



Maritime &
Coastguard
Agency

Remote Operator Training and Certification Framework

Training Record Book

June 2025

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1.0 Remote Operator Details

1.1 The following details must be completed in full:

- i) Remote Operator full name
- ii) Address
- iii) Phone number and email address
- iv) Date of birth
- v) CoC details
- vi) Signature of holder

1.2 Change of Remote Operator details including:

- i) Remote Operator full name
- ii) Address
- iii) Phone number and address

2.0 UK regulations

2.1 The following UK regulations set out the requirements for Maritime Autonomous Surface Ships (MASS). This training scheme falls within the regulatory scope of the following:

- i) The Workboat Code Edition 3, as amended
- ii) MGN 703, as amended

2.2 In service time must be collected in a ROC that controls a vessel capable of teleoperation and monitoring.

3.0 Introduction

3.1 A Remote Operator following the MCA-approved Remote Operator training scheme may start to complete this TRB upon successful completion of Phase I of the training scheme and entry into Phase II.

3.2 The training set out in this Training Record Book (TRB) has been developed to ensure that assessment of candidates is facilitated in a ROC during an “in-service” period of training.

3.3 All stakeholders engaged with this training scheme are asked to assist Remote Operators in becoming competent and experienced throughout the training scheme

4.0 Remote Operator Certificates

4.1 Candidates can start completing this TRB following the successful completion of Phase I.

4.2 Successful completion of this TRB, including the minimum requirements for in-service time in a ROC, a Remote Operator can progress to gain their management CoP during Phase III.

4.3 There is no requirement for a vessel operator to issue any form of certification upon successful completion of this TRB.

4.4 The vessel operator may issue testimonials as set out in Annex E, following the successful completion of Phase II.

5.0 Minimum Hours Record

5.1 This page can be duplicated as required to maintain a record of hours.

6.0 Minimum Days Record

6.1 This page can be duplicated as required to maintain a record of days.

7.0 Tasks

7.1 Tasks must not be block signed.

7.2 The Master of the vessel must countersign the end of each section.

7.3 Tasks must only be signed off by Remote Operators that hold a Remote Operator (M) CoP.

7.4 All columns must be filled for a task to be considered complete.

7.5 Correction fluid must not be used to amend entries.

7.6 Any information that is inaccurate or input in error, must be crossed out with a single line. The correct information must be entered in a new row.

7.7 If an error is made with regards to hours/days of service, the Master should also initial the correction.

7.8 Any unused rows within tables that record hours/ days of service must be crossed out.

7.9 In service time that has not been verified by the Master's signature or initials must not be counted.

8.0 Activities

8.1 The following may be input into the appropriate column:

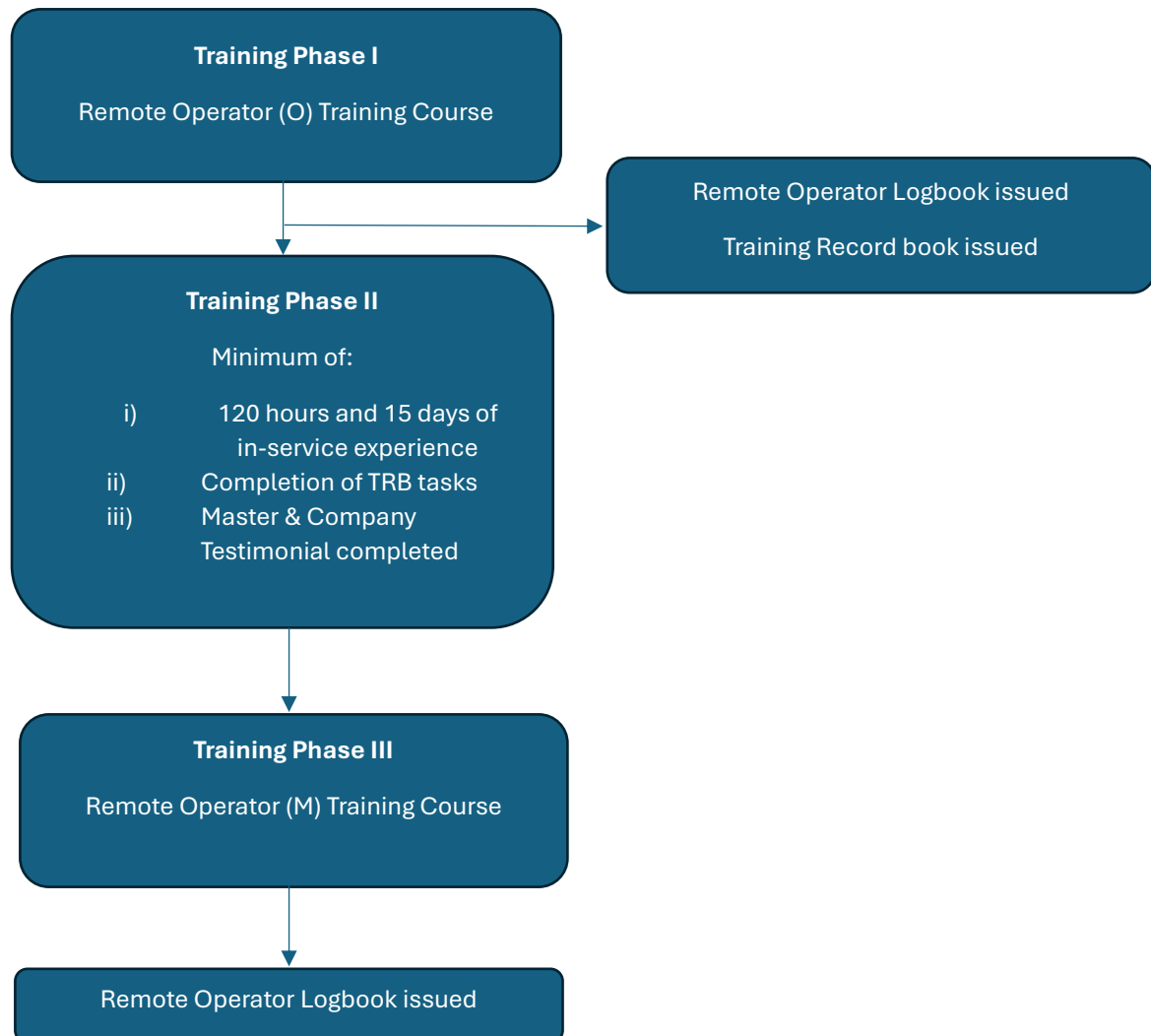
Description of Activity	Code
<u>Audit /Inspection</u>	<u>AU</u>
<u>ROV operations</u>	<u>ROV</u>
<u>Survey Operations</u>	<u>SUR</u>
<u>Cargo Operations</u>	<u>CAR</u>
<u>Navigational Watchkeeping</u>	<u>NAV</u>
<u>Search and Rescue</u>	<u>SAR</u>
<u>Ship Handling</u>	<u>SH</u>
<u>Other</u>	<u>OTH (Specify below)</u>

Description of Activity	Code
Other- [Insert Description]	OTH - [Inset notation]

8.2 More than one activity may be recorded in the appropriate column in Annex C.

9.0 Remote Operator Training Scheme

9.1 The below flowchart summarises the Remote Operator Training Scheme:



10.0 Certificate of Competency Record Keeping

10.1 Notwithstanding the provisions set out in this TRB for the achievement of a Remote Operator CoP, Remote Operators holding MCA-issued certification should maintain records and testimonials regarding their time served as a Remote Operator.

10.2 This can be maintained in a Remote Operator logbook.

Annex A – Phase I Confirmation

(For completion by MCA approved Training Centre)

Training Centre Details:

Dates of training:

Certificate of Proficiency (CoP) Number:

I hereby certify that the holder of this logbook has satisfactorily completed the MCA approved Remote Operator (O) training course and assessment(s).

Signature:

Printed names:

Training Centre Details:

Training Centre Stamp:

Annex B – Overview of In-Service Record

Note: Duplicate Annex B as is required to maintain a comprehensive record of service.

Vessel Name	IMO/Official Number	ROC Location	Vessel Location	Period of service		Confirming Master/Officer(s) Name/ Rank and Initials	Master/Officer's CoC Number
				From	To		

Annex C- Record of Service

Note: Duplicate Annex C as is required to maintain a comprehensive record of service.

Vessel Name	IMO/Official Number	Remote Operator Rank	Vessel Operator / Charter	Additional Notes
			/	

Date	Number of hours	Activity /Description	TRB task(s) completed	Confirming Officer's Initials

NOTE: ANY ROWS THAT ARE UNFILLED MUST BE CROSSED OUT IN A SINGLE BLACK LINE.

Annex D- Record of Tasks

1. The completion of all tasks is mandatory unless specified in the task row.
2. Only Remote Operators undertaking management roles may initial a task to confirm completion.
3. The Master must only sign each section of tasks, upon completion of a whole section.
4. All tasks should be completed under the supervision of Remote Operators holding a management CoP.
5. Where emergencies, security incidents and failures of systems and equipment are set out in the below tables, drills and training exercises should be considered as appropriate situations to demonstrate competence.

RECORD OF TASKS			
Section 1.00	Monitor the safety of remote operations		
Task notation:	Task description:	Date completed	Confirming Officer's Initials
1.01	Map the ROC and vessel data communications network		
1.02	Maintain communications, including: .1 the use of appropriate systems to communicate between dispersed teams .2 consideration of the reliability and accuracy of information received in the ROC .3 the prioritisation of information to be communicated to dispersed teams .4 the status of ROC and vessel systems .5 the limitations of verbal/non-verbal communications in remote operations .6 with external stakeholders, support vessels, VTS, other vessels, offshore installations and shoreside personnel		
1.03	Identify any vessel functions, that include: .1 automated functions .2 autonomous functions		

	.3 machine learning functions		
	.4 digital support systems		
1.04	Intervene in automated/autonomous functions, following a system's departure from safe operating limits		
1.05	Monitor and implement safe hours of work and rest		
1.06	Apply resource management in the ROC, including: .1 planning and coordination .2 personnel assignment .3 time and resource constraints .4 prioritisation of tasks		
1.07	Apply industry guidelines and best practice during vessels operations		
1.08	Comply with the company SMS throughout operations		
1.09	Monitor compliance with international and national regulations and guidance, including: .1 certification and documentation requirements for vessels and a Remote Operation Centre (ROC) .2 regulatory and certification frameworks governing data communication systems and networks .3 occupational health and safety regulations and guidance		
1.10	Contribute to ROC/vessel audits and inspections		
1.11	Apply occupational health and safety standards and safe working practices		
1.12	Conduct risk assessment, permits to work and toolbox talks		
1.13	Contribute to ROC and vessel audits, surveys and schedules, including the maintenance of certification validity		
1.14	Ability to update and maintain logs and records, including:		

	.1 the status of connectivity between the ROC and vessel		
	.2 the status of vessel sensory systems		
	.3 the prevailing meteorological and environmental conditions		
	.4 the vessel's voyage, including navigational watchkeeping and power plant status		
	.5 vessel operations		
	.6 testing of ROC and vessel systems		
	.7 software version control and maintenance		
	.8 failures of ROC and vessel systems		
	.9 emergency situations, security incidents and drills		
Master's Signature:		Date:	

Section 2.00	Establish and monitor connectivity between the ROC and vessel		
Task notation:	Task description:	Date completed	Confirming Officer's Initials
2.01	Conduct a risk assessment regarding connectivity between ROC and vessel		
2.02	Assess the appropriate data communications system for the prevailing circumstances, conditions and vessel operations		
2.03	Establish and verify the data communication link between the ROC and vessel		
2.04	Identify and monitor any degradation of connectivity		
2.05	Explain the impact of channel bandwidth, signal power, latency and coverage on connectivity		
2.06	Identify factors impacting any degradation of connectivity		
2.07	Monitor the status of connectivity between ROC and vessel		
2.08	Apply troubleshooting procedures for faults and failures in data communication systems		
2.09	Coordinate the changeover between data communication systems and channels		
2.10	Identify vessel functions that are to be prioritised during conditions of degraded connectivity		
2.11	Verify that there is sufficient bandwidth for intended vessel operations		
2.12	Implement the prioritisation of vessel functions during conditions of degraded connectivity		
2.13	Follow data prioritisation procedures during periods of degraded connectivity		
2.14	Identify and explain the regulatory frameworks governing data communication systems		
2.15	Explain the actions to take following a sustained loss of connectivity		
Master's Signature:		Date:	

Section 3.00	Verify and monitor vessel control functions		
Task notation:	Task description:	Date completed	Confirming Officer's Initials
3.01	Verify remote control functions, prior to departure, arrival and vessel operations		
3.02	Take and give control between control positions		
3.03	Transfer control between ROCs		
3.04	Operate and monitor remote control systems		
3.05	Explain the contingencies in place following a loss of control systems		
3.06	Transfer control to a back-up ROC and conduct a handover		
Master's Signature:		Date:	

Section 4.00	Operate and monitor the sensory systems and equipment		
Task notation:	Task description:	Date completed	Confirming Officer's Initials
4.01	Map the sensory system interface		
4.02	Operate and adjust sensory systems and interfaces: .1 Prior to departure and arrival .2 During navigational watches .3 During vessel operations .4 During emergencies and security incidents		
4.03	Operate and monitor camera systems and equipment to maintain a navigational watch		
4.04	Operate and monitor camera systems during vessel operations		
4.05	Operate camera systems in conjunction with search lights to detect and identify objects		
4.06	Operate and monitor sound reception systems		
4.07	Operate and monitor motion sensors		
4.08	Use sensory systems to monitor and record meteorological and environmental conditions		
4.09	Adjust digital interfaces to ensure optimal configuration to build situational awareness		
Master's Signature:		Date:	

Section 5.00	IT/OT and cyber security systems		
Task notation:	Task description:	Date completed	Confirming Officer's Initials
5.01	Map the ROC and vessel network and identify any network segmentation		
5.02	Explain regulations and guidance on maritime cyber security		
5.03	Review the cyber security risk assessment		
5.04	Review the company's cyber security management plan(s)		
5.05	Implement the Company's cyber security policies and management plan, including: .1 the identification, assessment and review of risks and vulnerabilities .2 the management of physical access to ROC and vessel IT and OT infrastructure .3 approval processes that govern changes to ROC and vessel control systems .4 access control policies .5 Remote Operator training and familiarisation .6 regulatory requirements and industry guidance		
5.06	Explain a Remote Operator role during a cyber security incident		
5.07	Recognise cyber security alerts and alarms		
5.08	Implement access control policies		
5.09	Follow trouble shooting procedures		
5.10	Digitally lock and unlock control position workstations		
5.11	Implement software version control		
5.12	Coordinate ROC and vessel software updates		
5.13	Coordinate ROC and vessel software rollbacks		
5.14	Coordinate the maintenance of ROC and vessel IT and OT		
Master's Signature:		Date:	

Section 6.00		Navigation	
Task notation:	Task description:	Date completed	Confirming Officer's Initials
6.01	Incorporate additional considerations into the voyage plan, including:		
	.1 data communication systems and network: i) availability and coverage ii) reliability of connectivity iii) appropriate type of data communication system iv) appropriate frequency/channel v) permit and licencing framework vi) forecasting models vii) risk assessments regarding connectivity viii) environmental, meteorological and geographical factors		
	.2 control system settings and parameters		
	.3 contingencies and abort points		
	.4 identified safe states at each stage of the voyage		
	.5 compliance with regulatory requirements		
	.6 the application of forecasting models		
	.7 the safe operating limitations of the ROC and vessel		
	.8 the appropriate use of sensory systems at each stage of the voyage		
	.9 the scheduling and structuring of handovers and transfer of control		
	.10 methods of primary and secondary position fixing		
6.02	Implement contingencies and abort points		
6.03	Set up, monitor and adjust navigational control system settings and parameters as required by the voyage plan		
6.04	Coordinate ROC and vessel pre-departure checks		
6.05	Coordinate ROC and vessel pre-arrival checks		
6.06	Assess and verify information received in the ROC to correctly apply the COLREGS		
6.07	Assess and verify information received in the ROC to maintain a safe navigational watch		
6.08	Determine and allow for compass errors		
6.09	Monitor sensory systems to record environmental and meteorological conditions		
6.10	Set up sensory systems and interfaces as required by the voyage plan		

6.11	Monitor sensory systems throughout the voyage and adjust as required to maintain situational awareness		
6.12	Monitor compliance with the data communication system licencing and permit framework throughout a navigational watch		
6.13	Coordinate the preparation of the ROC and vessel for departure from port		
6.14	Coordinate the preparation of the ROC and vessel for arrival to port		
6.15	Explain the precautions to be taken upon encountering heavy weather conditions		
6.16	Respond to varying conditions of connectivity during a navigational watch		
6.17	Account for latency and delays when plotting the vessel's real-time position		
6.18	Take action in response to encountering restricted visibility		
6.19	Conduct a navigational watch handover		
6.20	Conduct a navigational watch handover between Remote Operators at different control positions		
6.21	Monitor the vessel, once it has entered a safe state, including:		
6.22	.1 position		
6.23	.2 proximity to navigational hazards		
6.24	.3 proximity to other vessels		
6.25	.4 data communication systems		
Master's Signature:		Date:	

Section 7.00 Ship Handling			
Task notation:	Task description:	Date completed	Confirming Officer's Initials
7.01	Set up steering control system settings		
7.02	Test and verify steering and propulsion systems		
7.03	Adjust steering control system settings, taking into account the prevailing meteorological and environmental conditions		
7.04	Change between different steering system modes		
7.05	Assess the impact of degraded connectivity on manoeuvrability		
7.06	Assess the impact of latency on manoeuvrability		
7.07	Operate and monitor inertial sensory systems to determine vessel motion		
7.08	Identify and explain precautions to be taken when remotely manoeuvring: .1 in close proximity to other vessels and navigational hazards .2 offshore structures .3 during anchoring operations .4 in port .5 under conditions of degraded connectivity .6 during berthing operations		
7.09	Operate remote control steering and propulsion systems in accordance with their technical specifications and safe operating limits		
7.10	Manoeuvre the vessel within visual line of sight, including:		
	.1 maintaining heading control at slow speed		
	.2 for collision avoidance		
	.3 maintaining heading control by use of relative bearings and terrestrial reference points		
	.4 in narrow channels and fairways		
	.5 in restricted visibility		
	.6 during SAR /MOB incidents		

	.7 during berthing operations		
	.8 in preparation to be towed		
	.9 during anchoring operations		
7.11	Manoeuvre the vessel beyond visual line of sight, including:		
	.1 maintaining heading control at slow speed		
	.2 for collision avoidance		
	.3 maintaining heading control by use of relative bearings and terrestrial reference points		
	.4 in narrow channels and fairways		
	.5 in restricted visibility		
	.6 during SAR /MOB incidents		
	.7 during berthing operations		
	.8 in preparation to be towed		
7.12	Changeover to back-up steering and propulsion systems and manoeuvre the vessel		
7.13	Conduct the vessel's emergency stop manoeuvre(s)		
Master's Signature:		Date:	

Section 8.00	ROC and vessel maintenance and repair		
Task notation:	Task description:	Date completed	Confirming Officer's Initials
8.01	Coordinate risk assessments		
8.02	Coordinate permits to work		
8.03	Coordinate toolbox talks		
8.04	Coordinate and monitor safe working practices during periods of maintenance and repair		
8.05	Explain the procedures for implementing and monitoring the isolation of systems between remote and local personnel		
8.06	Implement and monitor the isolation of ROC and vessel systems		
8.07	Coordinate ROC and vessel's planned maintenance activities with engineers and maintenance teams		
8.08	Explain occupational health and safety regulations applicable to Remote Operators, working at a ROC, located on land		
8.09	Explain how maintenance schedules are implemented for unmanned vessels		
8.10	Explain the type and frequency of maintenance work, including: .1 ROC systems, including auxiliaries .2 vessel systems and equipment .3 software maintenance .4 IT/IT maintenance .5 data communication system testing		
8.11	Test and verify the function of vessel systems, prior to operation		
8.12	Identify the maintenance required of data communication systems, including any impacts on vessel navigation/operations		
Master's Signature:		Date:	

Section 9.00	Vessel Operations		
Task notation:	Task description:	Date completed	Confirming Officer's Initials
9.01	Coordinate risk assessments, permits to work and toolbox talks		
9.02	Implement safe working practices during vessel operations		
9.03	Conduct pre-operation checks on ROC and vessel systems and equipment		
9.04	Operate vessel speaker systems		
9.05	Explain the function of any automated cargo systems		
9.06	Coordinate the loading of cargo		
9.07	Monitor the safe stowage and securing of cargo		
9.08	Coordinate the discharge of cargo		
9.09	Explain the precautions to be taken by Remote Operators whilst bunkering		
9.10	Coordinate and monitor bunkering operations		
9.11	Coordinate survey operations, including:		
	.1 roles and responsibilities of personnel during sub-sea/ geospatial survey operations		
	.2 impacts on manoeuvring during subsea/ geospatial survey operations		
	.3 working with winches and payloads		
	.4 collision avoidance during remote survey operations		
	.5 explain factors to consider when working with tows, winches and payload systems		
9.12	Coordinate towing operations, including:		
	.1 towing arrangements		
	.2 vessel recovery towing procedures		
	.3 towing unmanned vessels during salvage operations		
	.4 make the necessary arrangements to prepare an unmanned vessel to be towed		
9.13	Control vessel's trim and stability, including:		
	.1 explain the data inputs necessary for remote control stability systems		
	.2 explain how damage stability procedures are implemented remotely		
9.14	Coordinate and monitor anchoring operations, including:		
	.1 explain operational considerations for anchoring unmanned vessels		
	.2 explain the contingencies in place to respond to fouled or dragging anchor for unmanned vessels		
	.3 conduct anchoring operations		
	.4 consideration for remote manoeuvring during anchoring operations		
9.15	Coordinate and monitor mooring operations, including:		

	.1 maintaining communications with mooring teams		
	.2 explain the contingencies in place to respond to parted mooring lines		
	.3 conduct mooring operations		
	.4 explain additional factors to consider during remote mooring operations		
9.16	Monitor safe access, as required		
9.17	Maintain a watch in port, as required		
9.18	Monitor the location of any persons on board the vessel		
9.19	Explain the function of automated functions in radio communications equipment		
9.20	Maintain a radio watch		
9.21	Coordinate the response to the vessel entering into a safe state, including:		
	.1 identify when a vessel has entered into a safe state		
	.2 explain the functions of a safe state		
	.3 enter the vessel into a safe state		
	.4 monitor the vessel upon entering into a safe state		
	.5 recover a vessel from a safe state		
Master's Signature:		Date:	

Section 10.0		Failures of ROC and vessel systems	
Task notation:	Task description:	Date completed	Confirming Officer's Initials
10.01	Coordinate the response to failures in ROC and vessel systems and equipment		
10.02	Apply FMEA in response to the failure of ROC and vessels systems		
10.03	Identify systems and equipment, the failure of which may result in hazardous situations		
10.04	Identify and explain automated functions that respond to failures of ROC and vessel systems		
10.05	Correctly recognise and respond to alarms and alerts		
10.06	Inform engineers and maintenance teams upon detecting failures in ROC or vessels systems		
10.07	Operate emergency stops		
10.08	Take initial action and coordinate the response to the failure of ROC systems in drills, including:		
	.1 IT/OT systems		
	.2 power supply and ancillary systems		
	.3 data communication systems		
	.4 radio-telephony equipment		
	.5 remote control systems		
10.09	Take initial action and coordinate the response to the failure of vessels systems in drills, including:		
	.1 data communication systems		
	.2 sensory systems		
	.3 radio communications		
	.4 steering and propulsion systems		
	.5 navigational equipment		
	.6 IT/OT systems		
	.7 power plan and auxiliary systems		
	.8 stability and ballasting systems		
10.10	Explain the procedure(s) to recover the vessel		
10.11	Coordinate vessel recovery operations		
Master's Signature:		Date:	

Section 11.00	ROC and Vessel Security		
Task notation:	Task description:	Date completed	Confirming Officer's Initials
11.01	Explain how security arrangements are implemented on unmanned vessels		
11.02	Follow SMS procedures to maintain and monitor the ROC and vessel's security		
11.03	Follow SMS procedures to respond to ROC and vessel security incidents		
11.04	Correctly recognise and respond to alarms and alerts		
11.05	Maintain communications across departments during security incidents		
11.06	Take initial action and coordinate the response during a drill to a security incident at the ROC, including:		
	.1 physical attack on the ROC or associated facilities		
	.2 cyber security incident		
	.3 bomb threat		
	.4 civil unrest		
	.5 physical trespass		
	.6 any other incident that requires the evacuation from the control position or ROC		
11.07	Take initial action and coordinate the response during a drill to a security incident at the vessel, including:		
	.1 piracy		
	.2 cyber security incident		
	.3 bomb threats		
	.4 unauthorised remote control of vessel systems		
	.5 stowaways		
	6 spoofing and jamming		
Master's Signature:		Date:	

Section 12.00	ROC and Vessel Emergency Response		
Task notation:	Task description:	Date completed	Confirming Officer's Initials
12.01	Explain how incident management is coordinated across dispersed teams		
12.02	Follow the SMS when responding to ROC and vessel emergencies		
12.03	Coordinate the response to emergencies at the ROC, including:		
	.1 fire		
	.2 loss of control		
	.3 medical emergency		
	.4 any other incident that requires the evacuation from the ROC or control position		
12.04	Coordinate the response to emergencies at the vessel during a drill, including:		
	.1 fire		
	.2 flooding		
	.3 loss of steering or propulsion		
	.4 grounding		
	.5 Person detected in the water/MOB		
	.6 collision/allision		
	.7 loss of control		
	.8 pollution incident		
	.9 medical emergency (when persons have boarded)		
Master's Signature:		Date:	

Annex E – Phase II Master’s Testimonial

Vessel:

IMO/Official Number:

Master’s Testimonial *(for completion by the Master of last vessel)*

I verify that

(Remote Operator’s name)

Has completed the Remote Operators training record book to my satisfaction and has demonstrated that, my opinion, that they are capable of undertaking watchkeeping duties as an Officer in Charge of a Navigational Watch, in their capacity as a Remote Operator.

I confirm that they have:

- .1 demonstrated an adequate knowledge of remote operations
- .2 understood the underlying principles of remote operations
- .3 taken control of the vessel in normal operating conditions
- .4 responded appropriately to emergencies, security incidents and failures of systems, including participating in drills
- .5 understood operation procedures in the ROC
- .6 undertaken navigational watchkeeping duties
- .7 demonstrated safe working practices and communication skills required for safe remote operations

Vessel Stamp

Master’s Name:

Date:

Master’s Signature:

Master’s CoC Number:

Country of Issue:

TRB holders’ name:

TRB holder’s Signature:

Date:

CoC number:

Country of Issue:

Annex F – Phase II Company Confirmation

Company Address:

Company Confirmation Letter

I verify that

(Remote Operator's name)

Has completed the Remote Operators training record book and has accumulated

(insert hours) hours of watchkeeping hours over (insert days) days of in-service experience

I confirm that:

- .1 the Remote Operator has performed their duty to a satisfactory level of professionalism and safety
- .2 the Remote Operator is sufficiently competent and experienced to progress to Phase III of their training programme.
- .3 this TRB is an accurate and true account of their record of service and completion of tasks

Company Official's Name:

Date:

Company Official's Signature

Date:

END



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