Submission and Receipt of Bids:

1. Certificate of "No Late Delivery" or "No Slippage" issued by the Project Management Office (PMO) of the Procuring Entity (PE) or from other government agency would refer to, including but not limited to, Philippine Navy (PN) and Bureau of Fisheries and Aquatic Resources (BFAR) with the same nature of project

Further, completed contract similar to the Project includes the following:

- Ships Maintenance and Repair;
- Dry-docking and Afloat Repair; and
- Ship's Repowering
- Comprehensive Gantt chart clearly specifying the scheduled maintenance tasks/ scope of works.
- 3. ISO 9001:2015 Certificates applicable to Ship Building and Ship Repair and issued by any member of the International Association of Classification Society (IACS). The IACS member who issued the ISO 9001:2015 Certificate should be active for at least three (3) years prior to the bid opening.
- 4. Valid Marina Licensed at least Class B shipbuilding and ship repair.
- 5. Valid Ship Repairs Liability Insurance Certificate.
- 6. List of after sales service centers strategically located in all parts of the country (1 service center located each in Luzon, Visayas, and Mindanao).

- 7. Certificate of Dealership/Distributorship solely issued by the Genset Manufacturer stating that the bidder is an authorized dealer/distributor of MARINE DIESEL GENSET, parts and its service center are strategically located in the Philippines. The dealer/distributor of MARINE DIESEL GENSET must be based in the Philippines for more than ten (10) years.
- 8. Certificate of Distributorship from Original Equipment Manufacturer (OEM) for the Marine Engine and Genset.
- Valid and updated Mayor's Permit or Business Permit since the repowering of the genset should be conducted in the winning supplier or service provider's own drydocking facility.
- 10. List of manpower/workers for the project.
- 11. The prospective bidder shall submit Brochures, pamphlets, pictures, operations and maintenance manual/s and/or other product literature for generator set.
- 12. The certificate of origin issued by the manufacturer of marine genset shall be submitted upon implementation of the project.
- 13. List of manufacturers of the boat raw materials, machinery components, navigational equipment and other component materials which shall be in any country or continent of the listed below:
 - a. Europe
- f. France
- b. Australia
- g. United Kingdom
- c. Japan
- h. Canada
- d. United States
- of America e. Singapore

G. Training

Personnel training for the use of equipment for a duration of up to five (5) days with at least ten (10) students.

TERMS AND CONDITIONS

- The **CONTRACTOR** shall present status of Gantt chart scheduled maintenance tasks/ scope of works specified in the for the span of Three Hundred Sixty-Five (365) calendar days for each MRRV 44 meter with corresponding percentage to the CPCG (ATTN:CG-10) and CGFLEET (ATTN: F10/MRG) which will be conducted every week on the preferred date of their authorized representatives by way of a PowerPoint presentation. Electronic and hard copies of the presentation shall also be provided.
- The **CONTRACTOR** shall provide repair logs/reports and plans necessary after completion of scheduled maintenance tasks/ scope of works specified in the manufacturers' Preventive Maintenance to the CPCG (ATTN:CG-10) and CGFLEET (ATTN: F10/MRG).

3	The CONTRACTOR shall present a weekly status of repair to the CPCG (ATTN:CG-10), CGFLEET (ATTN: F10/MRG) and designated authorized Project Officer. Five (5) electronic and printed copies of said report shall also be provided.	
4	In case the implementation of works covered under this contract could not proceed, unless growth repairs and/or necessary works have been conducted, the supplier should request from the Head of the Procuring Entity for the extension of the period of delivery.	
5	In the event the request of the supplier for extension of delivery period is granted, or the contract was suspended due to force majeure, the Procuring Entity shall amend the contract reflecting the changes arising from the extension or suspension of work including additional charges, if necessary, in accordance with Annex D of the 2016 Revised IRR of RA 9184.	
6	Once the CONTRACTOR has started any of the contracted work, such as docking of the vessel, it is the obligation of the CONTRACTOR to protect the vessel from any damage attached until the same has been delivered and accepted by the Procuring Entity.	
7	The CONTRACTOR should dry-dock the vessel in its <u>owned dry-docking</u> <u>facility</u> capable of protecting the same from natural calamities which necessitates the CONTRACTOR to relaunch or undock the vessel, CONTRACTOR SHOULD NOT charge or bill the Procuring Entity for any amount of whatever nature arising from relaunching and re-docking thereof.	
8	The CONTRACTOR must provide adequate firefighting personnel with the necessary firefighting equipment for the entire duration of the repair.	
9	The CONTRACTOR shall be held liable for any damages incurred on the ship and/or personnel due to the CONTRACTOR 's fault or negligence for the entire duration of the contract.	
10	The winning CONTRACTOR 's facility shall be free of health hazard materials substances.	
11	If there are specifications that require the opening of machinery, piping, fittings, and other equipment, it is understood that the CONTRACTOR shall close such machinery, piping, fittings, and other equipment, back to their original condition.	
12	Should the CONTRACTOR require the removal or shifting of any part of the vessel's fittings, stores, fuel, water, outfit, equipment, or piping for carrying out the work specified or implied, it shall remove the same at its own cost, and such removals shall be subsequently reinstalled in a satisfactory manner without	*

	to the Procuring Entity. The CONTRACTOR shall be held responsible for the protection of existing and newly installed equipment and materials. Any loss or damage due to the CONTRACTOR 's fault shall be renewed/restored/repaired at the CONTRACTOR 's expense.	
13	All interferences necessary to accomplish the work activities shall be removed and restored to their original condition without cost to the Procuring Entity.	
14	All metal scraps, ferrous or non-ferrous, fittings, machineries and equipment parts dismantled and removed from the vessels and replaced with new ones by the CONTRACTOR resulting from the actual repair of the vessel conducted by the CONTRACTOR shall remain the property of the PCG and shall, after completion of the work, be accounted for IAW proper PCG accounting procedures.	
15	The CONTRACTOR shall submit the After-Repair Completion Report to the procuring entity [CPCG (Attention: DCCGS for Ships and Aircraft Engineering, CG-10)] prior payment of the services rendered. Copy furnished CGFLEET (ATTN: F10/MRG)	
16	The CONTRACTOR shall notify the CGFLEET/ CG-10 at least five days (5) days before the conduct of any shipboard test and seven (7) days before conducting sea trials.	
17	The CONTRACTOR shall not disclose/divulge any information and communication, whether oral or written, to any other person or entity, without the express written consent of the PCG. It includes non-disclosure of, but not limited, to the following:	
	a.) Bidding Document b) Technical Specification of the Project c) Annual Procurement Plan and related Project Procurement Management Plan d) Proposals.	
	If the CONTRACTOR will disclose/divulge any information and communication, whether oral or written, to any other person or entity, without the express written consent of the PCG it is understood that it will be grounds for the imposition of any applicable administrative and criminal sanctions.	
18	As part of the contractual obligations, the CONTRACTOR shall be held liable for any damages incurred on the vessel during the conduct of towing services and repair activities. Further, this liability extends until the completion of the project and final acceptance of TIAC.	
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19	The Vessel that shall be dry-docked shall be identified and approved by PCG as	
	favorably recommended by CGFEET.	

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For guidance and information of all concerned.

RADM HOSTILLO ARTURO E CORNELIO PCG Chairperson, NHQ-PCG Bids and Awards Committee

Receiv	ved by the bidders:	
Name:	:	
Date: _		

