ANNEXURE M1

PORT OF RICHARDS BAY
TUG IPHOTHWE-LAY UP SCOPE OF WORK AND BILL OF QUANTITY

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1. PURPOSE

Craft availability is a core function to Transnet National Ports Authority and hence it is critically important to have in place a statutory maintenance program in place in order to be able to provide uninterrupted service to our customers and also to comply with the relevant SAMSA regulations. The purpose of this contract is to carry out dry dock maintenance of Tug Boat Iphothwe, as specified on the Bill of quantities (Annexure M1)

2. WORK AREA

The work on the Tugboat Iphothwe will be carried out on the dry dock facility secured and provided by the contractor as per the requirements on the Bill of quantities (Annexure M1).

3. CONTRACT PERIOD & PRICE ESCALATION

2.1 The contract shall be valid for the dry dock period for the period agreed upon by both TNPA and the contractor (four weeks is the preferred duration).

2.2 No price escalation will be allowed after the award of the tender.

4. SUPERVISION

The Service Provider shall carry out the “work” or “services”, under supervision of TNPA Marine Officers, in line with the bill of quantities as presented by the TNPA Project Manager.

5. TO BE SUPPLIED BY SERVICE PROVIDER

The Service Provider shall be responsible for providing the required labour, material, tools, workshop facilities, personal protective clothing and transport for equipment’s for the proper completion of the works.

6. TO BE SUPPLIED BY TNPA PORT OF RICHARDS BAY

The Project Manager or Tug officers will provide and arrange access to the work site.

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7. INFORMATION TO BE OBTAINED ON SITE

The Service Provider shall visit the sites of the proposed work and acquaint themselves with the nature of work, the condition under which the work is to be performed, the means of access to the site including any limitations or other authorities, and all matters that may influence or affect the contract.
NB: The dry dock facility is to be sourced by the contractor.

8. OCCUPATIONAL HEALTH AND SAFETY ACT (ACT 85 OF 1993)

- For the purpose of the contract, the Occupational Health and Safety Act 1993 (Act No 85 of 1993 and works to be executed in accordance with the OHS Act including relevant MOS Regulations.
- The Service Provider is required to undergo the TNPA SHE Induction Program before commencement of services.
- The Service Provider need to obtain TNPA Security permits to access the Port prior to commencement of services.
- The Service Provider is required to submit a Health and Safety File (SHE FILE) for TNPA's approval within seven (7) working days after receiving letter of award. Services will not commence if SHE File has not been submitted and approved. Service Provider to ensure SHE File is approved within two (2) weeks after receiving letter of award.
- Service provider will be liable to penalties if the SHE File is not submitted and approved within the specified period indicated above.
- The Service Provider must adhere to all Safety, Health, Environmental and Security requirements of the Port. Failure to do so can and will lead to termination of the contract.
- The Service Provider is to equip their employees with the necessary Personal Protective Equipment (PPE) when accessing the Port and its facilities.

9. INSURANCE

The Contractor shall in effect be liable for, in his own interest, any insurance of which he deems necessary to cover any loss and/or damage to TNPA Port of Richards bay property/assets, against any legal liability for accidental death, injury or damage to third party and/or property arising out of or in connection with, the requirements of this contract.

10. PENALTIES

10.1.1 The Services Provider shall at least within two working days of the scheduled service, confirm with TNPA Project Manager of such service and/or inform the TNPA Project Manager of the inability to render the service in accordance with the Service schedule, as provided by the Service Provider.

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10.1.2 Failing to complete the work within the agreed service schedule, the Service Provider shall pay to Transnet as penalty the sum of R 5 000 (Five thousand Rands) for every day or part thereof during which the works remain incomplete or services not rendered.

11. GENERAL

No amendment or variation of, or addition to this agreement shall be of any force or effect unless reduced to writing and signed by both parties.

12. SPECIAL CONDITIONS

- Principal contractor should have a technical representative and safety officer/representative on site, all the time during the dry dock period of a craft.
- Some of the planned work may be cancelled at TNPA's discretion after inspection in dry dock
- Additional work may be added subject to acceptance of written quotation and issue of variation order (i.e. no quote no payment)
- Contractor to allow for miscellaneous costs; scaffolding and rigging, electricity supply etc. to complete the planned work.
- Contractor to supply shore power & water to carry out scope of works.
- Contractor to provide their own electrical supply for heavy electrical equipment e.g. welding machines, high pressure washers etc. If heavy equipment is connected to the crafts' electrical supply and damage occurs, the repairs will be for the contractors account.
- Contractor to supply all tools & equipment necessary to carry out the scope of works.
- Contractor's tools and equipment to pose no risk to TNPA assets or environment.
- All high pressure washing to be done with suitable equipment of min 220 bar.
- Spray painting of the hull and bulwarks to be done with suitable airless spray equipment. (As per paint specialist specification).
- Safety precautions for entry into confined spaces to be adhered to at all times, therefore tanks are to be gas freed.
- Low voltage lights & intrinsically safe tools are to be used inside the tanks.
- Contractor to demonstrate and or have knowledge of the propulsion system of the crafts.
- Contractor to demonstrate and or have knowledge of Turbo chargers.
- Contractor to clean dry dock and dispose of waste. Environmental regulations apply
- Contractor to submit Risk Assessment with the tender pack.
- Each item to be quoted for and grand total to be shown, indicate if item is not quoted for.
- Pressure test all overboard valves on the water side of the valve to 2 bar for a minimum 5 minutes.
- Should any valves fail SAMSA inspection, further SAMSA costs will be for the contractor.
- Hull and deck thickness test will be done (charged per point) contractor to submit report.
- TNPA Representative to witness ALL tests.
- Contractor not following safe practices will be stopped from carrying out the works.

13. PRE- QUALIFYING CRITERIA

Should a tender not adhere to the following pre-qualification and technical criteria, the tender would not be considered and would be disqualified:

- SAMSA Dry dock construction certificate indicating that the facility can accommodate a vessel of 6.0 Meter draft.
- Registration with COIDA (Valid Letter of Good standing).

ITEM	SUB ITEM	DESCRIPTION	UNIT	QTY	AMOUNT
0	**0.1**	Contractor to provide a docking facility-(if contractor sources TNPA Graving dock; contractor is to secure the dates with the TNPA dock ONLY, payments of the dock will be done internally between TNPA Graving dock and Marine Services)	each	**1**	
	0.2	Contractor to provide divers for docking to ensure the Tugboat lands on the blocks			
	0.3	Dry dock facility to allow for 6M draft			
	0.4	Connect and supply shore power (380V ,50Hz) 3 phase			
	0.5	Contractor to provide four officers for both voyages; Richards bay to Durban voyage and Durban to Richards bay officers. • Master, STCW II/3, Master (<500GT Near-Coastal) • Chief Mate, STCW II/3, Master (<200GR Near-Coastal)/ Officer in charge of a navigational watch (<500GT Near-Coastal) • Chief Engineer, STCW III/2, Chief Engineer • Second engineer, STCW III/2, Second engineer			
1		**EXTERNAL HULL CLEANING and PAINTING**			
1.1		***HULL CLEANING, SEA CHESTS AND GRIDS, PAINTING***			
	1.1.1	Scrape, high-pressure water wash and full grit blast hull exterior up to, and including underwater, gunwales.	M^2	1350	

	1.1.2	Removed Growth to be disposed by contractor			
	1.1.3	Cherry Picker or crane to be supplied by contractor			
	1.1.4	Cover all anodes studs to protect them from paint			
	1.1.5	cover transducers with grease to protect against paint			
	1.1.6	Ensure the tank drains are plugged prior to hull cleaning			
	1.1.7	Mechanically clean area below Voith table (No blasting around the voith turn table)			
	1.1.8	De-scale and de-rust Main Engine and Auxiliary Engines Funnels	each	4	
	1.1.9	Remove ships intake grids	each	2	
	1.1.10	Remove old anodes replace all with new anodes (10kg rectangular bolt-ons zinc anodes), to be supplied by the contractor	each	93	
	1.1.11	Scrape and high pressure wash inside sea chests and sea chest grids.			
	1.1.12	Damaged Intake Grid bolts and threads to be repaired and/or replaced. Broken bolt threads to be removed from holes. *[Bolts are stainless steel]*			
	1.1.13	Spray paint inside sea chests and grids			
	1.1.14	Replace anodes inside sea chests			
	1.1.15	Replace grids upon completion of painting	each	2	
	1.1.16	All sea chest grid bolts to be rewired with stainless steel wire. *[Wire to be supplied by contractor]*	each	12	
	1.1.17	Apply one coat primer paint as per appointed paint representative's instructions to hull exterior, including underwater and side areas, propeller table, gunwales, sea chests, hawser pipes.	M^2	800	
	1.1.18	Apply one coat anti-fouling paint as per appointed paint representative's instructions to hull exterior up to and including the waterline. To include underwater and side areas, propeller table, sea chests, and Voith sea spaces. *[Contractors will be responsible for turning Voith units as required and in a safe manner]*	M^2	800	
	1.1.19	Apply final coat as per appointed paint representative's instructions to hull exterior above waterline. To include gunwales(inside and outside), rubbing band, hawser pipes, anchors, and cutting in between colours (including spare anchor)	M^2	735	

	1.1.20	Paint vessel names, port of registration and draft marks In white (port and Stb'd side)	each	2	
	1.1.21	Paint funnels with heat resistant paint as per manufacturers specification. (ANNEXURE C)	each	4	
	1.1.22	Paint all decks with green paint as per manufacturer's specification and put non-slip sand on decks.	M^2	350	
	1.1.23	Paint accommodation outside, including the superstructure, bridge and monkey Island.	M^2	405	
	1.1.24	Paint all deck auxiliary equipment such as winches, cranes, anchor windlass and fit denso tape on metal fittings			

1.2		**ANCHORS AND CABLES**	unit		
	1.2.1	*High pressure wash anchor, cables and spare anchor.*	each	2	
	1.2.2	*Re-mark cable.*	each	1	
	1.2.3	*Coat cable with boiled linseed oil or equivalent.*	each	1	
	1.2.4	*Sand blast anchor chains and paint afterwards*	each	1	
	1.2.5	*Range anchor chain end to end*	each	1	

1.4		***VOITH SEA SPACES***			
	1.4.1	Both Port and Starboard Voith sea water space covers to be removed. *[Four covers]*	each	4	
	1.4.2	Scrape and high pressure wash completely inside port and starboard Voith spaces. *[Contractors will be responsible for turning Voith units as required and in a safe manner]*	each	4	
	1.4.3	Inspection of Voith units before painting			
	1.4.4	Manhole bolts and threads to be inspected and repaired/replaced as required. Jointing surfaces to be cleaned, inspected for damage and prepared as required. All bolts, studs and stud holes to be cleaned and buffed.			
	1.4.5	Any Unplanned work on Voith Units subject to inspections (i.e.: corrosion and cavitation)			

	1.4.6	Port and Starboard Voith spaces to be painted with one coat of anti-fouling as per hull specifications.			
	1.4.7	Replace Port and Starboard Voith covers. *[New Neoprene jointing to be supplied by contractors. All studs/bolts to be coated with suitable anti-seize/anti-corrosion paste before assembly. Contractors to ensure employees are knowledgeable when tightening up covers with rubber jointing]*			
	1.4.8	Manhole Covers to be inspected by contactor for leaks during flooding			

1.5		***VOITH BLADES***	each	10	
	1.5.1	Voith blades to be scrapped and mechanically cleaned by hand with buffing machine to bare metal prior to Voith inspections and painting. *[Grinding of blades will not be permitted].* *Blades to be polished and be covered.*			
	1.5.2	Voith inspections and tests to be conducted in conjunction with Voith representative. (contractor to outsource voith representative)			
	1.5.3	Any Unplanned work on Voith Units subject to inspections			
	1.5.4	Voith blades to be covered with protective covering prior to painting.			

2		**SHIPS VALVES**			
	2.1	***SHIPS SEA CHEST AND OVERBOARD VALVES***	unit		
		Port side bw1 galley overboard valve	each	1	
		Port side bg32 o.w.s overboard valve	each	1	
		Port and stbd side main fire pump line drain valves			
		Port side bg1 generator scupper drain valve			
		Stbd side bg57 compressor flat drain valve supply and fit			
		Sw1 sea chest suction valve			
		Sw4 sea water strainer open and clean up			
		Sw2 sea strainer outlet isolating valve			

		Bg7 aft bilge main suction valve			
		Aft bilge strainer open and clean up			
		Xf1 port side fire pump sea chest isolating valve and apply new grease to valve actuating Mechanism			
		Xf2 stbd fire pump sea chest isolating valve and apply new grease to valve actuating Mechanism			
		Grease shafts nipples from kumera gearbox to main fire pumps port and stbd			
		Stbd side bg18 aft overboard discharge valve			
		Stbd side bg17 fwd overboard discharge valve			
		Stbd bg 19 aft g/s pump discharge valve to fire main			
		Stbd bg14 fwd g/s pump discharge valve to fire main			
		Sewage overboard valve			
		Stbd bw2 grey water overboard valve			
		Stbd black water overboard valve			
		Bg25 workshop scupper drain valve			
		FW8 fresh water tank emptying valve			
		Stbd vl02 V.S.P vent shut off valve			
		Clean and paint induction strainers, replace neoprene gasket	each	4	
	2.1.1	Valves to be dismantled for SAMSA inspection and refurbished. Machine, lap-in/machine valve and seats as required. New jointing and packing to be used. Jointing between valve and ships side/sea chest to be renewed after cleaning flanges. Stainless steel bolts and nuts to be used where mild steel are found. Use anti- seizing past on bolts. All valve and strainer insides to paint with Apexior 3 or equivalent. All valve openings to exterior to be blanked off to stop ingress of shot blast and paint. All mating surfaces, studs and nuts to be examined for signs of corrosion.			
	2.1.2	Remove sea valves in entirety			
	2.1.3	All openings to be blanked off to stop ingress of shot blast/paint *[Ref Item 1.2 : Hull and Superstructure Grit Blasting and Item 1.10 :*			

		Hull painting			
	2.1.4	Valve/sea chest mating surfaces to be cleaned, prepared and inspected for damage and/or corrosion.			
	2.1.5	All studs, nuts and bolts to be cleaned and buffed.			
	2.1.6	Dismantle and refurbish valves, including cleaning and painting, lapping-in valve seats/disks or machining same where necessary.			
	2.1.7	Valve parts too inspected by vessel TNPA representative before assembly. Valve bodies, valve spindles, valve disks and seats to be inspected for damage and all valve spindle threads checked. Condition of gland followers and gland studs to be inspected. [Confirm with SAMSA surveyor if he wants a visual inspection of valves before assembly and value/time of pressure test.			
	2.1.8	Reassemble all valves with new joints and new gland packing.			
	2.1.9	Pressure test all sea valves on the gland side to 2 bar for a minimum 5 minutes. TNPA representative to witness tests. *[Valves should be closed by hand and then "nipped up" for the pressure test. Over tightened valves will not be accepted]*			
	2.1.10	On satisfactory completion of pressure test, valves to be presented to SAMSA surveyor for inspection. *[Should any valves fail SAMSA inspection, further SAMSA costs to be borne by contractor]*			
	2.1.11	Refit valves using new KLINGER jointing and stainless steel nuts and bolts.			
	2.1.12	During Flooding valves to be left in open position, checked for leaks, and rectified if leaking by contractor.			

3.0		**TANKS AND VOID SPACES**	unit	Quantity	
		AFT PEAK BALLAST TANK	M^3	42.8	
		FORE PEAK BALLAST TANK	M^3	52.1	
	3.1.1	Contractors to open and reseal tanks using new neoprene jointing. Contractors to ensure that all tanks have a valid gas free certificate before entering. All tanks to be verified gas free on daily basis. Contractors to supply own ventilation fans. Any contractors not following safe working practices will be stopped from working. Tank plugs to be removed by ships staff. Low voltage lights to be used in the tanks and intrinsically safe tools to be used in the tanks. Rules for entering confined spaces to be adhered to.			
3.1		***FRESH WATER TANKS (37.4 X 2)***	M^3	74.8	
	3.1.2	Fresh water tank to be emptied.			
	3.1.3	Fresh water tank plugs to be removed			
	3.1.4	Plugs, male and female threads to be cleaned and inspected. New leather joints to be made.			
	3.1.5	Fresh water tank - covers to be removed			
	3.1.6	Fresh Water Tank - All studs, nuts and bolts to be cleaned and buffed.			
	3.1.7	Fresh water tank cover mating surfaces to be mechanically cleaned and prepared.			
	3.1.8	New Neoprene jointing to be supplied for tank covers			
	3.1.9	Gas free certificate to be issued for entry into Fresh Water Tank.			
	3.1.10	Fresh water tank to be high pressure water washed. Water to be removed and tanks dried.			
	3.1.11	Fresh water tank to be degreased and mechanically cleaned for inspection.			

	3.1.12	Fresh water tank to be inspected by TNPA representative, SAMSA and Appointed Paint Representative			
	3.1.13	On approval freshwater tank to be painted as per Appointed Paint Representative. *[Allow 5 % coverage for quotation purposes]*			
	3.1.14	Fresh Water Tank plugs to be refitted with 3mm leather gasket (service provider to supply)			
	3.1.15	Final inspection by TNPA representative before tank covers are replaced.			
	3.1.16	Fresh water tank covers to be replaced. Anti-seize paste to be used on all nuts and bolts.			

3.2		***FUEL TANKS***			
		Diesel Day tanks Port	M^3	5.7	
		Diesel Day tanks STBD	M^3	5.7	
		Fuel tank Port	M^3	50.6	
		Fuel Tank Starboard	M^3	50.6	
	3.2.1	Fuel Tanks to be emptied.			
	3.2.2	Fuel Tanks covers to be removed			
	3.2.3	Fuel Tanks All studs, nuts and bolts to be cleaned and buffed.			
	3.2.4	Fuel Tanks covers mating surfaces to be mechanically cleaned and prepared.			
	3.2.5	New oil resistant Vellumoid jointing to be supplied for Fuel Tanks covers.			
	3.2.6	Gas free certificate to be issued for before entry into Fuel Tanks and before SAMSA Inspection			
	3.2.7	Fuel Tank to be cleaned for SAMSA inspection			
	3.2.8	Fuel Tank to be inspected by ships staff			
	3.2.9	Fuel Tank inspection to be carried out by SAMSA *[New gas free certificate before entry to be supplied by contractor]*			

	3.2.10	Final inspection by ships staff before covers are replaced.		
	3.2.11	Fuel Double Bottom Tank covers to be replaced. Anti-seize paste to be used on all nuts and bolts.		

3.3		**Void space**	M^3	±10	
	3.3.1	Tanks to be emptied.			
	3.3.2	Tanks covers to be removed			
	3.3.3	Tanks All studs, nuts and bolts to be cleaned and buffed.			
	3.3.4	Tanks covers mating surfaces to be mechanically cleaned and prepared.			
	3.3.5	New neoprene jointing to be supplied for Tank covers.			
	3.3.6	Gas free certificate to be issued for before entry into Tanks			
	3.3.7	Tank to be cleaned for SAMSA inspection			
	3.3.8	Tanks to be inspected by TNPA Representative			
	3.3.9	Tanks inspection to be carried out by SAMSA *[New gas free certificate before entry to be supplied by contractor]*			
	3.3.10	Final inspection by TNPA Representative before covers are replaced.			
	3.3.11	Tank covers to be replaced. Anti-seize paste to be used on all nuts and bolts.			

3.4		**Anchor chain lockers**	m^3	4	
	3.4.1	Chain locker to be opened for inspection. High pressure washed and cleaned for SAMSA inspection. Touch-up paintwork as required. Gratings to be removed and refitted.			
	3.4.2	On completion of painting chain lockers, anchor chains to be brought back on-board.			
	3.4.3	Final inspection by TNPA Representative before chain locker covers are replaced.			

	3.4.4	Anchor locker cover to be replaced. Anti-seize paste to be used on all nuts and bolts.			

3.5		***FOAM TANK***	M^3	13.912	
	3.5.1	Foam Tank to be emptied into external storage tanks. Contractor to supply tanks			
	3.5.2	Foam Tank - cover to be removed			
	3.5.3	Foam Tank- All studs, nuts and bolts to be cleaned and buffed.			
	3.5.4	Foam Tank covers mating surfaces to be mechanically cleaned and prepared.			
	3.5.5	New Neoprene jointing to be supplied for Fuel Day Tank covers.			
	3.5.6	Gas free certificate to be issued for entry into Port and Starboard Foam Tanks			
	3.5.7	Foam Tank to be degreased and mechanically cleaned for inspection.			
	3.5.8	Foam Tank to be inspected by TNPA Representative and by Appointed Paint Representative			
	3.5.9	Foam Tank inspection by SAMSA *[New gas free certificate]*			
	3.5.10	On approval by SAMSA Foam Tank to be painted as per Appointed Paint Representative. *[Allow 5% coverage for quotation purposes]*			
	3.5.11	On approval by SAMSA Foam Tank to be painted as per Appointed Paint Representative. *[Allow 5% coverage for quotation purposes]*			
	3.5.12	Final inspection by TNPA Rep. before covers are replaced.			
	3.5.13	Foam Tank cover to be replaced. Anti-seize paste to be used on all nuts and bolts.			
	3.5.14	Contractor to repair foam tank as necessary and informed by the inspection			

3.6	**3.6**	**DIRTY OIL TANK** **Contractor to pump out Dirty oil tank, provide disposal facility ± 5M³, dispose of dirty oil, and provide disposal certificate.**	M^3	4.959	
	3.6.	Dirty oil tank to be emptied			
	3.6.1	Remove all pipe work to open tank			
	3.6.2	Dirty oil tank covers to be removed			
	3.6.3	Dirty oil tank all studs, nuts and bolts to be cleaned and buffed.			
	3.6.4	Gas free certificate to be issued for before entry into oily water tank			
	3.6.5	Dirty oil tank to be cleaned for SAMSA inspection			
	3.6.6	Dirty oil tank to be inspected by ships staff			
	3.6.7	Dirty oil tank inspection to be carried out by SAMSA *[New gas free certificate before entry to be supplied by contractor]*			
	3.6.8	Final inspection by TNPA Rep. before covers are replaced.			
	3.6.9	Dirty oil tank covers to be replaced. Anti-seize paste to be used on all nuts and bolts.			
	3.6.10	Dirty oil tank replaces neoprene gasket			
	3.6.11	Dirty oil tank replaces all pipe work on completion			

5.0		***FIRE MONITORS***	each	2	
	5.1	Hydraulic power pack to be isolated			
	5.2	All Rubber hydraulic hoses to be renewed			
	5.3	Fire monitor to be removed from Tug			
	5.4	Fire monitors to be dismantled			
	5.5	All seals to be renewed			
	5.6	All Hydraulic actuators to be overhauled			
	5.7	fire monitor to be painted after assembly			

	5.8	Test fire monitor when tug is out of the dock			
	5.9	All leaking hydraulic pipes to be renewed.			
	5.10	All bearings to be inspected, replaced as required and fit new grease nipples			

6.0		***NDT THICKNESS TESTING***			
	6.1.1	Conduct the following NDT in the following areas			
	6.1.2	NDT testing of the hull plating including propeller platform and sea chests			
	6.1.3	NDT testing of port and starboard void turntable and vertical sides			
	6.1.4	NDT of both port and starboard foam tanks internally			
	6.1.5	NDT Port and Starboard hawser pipes			
	6.1.6	NDT of main sea water cross over pipe			
	6.1.7	NDT of main deck and bridge deck			
	6.1.8	NDT of Port and Starboard anchor chains			
	6.1.9	Supply certificate of results prior to reflating of vessel			

7.0		**Pipe work and plating**	each		
	7.1.1	Erect safe access scaffolding to vessel			
	7.1.2	Arrange for hot work permit before hot work			
	7.1.3	Perform repairs on the hull plating (EH 36, 12mm)	M^3	10	
	7.1.4	Paint internal after the repairs with engine room approved paint	M^3	10	
	7.1.5				

8.0		**Water**			
	8.1.1	Supply water for blasting and cleaning			

		Waste			
9.0	**9.1.1**	Provide waste collection and disposal facilities			

10.0	10.1	**SAMSA**			
	10.1.1	SAMSA to inspect hull before painting			
	10.1.2	SAMSA to inspect sea and overboard valves			
	10.1.3	SAMSA to inspect tank + valve mating surfaces			
	10.1.4	SAMSA to inspect Voith Units			
	10.1.5	SAMSA to inspect hull prior to filling of dry-dock. Issue of new Dry-docking certificate.			

11.0	**11.1**	***CHEMIST***			
	11.1.1	CHEMIST to test and issue gas free certificates for tank entry and hot work permits.			
	11.1.2	Valid gas free certificate to be provided before when working on enclosed spaces and for SAMSA tank Inspections			

12.0		***DRYDOCK***			
	12.1.1	Hire of shore cranes, cherry pickers and forklift. Contractor to supply crane.			
	12.1.2	Arrange and connect 380v 3 phase shore supply + extension cable			
	12.1.3	Arrange ablution facilities			
	12.1.4	Arrange fire main supply			
	12.1.5	Arrange divers for the docking day			

13.0	**13.1.1**	**HOT WORK**			
	13.1.2	Supply fire marshal			
	13.1.3	Supply hot work permit			
	13.1.4	Supply safety officer			

14.0		**FENDERS**			
	14.1.1	Remove and refit sausage fender (to be supplied by the contractor)			
	14.1.2	Renew fender locating pins as required.			
	14.1.3	Straighten fender locating pins as required.			
	14.1.4	Renew vertical fender palms as required.			

	14.1.5	Repairs to stern horizontal fender housing			
	14.1.6	Renew sausage fender tensioning screws			
	14.1.7	Renew Fender Straps			
	14.1.8	Renew Fender Straps Ratchet			
	14.1.9	Miscellaneous repairs to stern section.			
	14.1.10	Repair belting port and stb'd side.			
	14.1.11	Repairs to port and stb'd fender boxes.			
	14.1.12	Replace W shape damaged rubber fender stb'd quart aft			
	14.1.13	Mechanically clean fender housing, paint the space before fitting the fenders.			

15.0	**15.1**	**KEEL COOLERS**			
	15.1.1	Remove , clean, pressure test and refit Keel Coolers (*repair where necessary*)	each	2	
	15.1.2	Replace gasket (*Contractor to supply*)			

16.0	**16.1**	**COOLERS**	each	4	
	16.1.1	Remove and clean the WEKA box coolers (high pressure wash). Pressure test and plug all leaking tubes. Ensure water tightness			
	16.1.2	All pipework for coolers flushed and cleaned off marine growth			
	16.1.2	Fit the new Weka Protector as per manufactures specification (ANNEXURE B2)			
	16.1.2	Commission coolers once craft is back in water			

17.0	**17.1**	**TOWING WINCH**			
	17.1.1	Ultrasonic cleaning of Hydraulic filter	each	1	
	17.1.2	General service of the hydraulic power pack			
	17.1.3	Check the condition of all pipes and change as necessary then coat with denso tape			

18.0	**18.1**	**MAIN ENGINE**			
	18.1.1	Ultrasonic cleaning of Lube oil filters	each	2	
	18.1.2	Ultrasonic cleaning of self-cleaning filter	each	2	
	18.1.3	Cleaning of the engines	each	2	

19.0	**19.1**	**DIVERS**			
	19.1.1	Provide divers during docking and undocking of craft	each	2	

21.0	**21.1**	**THICKNESS TEST**			
	21.1.1	To do thickness testing as per SAMSA Requirement, plus or minus 200 points per vessel.			

22.0	**22.1**	**WATERTIGHT COMPARTMENTS**			
	22.1.1	To clean all water tight doors rubber groves and fit new rubbers on potholes and water tight doors. Rubber to be supplied by contractor.			
	22.1.2	Repair all steel lips as necessary prior to renewing rubbers			
	22.1.3	Pressure test water tight integrity of all watertight compartments before and after repairs			
	22.1.4	Remove wheelhouse sliding windows & sky light, treat corroded areas and refit with new seals			

23.0	**23.1**	**ADDITIONAL REPAIRS**			
	23.1.1	Bridge chart table to be replaced with a new one and fitted securely			
	22.1.2	Accommodation flooring to be patched where necessary securely with marine grade wood			

24.0		***TUG CLEANING***			
	24.1	***ENGINE ROOM CLEANING***			
		Bilge/ Sludge (*Contractor to make provision for Disposal Facility and provide disposal certificate*)			
	4.1	Shore Tank to be supplied			
	4.2	Bilges to be pumped out into shore tank [Contractor to supply tank. Pump and certified hose]			
	4.3	Contents of bilges to be disposed of legally			
	4.4	Certificate of disposal of bilge liquid to be supplied to the vessel. To include location of disposal and volume.			
	4.5	Deck plates to be removed and bilges cleaned.			
	4.6	Bilges to be degreased and wiped down.			
	4.7	All waste material in bilges to be removed and disposed of legally			
	4.8	Certificate of disposal of bilge waste to be supplied to vessel. To include location of disposal and volume.			
	4.9	Engine room workshop to be degreased, mechanically prepped and touch up paint as necessary			
	4.10	Engine room bulkheads, deck plates and pipes to be wiped clean with degreaser			
	4.11	Compressor room to be cleaned with degreaser including the bulkheads and pipes			
	4.12	Generator flat to be cleaned with degreased inclusive of the bulkheads and the pipes			
	4.13	Engine control room to be cleaned thoroughly and fumigated for ants and cockroaches			
	4.2	**ACCOMODATION**			
	4.2.1	Cleaning of the alleyway, galley, Co2 locker, all cabins, mess room and bathrooms.			
	4.2.2	Floors and bulkheads inclusive and full fumigation of that space.			
	4.2.3	Removal of the bunks and cleaned and the space fumigated			

	4.2.4	curtains to be washed where applicable			
	4.3	**BRIDGE AND VOID SPACE**			
	4.3.1	Cleaning of the bridge and void space			
	4.3.2	Floors and bulkheads inclusive of fumigation of the bridge			