INTERTANKO

INTERTANKO Gap Analysis and Mapping of MESQAC 2010 v MESQAC 2017 (Rev.1)

TWENTY 17

Gap Analysis and Mapping of MESQAC 2010 v MESQAC 2017 (Rev.1)

Introduction

The MARINE ENVIRONMENTAL, SAFETY and QUALITY ASSURANCE CRITERIA (MESQAC) provides vessel operators with an understanding of the marine environmental, safety and quality assurance expectations of third party vessels to be considered for ExxonMobil affiliate service.

The 2010 edition of these criteria has been revised by IMT and INTERTANKO participated in this revision by providing IMT with comments and suggestions. The 2017 edition was released to the industry in July 2017 and International Marine Transportation Pte Ltd. (IMT) has, since then, issued a revision to the 2017 edition.

This edition (MESQAC 2017-Rev.1) also supersedes all previous editions of MESQAC relevant to International Ocean and/or seagoing vessels.

We are now pleased to provide our members with a Gap Analysis and Mapping of MESQAC 2010 v MESQAC 2017(Rev.1) where the changes made in the latest edition of MESQAC have been mapped to the 2010 edition and the differences between these versions have been highlighted.

This Gap Analysis has been formatted to draw attention to the changes in MESQAC 2017 Rev.1. The text from page 9 through to page 15 of this document is a direct reproduction of MESQAC 2017 Rev.1. INTERTANKO has highlighted the changes by **colouring the new text in brown**. MESQAC Sections A to V (pages 16 to 63 of this document) have been tabulated by INTERTANKO, **with brown text** highlighting the gaps and with two additional columns added by INTERTANKO to advise of the Gap and Mapping between the 2010 and 2017 versions of MESQAC. This approach continues in the Appendix from pages 64 to 67.

We hope that this gap analysis and mapping document will guide and assist our Members in assessing their levels of compliance with the criteria and, as IMT will implement compliance with MESQAC from 31December 2017, in ensuring proper declaration of such compliance.

There are twenty one expectations that have moved from '**Strongly Preferred**' to '**MUST**' and there is one expectation that moved from '**MUST**' to '**Strongly Preferred**'. The first few pages of this document provide a summary of these changes.

The purpose of this document is to enhance the understanding of the marine environmental, safety and quality assurance criteria (MESQAC) and expectations of third party vessels that are to be considered for ExxonMobil affiliate service.

We urge Members to familiarise themselves with the information contained in this booklet and ensure that vessels untended for ExxonMobil affiliate service meet or exceed the 'MUST' criteria.

All operators are required to acknowledge vessel compliance with MESQAC criteria by submitting the MESQAC declaration attached as Appendix C to the MESQAC.

The compliance declaration must be returned to IMT at **msscreen@exxonmobil.com** no later than 31 December 2017.

Summary

In laying out this Gap Analysis and Mapping document we have, for ease of reference, highlighted all changes in **brown**.

In addition, a summary of changes have been laid out in a tabulated format which has all the changes and important information summarised for each section.

It is important to note that IMT may request to carry out a verification review of the TMSA and MESQAC declarations on board one or more of the company's vessels.

Furthermore there are new contact details for incident notification and for when there are changes of owners or technical operators. With regard to incident notifications, it is worth noting IMT's minimum expectations from an incident investigation when closing incidents.

Behaviour Based Safety (BBS) Programs are stressed as being "**strongly preferred**" and there is a focus on the management of changes of crew at management level.

In this revision there are 56 new criteria and 40 criteria have been removed, 21 have been moved from "**strongly preferred**" to "**MUST**". In contrast only 1 has been moved from **MUST** to **strongly preferred**.

The expectations that have been deleted include Section T for Combination carriers which was completely removed and some from Section D for the carriage of navigational equipment.

Members should note that when completing the MESQAC declaration for **MUST** items which they plan to address but which require a lead time or a dry dock, they should:

1. Mark the listed vessels as compliant (Yes) along with a reference to which criteria requires lead time or dry-dock.

2. Include all interim preventive, mitigative or contingency measures taken to address each case.

3. Include an estimate of when such vessels are expected to be fully compliant as per Appendix C (the MESQAC Compliance Declaration).

Summary of the Gap Analysis and Mapping of MESQAC 2010 vs 2017 (Rev.1)

INDEX		SUMMARY
LIST OF ABBREVIATIONS	Sheet 1	Whole section is New
INTRODUCTION	Page 7	Minor changes (in brown colour) - Notice is New
SUITABILITY TO CARRY EXXONMOBIL AFFILIATE CARGOES	Page 8	No change
CHANGE OF OWNER AND/OR TECHNICAL OPERATOR	Page 8	Minor changes (in brown colour) Please take note of IHS & IMT new email id for the notification.
TANKER MANAGEMENT SELF ASSESSMENT (TMSA)	Page 8	Minor changes (in brown colour) IMT may carry out an on-board TMSA review.
THIRD PARTY VESSEL INSPECTIONS	Page 9	Minor changes (in brown colour) IMT inspection is not an approval of the vessel for ExxonMobil affiliate service.
INCIDENT NOTIFICATION AND INVESTIGATION	Page 9	Minor changes (in brown colour) - Delayed or not reporting may affect future service eligibility. - Incident investigation and closure (New) - Review of incident investigation reports (New)
MARINE ENVIRONMENTAL, SAFETY AND QUALITY ASSURANCE CRITERIAS	Respective sections	
SECTION A GENERAL INFORMATION	Sect A	Minor changes (in brown colour) & 2 new expectations - Interim compliance for all MUST items - IMT on-board physical check.
SECTION B CREW MANAGEMENT	Sect B	Minor changes (in brown colour) & 2 new expectations - Cargo handling simulator course - Behaviour based safety program In addition, there are 3 new expectations for term chartered tonnage. B3 amended as per Rev.1

INDEX		SUMMARY
SECTION C CREW MATRIX REQUIREMENTS	Sect C	Minor changes (in brown colour) - Crew change for seniors should be staggered. - Crew matrix updated and validated not more than two months. In addition, senior officer must be briefed by operator prior joining for term chartered tonnage.
SECTION D NAVIGATION	Sect D	Minor changes (in brown colour) & 4 new expectations - Navigational assessment by master - Navigational audit by shore - Alarms management - Dual axis Doppler speed log for vessel >160k DWT In addition, there are 3 new expectations for term chartered tonnage. D16 amended as per Rev.1
SECTION E SAFETY AND SECURITY MANAGEMENT	Sect E	Minor changes (in brown colour) & 10 new expectations - Permit to work - Stop work policy - Fixed gas detection system - Security measures - Security reporting - Security planning charts - Designated safe muster point - High intensity searchlights - Citadel - Independent tracking device In addition, there are 3 new expectations for term chartered tonnage. E6, E7, E19 and E3a amended as per Rev.1
SECTION F POLLUTION PREVENTION	Sect F	Minor changes (in brown colour) & 3 new expectations - Ballast water treatment systems - Cargo and ballast overboard pipelines - Control of sulphur emissions In addition, there are 2 new expectations for term chartered tonnage.
SECTION G STRUCTURAL CONDITION	Sect G	Minor changes (in brown colour) & 2 new expectations - No extension on Special Survey - No substantial corrosion or doubler plates.

INDEX		SUMMARY
SECTION H CARGO AND BALLAST SYSTEMS	Sect H	Minor changes (in brown colour) & 8 new expectations - Centralized CCR (previously under term chartered tonnage) - Portable sonic measuring tapes - Verification by two individuals - Operational high-level alarms - Cargo hose standard - Cargo hose inspection - Cargo hose testing - Cargo hose retirement age In addition, there is 1 new expectation for term chartered tonnage.
SECTION J INERT GAS AND CRUDE OIL WASHING SYSTEMS	Sect J	Minor changes (in brown colour) No additional, instead 2 expectations were removed from previous version.
SECTION K MOORING	Sect K	Minor changes (in brown colour) & 1 new expectation - All buoy berths
SECTION L COMMUNICATIONS	Sect L	Minor changes (in brown colour) & 2 new expectations - Satellite communication equipment. - Procedures for the use of social media and mobile phones.
SECTION M ENGINE ROOM AND STEERING GEAR	Sect M	Minor changes (in brown colour) & 12 new expectations - Main engine manoeuvring and controls training for C/E & 2/E - Class approved PMS (previously under term chartered tonnage) - Weekly test program - Black out procedure - E/R manning criteria - Understanding critical alarms and trips - Maintaining critical alarms and trips - Water content meter check - Defect reporting system - Standby machinery testing - Emergency and critical equipment weekly testing - Intrinsically safe and explosion proof equipment maintenance
SECTION N GENERAL APPEARANCE AND CONDITION	Sect N	Minor changes (in brown colour)

INDEX		SUMMARY
SECTION P SHIP TO SHIP TRANSFER SUPPLEMENT	Sect P	Minor changes (in brown colour) & 1 new expectation - Risk assessment and approval
SECTION Q ICE OPERATIONS	Sect Q	Minor changes (in brown colour)
SECTION R CHEMICAL CARRIER SUPPLEMENT	Sect R	Minor changes (in brown colour) & 3 new expectations - Closed process samplers - Tank cleaning operations - Heating system isolation
SECTION S GAS CARRIER SUPPLEMENT	Sect S	Minor changes (in brown colour) & 3 new expectations - Cargo transfer systems annual testing - Personal toxic gas meters - LPG and chemical gas carriers cargo valves and sampling procedures
SECTION T COMBINATION CARRIER SUPPLEMENT	Sect T	This section has been completely removed
SECTION U ENERGY EFFICIENCY AND FUEL MANAGEMENT	Sect U	Expectations in this section are only for term chartered tonnage. There is new expectation for Vessel Performance Monitoring System.
SECTION V GAS-FUELLED VESSELS SUPPLEMENT	Sect V	This is a new section and only for term chartered tonnage. There are 2 new expectations namely on bunkering procedures and ESD.
APPENDIX A ADDITIONAL CRITERIA FOR TERM CHARTERED TONNAGE	Respective sections	Additional criteria for term chartered tonnage has been addressed in the above relevant sections.
APPENDIX B DRUG AND ALCOHOL DECLARATION		Minor changes (in brown colour)
APPENDIX C MESQAC COMPLIANCE DECLARATION		Minor changes (in brown colour) In the declaration, Operator to declare the MUST criteria not met and expected date.

There are 21 expectations that moved from Strongly Preferred to MUST.

There is 1 expectation that moved from MUST to Strongly Preferred.

LIST OF ABBREVIATIONS

ABM	All Buoy Mooring
ARPA	Automatic Radar Plotting Aid
AUS	Automatic Unloading System
BCH	Code for the Construction and Equipment of ships carrying Dangerous Chemicals in Bulk
BNWAS	Bridge Navigational Watch Alarm System
CAP	Condition Assessment Program
CCR	Cargo Control Room
CDI	Chemical Distribution Institute
COLREGS	Collision Regulations
COW	Crude Oil washing
CSR	Common Structural Rules
DH	Double Hull
DRS	Defect Reporting System
DWT	Deadweight (Summer Deadweight in Metric Tons)
ECDIS	Electronic Chart Display and Information System
ECM	Energy Conservation Measures
ECS	Electronic Chart System
EEOI	Energy Efficiency Operational Index
ESD	Emergency Shut Down
ESP	Enhanced Survey Program
ETA	Emergency Towing Arrangement
GMDSS	Global Maritime Distress and Safety System
GOM	Gulf of Mexico
GPS	Global Positioning System
H2S	Hydrogen Sulfide
HFO	Heavy Fuel Oil
IBC	International Bulk Chemical Code
ICS	International Chamber of Shipping
IFC	Information Fusion Centre
IGC	International Code for the Construction and Equipment of ships carrying Dangerous Chemicals in Bulk
IGS	Inert Gas System
IMO	International Maritime Organization
IMT	International Marine Transportation Ltd
ISF	International Shipping Federation
ISGOTT	The International Safety Guide for Oil Tankers and Terminals
ISM	International Safety Management (ISM) Code
ISPS	The International Ship and Port Facility Security (ISPS) Code
LNG	Liquefied Natural Gas
LPG	Liquefied Petroleum Gas
LR	Lloyd's Register
MARPOL	International Convention for the Prevention of Pollution from Ships
MBM	Multi Buoy Mooring
MEG	Mooring Equipment Guidelines
MESQAC	Marine Environmental, Safety and Quality Assurance Criteria
MGO	Marine Gas Oil
MLC	Maritime Labour Convention
MSC-HOA	Maritime Security Centre – Horn of Africa
MSDS	Material Safety Data Sheet
MTISC-GoG	Maritime Trade Information Sharing Centre – Gulf of Guinea
MWP	Maximum Working Pressure
OBO	Oil Bulk Ore

OCIMF	Oil Companies International Marine Forum
ODME	Oil Discharge Monitoring Equipment
OOW	Officer of the Watch
OPRC	Oil Pollution Preparedness, Response and Coordination Convention
OWS	Oily Water Separator
P/V	Pressure/Vacuum
PMS	Planned Maintenance System
PPE	Personal Protective Equipment
PTW	Permit to work System
RPM	Revolutions Per Minute
SEEMP	Ship Energy Efficiency Management Plan
SIGTTO	The Society of International Gas Tanker and Terminal Operators
SIRE	Ship Inspection Report Program
SMS	Safety Management System
SOLAS	International Convention for the Safety of Life at Sea
SOPEP	Shipboard Oil Pollution Emergency Plan
SPM	Single Point Mooring
SRM	SeaRiver Maritime Inc
SSP	Ship Security Plan
STCW	IMO Standard of Training, Certification and Watchkeeping for Seafarers
STS	Ship to Ship Operation
S-VDR	Simplified Voyage Data Recorder
SWL	Safe Working Load
TMSA	Tanker Management Self-Assessment
UKC	Under Keel Clearance
UKMTO	United Kingdom Maritime Trade Operations
UMS	Unmanned Machinery Spaces
USCG	United State Coast Guard
VDR	Voyage Data Recorder
VPMS	Vessel Performance Monitoring System
VPQ	Vessel Particular Questionnaire
VRP	Vessel Response Plan

Introduction

This document has been produced by **International Marine Transportation (IMT) Singapore Pte Ltd.,** which jointly uses a standard methodology with International Marine Transportation Limited and SeaRiver Maritime Inc. to provide vetting services to all ExxonMobil affiliates engaged in marine transportation using third party vessels. This document is referred to in short as **MESQAC** and applies to International Ocean/Seagoing tanker vessels in ExxonMobil affiliate service, regardless of deadweight or vessel type and henceforth referred to either as 'third party vessels' or, if appropriate, just simply 'vessels'.

SeaRiver Maritime (SRM) assesses the suitability of ALL third party vessels for conducting lightering operations in the US Gulf of Mexico while on ExxonMobil service.

The purpose of this document is to provide vessel operators with an understanding of the marine environmental, safety and quality assurance expectations of third party vessels to be considered for ExxonMobil affiliate service. Please note that, in this context, 'service' means carrying ExxonMobil affiliate title cargo, chartered by ExxonMobil affiliates, calling at ExxonMobil affiliate facilities, or carrying cargo or calling at facilities in which ExxonMobil affiliates have a joint venture interest. In addition, 'vessel operator' refers to the technical manager having day-to-day oversight of the technical management of the fleet vessels and their Safety Management Systems.

Third party vessels not meeting environmental and safety expectations or criteria described as '**MUST**' may not be considered eligible for ExxonMobil affiliate service. If meeting certain of these expectations or criteria involves gas freeing or dry docking the vessel, or requires long lead times, a limited period for further consideration of the vessel may be granted upon receipt of written confirmation that actions will be taken at the earliest opportunity, and if documented mitigating procedures are in place. Vessels not meeting environmental and safety expectations or criteria described as '**Strongly Preferred**' may be disadvantaged in the selection process versus other vessels meeting those requirements.

Third party vessels **MUST** be in full compliance with all applicable international conventions, laws, regulations and other requirements of the country of vessel registry, and of the countries, states, and/or port authorities of the ports and/or places, including facilities, to which the vessel may be ordered while in ExxonMobil affiliate service, and/or the applicable regulations or requirements of any terminals or facilities in such ports or places where the vessel will load or discharge. Vessels **MUST** have on-board, all certificates, records or other documents required by the aforesaid conventions, laws, regulations and/or requirements.

Vessel operators MUST familiarize themselves with information regarding vessel inspections contained in MESQAC. It is the responsibility of the vessel operator to ensure their vessels meet or exceed MESQAC expectations and criteria and can demonstrate compliance through an inspection report or on-board MESQAC checks. Vessel operators need to be aware of the potential vetting consequences and implications of not meeting 'MUST' or 'Strongly Preferred' expectations or criteria.

Only currently valid ship inspection reports held in databases administered by either the Oil Companies International Marine Forum (OCIMF) or the Chemical Distribution Institute (CDI) will be evaluated.

It is **Strongly Preferred** that SIRE/CDI reports are no more than six months old.

Questions or comments regarding MESQAC should be addressed to msscreen@exxonmobil.com

Additional Marine Environmental, Safety, and Quality Assurance Criteria for vessels in ExxonMobil affiliate Term Charter service are set out in Appendix A to this publication.

Notice:

1. Throughout this document, unless otherwise stated, all references to industry publications, guidelines, recommendations and information papers refer to the latest edition available. Similarly, all references to governmental international/national conventions, guidelines, rules, regulations, resolutions and standards refer to those currently in date/force and applicable.
2. IMT does not endorse or approve any vendor's equipment, design, and systems or make any representations regarding compliance of any vessel equipment, design and systems with MESQAC requirements
3. The MESQAC sets out the criteria by which IMT and its affiliates provide vetting services. It is not intended to provide readers with, and should not be relied upon by readers as, definitive or exhaustive guidance on the safe or proper operation of ships.

SUITABILITY TO CARRY EXXONMOBIL AFFILIATE CARGOES

Operators of third party vessels are reminded that vessels are not pre-approved for ExxonMobil affiliate service. All vessels are evaluated using the latest information available each time they are nominated for ExxonMobil service, or when calling at terminals or facilities where ExxonMobil has an interest.

CHANGE OF OWNER AND/OR TECHNICAL OPERATOR

Data for all vessels, including when taking delivery of new vessels, vessels that are sold, assigned a new technical operator, or change classification society, is used in the vetting process.

IMT automatically downloads vessel- and operator-specific data from IHS Fairplay. Vessel operators are strongly advised to promptly notify IHS Fairplay of any of the above-mentioned changes by contacting IHS Fairplay at the following email address: shipsinservice@ihs.com

Vessel operators should also directly inform IMT of all above-mentioned changes including advance notice of changes to the email address: Msowner@exxonmobil.com

TANKER MANAGEMENT SELF ASSESSMENT (TMSA)

The management and operation of vessels within a culture of safety and environmental excellence has been formalized with the implementation of the International Safety Management (ISM) Code. OCIMF's TMSA program builds upon the ISM Code and is used as a tool to help vessel operators assess, measure and improve their Safety Management Systems.
The TMSA program encourages vessel operators to assess their Safety Management Systems against listed key performance indicators and provides recognized best practice guidance for each indicator.

Vessel operators are assessed on factors which include the effectiveness of their Safety Management System, fleet safety, and environmental performance. When submitting TMSAs to OCIMF, vessel operators must select 'International Marine Transportation' from the report recipient list in order to allow IMT vetting organizations to be able to review the operator's TMSA submission.

In order for a vessel to be considered for ExxonMobil affiliate service, the vessel's operator **MUST** have submitted a TMSA with a 'created date' within the past twelve months and have selected 'International Marine Transportation' as a report recipient. Vessels operated by a company which has not submitted a valid TMSA or has not achieved Stage 1 compliance may not be acceptable for ExxonMobil affiliate service. Further updated TMSA submissions should be submitted via **www.ocimf-tmsa.com** whenever a vessel operator considers it has made material changes to its Safety Management System. At the minimum, a vessel operator should make a submission at intervals not exceeding twelve months. By doing this, the vessel operator is able to demonstrate that its management has undertaken a formal review of its Safety Management System.

It is expected that a vessel operator's entire TMSA submission will have been reviewed and endorsed by its senior management as an accurate assessment of the vessel operator's current Safety Management System.

IMT may periodically request to visit a vessel operator's offices with the primary aim of making an assessment as to the accuracy of an operator's most recent TMSA submission. These visits are referred to as **TMSA Review Meetings** and use standard audit techniques to verify the accuracy of the TMSA submission and gauge the processes and procedures put in place to achieve the expectations of the sampled element.

A structured and systematic approach is taken when conducting a TMSA review. To facilitate this, the IMT review team uses a proprietary document and examines the vessel operator's most recent TMSA submission. It is important to note that a TMSA Review Meeting is not an audit and no written report or documented non-conformances will be issued. Vessel operators will, however, be provided with verbal feedback during and at the end of the review and should use this opportunity to seek verbal clarification and understanding of IMT's interpretation of TMSA key performance indicators.

Following a TMSA Review Meeting, a vessel operator may be asked to re-assess its TMSA submission and re-submit the TMSA at the earliest opportunity. It is important that the vessel operator undertakes this as soon as is reasonably possible. IMT may also require the vessel operator to submit evidence supporting closure of an observation or misalignment noted during the TMSA review.

For further details of the OCIMF TMSA Program, go to **www.ocimf-tmsa.com**.

For assistance with any TMSA issues concerning ExxonMobil affiliate vetting please email: MSOwner@exxonmobil.com

Besides the TMSA review of management system in vessel operator's office, IMT may also request to carry out an on-board TMSA review on one or more of their fleet vessels. The scope of an on-board TMSA review is limited to the OCIMF TMSA content applicable to shipboard operations. The purpose of the on-board TMSA is to verify that there is effective implementation of the vessel operators Safety Management System throughout the operator's organization, including on-board the vessels.

THIRD PARTY VESSEL INSPECTIONS

Evaluations of inspection reports of third party vessels are conducted in order to ascertain whether these vessels meet applicable IMT expectations. SIRE and CDI reports will be used.

Third party vessel inspections, other than a vessel Term Chartered to an ExxonMobil affiliate, can be requested by contacting IMT via msinspect@exxonmobil.com;

An inspection request for a third party vessel term chartered to an ExxonMobil affiliate should be sent at msterm@exxonmobil.com

All SIRE inspections arranged by IMT will be undertaken by OCIMF accredited inspectors. Inspections are arranged through, and with the permission of, the vessel operator. It is necessary that the vessel operator advises the vessel Master and the appropriate port agent of inspection arrangements. On- boarding the vessel, inspectors are instructed to report to the Master, or the Officer of the Watch (OOW) if the Master is not available.

Inspections arranged by IMT will be conducted in accordance with the OCIMF guidelines. On completion of the inspection, and prior to departing the vessel, inspectors will conduct a verbal close- out meeting to summarize findings with the Master or the Master's representative. Master or the Master's representatives are encouraged to repeat the findings to the inspector to eliminate any doubts in the understanding during the verbal close out.

Please note that following an inspection, the vessel operator **MUST** respond to OCIMF / CDI explaining the cause and corrective actions to address the observations identified in the report. Failure to provide satisfactory evidence that observations have been addressed may result in the vessel being considered unsuitable for ExxonMobil affiliate service. Please note providing a satisfactory response or evidence that observations have been addressed does not guarantee the vessel being considered suitable for ExxonMobil affiliate service.

INSPECTION SYSTEMS

IMT supports the use of the OCIMF SIRE uniform vessel inspection procedure and the CDI inspection system. The vessel operators **MUST** understand these industry vessel inspection formats and familiarize themselves with the associated procedures and advise their Masters accordingly. It is required that an up-to-date Vessel Particulars Questionnaire (VPQ) be available in the SIRE/CDI systems.

INSPECTION RESULTS

Failure to present the vessel for inspection in good condition or appearance will be regarded as evidence of a failure of the vessel and the vessel operator's management systems. In this case, the vessel may not be considered for use following completion of corrective actions and the vessel operator's eligibility for ExxonMobil affiliate service may also be adversely affected. Once a SIRE/CDI inspection has been carried out, the vessel operator **MUST** respond to the observations raised in the SIRE/CDI inspection report within the timeframe stipulated by OCIMF/CDI.
Please note that the satisfactory completion of an inspection conducted by IMT does not imply and should not be construed as an approval of the vessel for ExxonMobil affiliate service.

INCIDENT NOTIFICATION AND INVESTIGATION

ExxonMobil charter party agreements and/or voyage orders contain specific instructions with regard to incident notification requirements and reporting procedures.

As stipulated in the charter party agreements, vessels on charter to an ExxonMobil affiliate may be subject to an investigation by a representative of the vetting organizations to ascertain the cause of any incidents. A vessel's Master or vessel operator is required to promptly notify IMT if the vessel is involved in any incident, accident or casualty in accordance with the charter party and/or voyage orders as reflected in the list below, which is also provided for guidance to vessels not on charter to an ExxonMobil affiliate (see guidance below):

DEFINITION OF INCIDENT

Vessels involved in an incident may include, but are not limited to:

- Fatality or work-related injury resulting in lost time incidents;
- Collision or contact with other vessels;
- Grounding or bottom touch;
- Pollution, including accidental or uncontrolled release of cargo vapor or gas releases irrespective of the quantity released;
- Oil spill on deck or other locations on-board including release of cargo, bunker, lube oil, or hydraulic oil etc.;
- Fire or explosion;
- Cargo system or transfer hose or arm 'pressing' or over pressurization due to inadvertent valve closure ashore or on-board;
- Mooring related incident including rope parting, mooring equipment damage, etc.;
- Anchoring incidents including anchor dragging, anchor fouling, anchor loss etc.
- Structural damage including indentations, internal/external cracks etc.;
- Allison (contact) with fixed objects including jetties, SBM, SPM, locks, bridges, buoys, ice etc.;
- Failure or breakdown of vessel's equipment including, but not limited to, main and auxiliary engine or cargo handling machinery and navigational equipment;
- Drug and alcohol policy violation;
- Cargo loss, contamination, or reaction (e.g.: solidifying, etc.);
- Port state detentions;
- Seizure or arrest;
- Security related incidents including attempted and actual piracy or robbery attacks, security breaches etc.; and
- Media coverage.

INCIDENT NOTIFICATION

Vessels NOT on ExxonMobil affiliate charter

Incidents as defined above which occur whilst the vessel is not on ExxonMobil affiliate charter **MUST** be promptly reported to IMT at incident@exxonmobil.com or via the OCIMF vessel incident repository linked to the SIRE Database, as incident closure is part of the vetting approval process.

Vessels on ExxonMobil affiliate charter

Incidents as defined above which occur whilst the vessel is on ExxonMobil affiliate charter **MUST** be promptly sent in line with the notification procedures detailed within the charter party and/or voyage orders. As defined in the charter party/voyage orders incidents **MUST** also be reported to incident@exxonmobil.com

*Not reporting or delayed reporting of incidents whether the vessel is on ExxonMobil affiliate charter or not could affect vessel operator's future eligibility for ExxonMobil affiliate service.

INCIDENT INVESTIGATION AND CLOSURE

Following an incident, an investigation report **MUST** be submitted by the vessel operator to incident@exxonmobil.com

The incident investigation process **MUST** identify root causes and effective preventative actions taken to avoid re-occurrence of similar incidents on-board any of the vessels within the vessel operator's fleet. Satisfactory closure of an incident is an important part of IMT's vetting process.

REVIEW OF INCIDENT INVESTIGATION REPORTS

On receipt of incident investigation report a detailed review is carried out by IMT.

IMT's minimum expectations from an incident investigation report are (as a minimum, but not limited to) as follows:

Description	**Detailed sequence of the event or narrative of events.** Photographs, pipeline diagrams, Electronic Chart and Information Display System (ECDIS)/ radar screenshots etc.
Corrective actions	**Actions taken post incident to gain control of the situation and resume operations.**
Non-contributory factors	**Factors considered but ruled out as having caused the incident.** *e.g.* Work and rest hours, rank and company experience of crew, traffic and weather conditions, drug and alcohol compliance; equipment maintenance etc.
Causal factors, Immediate causes, Direct Causes	**Any condition that if corrected, could have prevented the incident from occurring or reduced the impact of the incident.** *e.g.*- In the case of product release, causal factors could be: Incorrect cargo line up / no two man check etc.
Root causes	**Basic cause (or causes) that if fixed will prevent the incident's recurrence.** *e.g.*- In the case of a spill, root causes could be: Inadequate behaviour based safety program (non-compliance of procedures), lack of management oversight / weak Safety Management System etc.
Preventative measures	**Measures identified towards prevention of similar incidents fleet wide. Timeline to complete each identified preventative measure.** **Plans to verify the effectiveness of preventative measures.**
Lessons learned, experience sharing	**Key learnings from this incident.;** **Experience sharing through Safety and technical bulletins / Crew seminars.** **/ Shore management visits.**
Supporting documents (as applicable)	• Class attendance report / latest class survey status report. • Service engineer's / technicians' reports. • Evidence of experience sharing fleet wide. • Regulatory authorities' reports (e.g. port State control/flag State/water police etc.) • Crew experience matrix during the incident etc.

It is **Strongly Preferred** that the vessel operator's senior management fully endorses the incident investigation report before it is sent to IMT.

SECTION A GENERAL INFORMATION

2017 CRITERIA	GAP	MAPPING
A.1 The vessel operator **MUST** lodge an up-to-date copy of the Vessel Particulars' Questionnaire (VPQ) with the OCIMF SIRE and CDI programs as applicable.		No change
A.2 Vessel operators are reminded of the importance of accuracy of data contained within the VPQ. Technical assessments (e.g. berth fit) that may affect the commercial decision will be based on this data.		No change
A.3 To ensure correct identification, the vessel operator **MUST** verify that the International Maritime Organization (IMO) number assigned to the vessel, and entered in the VPQ, corresponds exactly to the number in Lloyds' Register of Shipping.		No change
A.4 Vessel Operators **MUST** warrant an understanding of and compliance with the latest edition of the Marine Environmental, Safety and Quality Assurance Criteria (MESQAC) for vessels considered for ExxonMobil affiliate service.		Previously under A.5
Vessel Operators make the above warranty by submitting a signed Blanket MESQAC Compliance Declaration (sample as in Appendix C) to IMT. This should be sent as an email attachment to the following address: msscreen@exxonmobil.com		No change
Vessel Operators when completing the Blanket MESQAC declaration for **MUST** items which they plan to address but that require a lead time or dry dock should: 1. Mark the listed vessels as compliant (Yes) along with a reference to which criteria requires lead time or dry-dock. 2. Include interim preventive, mitigative or contingency measures taken to temporarily address each case. 3. An estimate of when it is expected such vessels will be fully compliant.	Interim compliance for MUST items	New
In addition to on-board TMSA reviews, IMT may also request an on-board physical MESQAC check and/or on-board security checks. These check(s) may be carried out on-board one or more vessels within the vessel operators' fleet.	Onboard physical check	New
ADDITIONAL CRITERIA FOR TERM CHARTERED TONNAGE		
No additional criteria.		

2017 CRITERIA	GAP	MAPPING
B.1 All Masters **MUST** have sufficient and appropriate experience as Master or Chief Officer. For recently promoted Masters this should include: 1. Recent manoeuvring experience as Chief Officer or as supernumerary on the same vessel or class of vessel having the same or similar handling characteristics; or 2.Having attended an approved ship handling simulator course at an installation capable of simulating the manoeuvring characteristics of such class of vessel. [STCW Code – Section A1/12]		No change
B.2 All Officers in direct control of navigation, cargo and/or bunker oil handling operations on-board tankers for seagoing service **MUST** have conversational proficiency in English. The Safety Management System (SMS) manual(s) **MUST** be in a language readable and understood by the crew on-board. All officers **MUST** possess valid certificates and licenses required for their rank and position on the vessel and the intended trade. This **MUST** include Dangerous Cargo Endorsements as specified in STCW, the Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (BCH), the International Bulk Chemical Code (IBC), or the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC).		No change
B.3 The operator **MUST** ensure that Master and Deck Officers have successfully completed IMO Model Course 1.22 in 'Ship Simulator and Bridge Teamwork' (or it's equivalent) at intervals not exceeding five years.	Added: ("or its equivalent") (Rev.1)	No change
B.4 Officers who have immediate responsibility for cargo transfer **MUST** be in possession of a Certificate of Specialized Training, as applicable to the type of cargo being carried. [STCW Code – Reg. V/1-1.3]	Strongly Preferred changed to MUST	No change
B.5 It is **Strongly Preferred** that Master and Deck Officers successfully complete an industry recognized Cargo Handling Simulator course at intervals not exceeding five years.	Industry recognized Cargo Handling Simulator course	New
B.6 In addition to compliance with their Safe Manning Certificate, vessels engaged in 24-hour continuous operations **MUST** meet the following minimum requirements: 1. For vessels greater than 16k DWT the minimum manning level **MUST** consist of one Master and at least three licensed Deck Officers, and for the engine department, regardless of whether or not operating Unmanned Machinery Spaces (UMS), one Chief Engineer and at least two licensed Assistant Engineers. On non-UMS vessels, it is **Strongly Preferred** that the engineering department minimum manning consists of one Chief Engineer and at least three licensed Assistant Engineers. 2. For vessels less than 16k DWT - Minimum manning level **MUST** consist of one Master and at least two licensed Deck Officers. It is **Strongly Preferred** that the minimum manning for these vessels consists of one Master and at least three licensed Deck Officers, and one Chief Engineer and at least one licensed Assistant Engineer. Other manning arrangements may be considered following a review on a case-by-case basis. This will include a review of crew competence/experience, conditions of service, leave rotation, equipment, and procedures to address contingencies.		Previously under B.5

2017 CRITERIA	GAP	MAPPING
B.7 Documented procedures **MUST** be available to monitor record and control maximum hours worked and minimum rest hours to minimize fatigue in compliance with Maritime Labour Convention (MLC) 2006, STCW 2010 regulations (Sect A-VIII/1), VIQ 3.2, and Information paper, "Recommendations Relating to the Application of Requirements Governing Seafarers' Hours of Work and Rest" published by OCIMF/International Chamber of Shipping (ICS)/International Shipping Federation (ISF).	Compliance with Maritime Labour Convention (MLC) 2006, STCW 2010 regulations	Previously under B.6
B.8 The vessel operator **MUST** warrant that it operates under an Alcohol and Drug Policy which meets or exceeds the standards set out in the ICS/OCIMF publication 'Guidelines for the Control of Drugs and Alcohol On-board Ships' and current STCW and flag state requirements. Such policy **MUST**, at a minimum, contain provisions for drug and alcohol testing that includes unannounced testing and routine medical examinations for all officers and crew, and provides for all officers and crew to be so tested at least once a year through the combined Program of unannounced testing and routine medical examinations. The vessel operator makes the above warranty by (a) agreeing to the ExxonMobil Drug and Alcohol charter party clause and (b) submitting a signed Drug and Alcohol Blanket Declaration Note. Companies based in the USA and Canada with USA or Canadian flag vessels that respectively meet USCG or Canadian regulations for drug and alcohol testing are acceptable.		Previously under B.7
B.9 It is **Strongly Preferred** that vessels are operated under a ZERO ALCOHOL policy (carriage and/or consumption of alcohol is prohibited on-board).		Previously under B.8
B.10 All vessel operators **MUST** have documented procedures that addresses the following: 1. Measures to discourage the smuggling of drugs and alcohol onto the vessel. 2. Random unannounced checks for unauthorized possession and consumption of alcohol or drugs on-board the vessel. 3. Drug and alcohol testing following an incident or operational anomaly. 4. Testing where an individual is suspected of being under the influence of alcohol or drugs. 5. Disciplinary action where person(s) are found or suspected to be in breach of the company's drug and alcohol policy. In addition to the above, where vessels are not operated under a ZERO ALCOHOL policy, the operator **MUST** have documented procedures that address the following: 1. System for controlling the issue and distribution of alcohol to individuals. 2. Monitoring and documenting the distribution and consumption of alcohol on-board the vessel. 3. Defined authority responsible for controlling the issue and distribution of alcohol 4. On-board and shore side system to monitor issue and consumption of alcohol 5. Method of verification for strict adherence to policy.		Previously under B.9
B.11 At least two officers on-board **MUST** be trained as accident/incident investigators.	Strongly Preferred changed to MUST	Previously under B.10
B.12 The vessel operator **MUST** appoint an on-board 'Safety Officer' trained specific to this role.	Strongly Preferred changed to MUST	Previously under B.11

2017 CRITERIA	GAP	MAPPING
B.13 It is **Strongly Preferred** that the vessel operator has a Behaviour Based Safety (BBS) Program.	Behaviour Based Safety (BBS) Program	New
ADDITIONAL CRITERIA FOR TERM CHARTERED TONNAGE		
B.1a Master and Deck Officers serving on term chartered vessels **MUST** have successfully completed an industry recognized cargo handling simulator course appropriate to the vessel type at intervals not exceeding five years.	Cargo handling simulator course	New
B.2a Master and senior Deck Officers serving on term chartered vessels **MUST** have successfully completed an industry recognized ship-handling simulator course appropriate to the manoeuvring characteristics of the vessel size and type at intervals not exceeding five years.	Ship-handling simulator course	New
B.3a The vessel operator **MUST** have implemented a Behaviour Based Safety Program.	Behaviour Based Safety Program	New

<table>
<tr><th>2017 CRITERIA</th><th>GAP</th><th>MAPPING</th></tr>
<tr><td>The safe operation of a vessel is a function of the competency (as per the STCW Code) and experience of the officers responsible for the execution of the vessel operators Safety Management System. Therefore, it is expected that vessels are manned with a complement that reflects an adequate amount of experience and familiarity with the vessel operator's processes and procedures.</td><td></td><td>No change</td></tr>
<tr><td>Crew change for management level (Senior Officers/Engineers) of the same department MUST be staggered.</td><td>Staggered crew change</td><td>New</td></tr>
<tr><td>The provisions of the following CREW MATRIX table(s) are Strongly Preferred: (AS PER TABLE)</td><td>Experience for Gas / Cargo Engineer (include LPG vessel)</td><td>No change</td></tr>
<tr><td colspan="3">
<table>
<tr><th>Experience</th><th><u>Senior Deck Officers</u>
Master + Chief Off. (Combined)</th><th><u>Junior Deck Officers</u>
2nd Off. + 3rd Off (Combined)</th></tr>
<tr><td>Rank</td><td>> Three (3) Years (Sea Time)
Of the three (3) years combined, Master should have minimum six (6) months and Chief Off. should have minimum six (6) months (Sea Time)</td><td>> One (1) Year (Sea Time)</td></tr>
<tr><td>Operator</td><td>> Two (2) Calendar Years</td><td>> One (1) Calendar Year</td></tr>
<tr><td>This type of tanker</td><td>> Six (6) Years (Sea Time)</td><td>N/A</td></tr>
<tr><td>All types of tanker</td><td>N/A</td><td>> One and a half (1.5) Years (Sea Time)</td></tr>
</table>
<table>
<tr><th>Experience</th><th><u>Senior Engineers</u>
Chief Engr. + 2nd Engr. (Combined)</th><th><u>Junior Engineers</u>
3rd Engr. + 4th Engr. (Combined)</th><th><u>Gas / Cargo</u>
Engineer (LNG and LPG vessel)</th></tr>
<tr><td>Rank</td><td>> Three (3) Years (Sea Time)
Of the three (3) years combined, Chief Engineer should have minimum six (6) months and 2nd Engineer should have minimum six (6) months (Sea Time)</td><td>> One (1) Year (Sea Time)</td><td>> One (1) Year (Sea Time)</td></tr>
<tr><td>Operator</td><td>> Two (2) Calendar Years</td><td>> One (1) Calendar year</td><td>> Half (0.5) Calendar Year</td></tr>
<tr><td>This type of tanker</td><td>> Six (6) Years (Sea Time)</td><td>N/A</td><td>N/A</td></tr>
<tr><td>All types of tanker</td><td>N/A</td><td>> One and a half (1.5) Years (Sea time)</td><td>N/A</td></tr>
</table>
</td></tr>
<tr><td>For vessel(s) less than (<) 16k DWT, where there is a reduction in the number of engineers on board the vessel: (AS PER TABLE)</td><td>Experience for Gas / Cargo Engineer (include LPG vessel)</td><td>No change</td></tr>
</table>

2017 CRITERIA	GAP	MAPPING

Experience	Senior Deck Officers Master + Chief Off. (Combined)	Junior Deck Officers 2nd Off. + 3rd Off (Combined)
Rank	> Three (3) Years (Sea Time) Of the three (3) years combined, Master should have minimum six (6) Months and Chief Off. should have minimum six (6) months (Sea Time)	> One (1) Year (Sea Time)
Operator	> Two (2) Calendar Years	> One (1) Calendar Year
This type of tanker	> Six (6) Years (Sea Time)	N/A
All types of tanker	N/A	> One and a half (1.5) Years (Sea time)

Experience	Chief Engineer + Junior / Licensed Assistant Engineer(s) (Combined)	Gas / Cargo Engineer (LNG and LPG vessel)
Rank	> Three (3) Years (Sea Time) Of the three (3) years combined, C/E should have minimum six (6) Months	> One (1) Year (Sea Time)
Operator	> Two (2) Calendar Years	> Half (0.5) Calendar Year
This type of tanker	> Six (6) Years (Sea Time)	N/A
All types of tanker	N/A	N/A

SIRE ONLINE: Crew Matrix		
The Interactive Online Crew Matrix on the OCIMF SIRE website **MUST** be kept updated at all times by the vessel operator.		No change
It is **Strongly Preferred** that the crew matrix is updated and validated at intervals of not more than two months.	Crew matrix update	New
It is **Strongly Preferred** that the years in crew matrix are recorded using a single decimal place in order to facilitate accurate assessments.		No change
ADDITIONAL CRITERIA FOR TERM CHARTERED TONNAGE		
C.1a For term chartered vessels, the crew matrix requirement mentioned within section C is a **MUST** and in addition, it is a **MUST** that the experience of senior officers and engineers with the vessel operator to be: (AS PER TABLE)	Strongly Preferred changed to MUST	No change
C.2a It is **MUST** that the senior officers are given individual briefings by the vessel operator's senior management to re-iterate company philosophy, expectations, KPIs and officers' responsibilities prior to joining the vessel.	Senior officers briefing by operator's senior management	New

SECTION D NAVIGATION

2017 CRITERIA	GAP	MAPPING
In addition to statutory requirements, each vessel **MUST** be equipped with at least the following equipment, which **MUST** be maintained in good working order and condition. It is recognized that some governing flag states may require ADDITIONAL equipment to that required in this section. Flag states may also require certain items of equipment to meet local operating standards or 'Type Approval'. Each vessel **MUST** comply with flag state equipment requirements.		No change
D.1 Vessels **MUST** have a means to provide a warning if the vessel deviates from her intended course; e.g. Global Positioning System (GPS) and ECDIS (if installed on-board) cross track error, autopilot alarm etc. An independent magnetic off course alarm is **Strongly Preferred**. ***[VIQ 4.10.51]***	ECDIS included	No change
D.2 Vessels **MUST,** irrespective of Gross Tonnage, be provided with a Simplified Voyage Data Recorder (S-VDR) system. Voyage Data Recorder (VDR) systems **MUST** be of approved type and capable of storing navigational data, bridge audio, etc. so that the data stored can be retrieved and analysed. The vessel **MUST** have documented procedures for downloading data from VDR post incident or operational anomaly. It is **Strongly Preferred** that VDR data is used for evaluation of navigation practices and compliance with the vessel operator's procedures. [VIQ 4.10.48]	Strongly Preferred changed to MUST, even for vessels < 3000 GT. VDR data is used for evaluation of navigation practices and compliance.	No change
D.3 Vessels **MUST** be fitted with a wind speed and direction indicator in the wheelhouse. [VPQ 4.1.1]	Strongly Preferred changed to MUST. And be fitted in wheelhouse	No change
D.4 Vessels above 100k DWT **MUST** be fitted with a Rate of Turn (RoT) indicator.		No change
D.5 The vessel **MUST** be fitted with a gyro compass. It is **Strongly Preferred** that vessels have two gyro compasses, or one gyro compass and one transmitting magnetic compass. [VIQ 4.10.41]		No change
D.6 The vessel **MUST** have means of taking visual compass bearings.		No change
D.7 Radar: Vessels under 3k DWT: **MUST** have at least one radar fitted with a true north feature. Vessels over 3k DWT **MUST** have at least two radars, at least one of which has a true north feature and each being capable of being operated independently. It is also **Strongly Preferred** that 3cm and 10cm (X and S band) capability is provided via the combined use of two radars that can be inter-switched. [VPQ 4.1.4]	each radar being capable of being operated independently	No change
D.8 One radar **MUST** be fitted with electronic tracking and plotting facilities unless a standalone Automatic Radar Plotting Aid (ARPA) is fitted. [VPQ4.1.7]		No change

2017 CRITERIA	GAP	MAPPING
D.9 Vessel own speed input to an ARPA **MUST** be speed through the water.		No change
D.10 The vessel **MUST** be fitted with a depth finder. The depth finder is **Strongly Preferred** to have the capability of recording and setting of the alarm set point. [VIQ 4.10.17] [VPQ CH. 4.1.1]	The depth finder setting of the alarm set point	No change
D.11 The vessel **MUST** be fitted with rudder angle indicators, azipod angle indicators (if applicable), speed log indicators, and propeller RPM or controllable pitch propeller pitch setting indicators on the bridge/wheelhouse. [VIQ 4.10.19] [VPQ CH. 4.13.1]	Additional fitted with azipod angle indicators (if applicable) and speed log indicators. All will be fitted on the bridge/wheelhouse	No change
D.12 It is **Strongly Preferred** that vessels are fitted with bridge wing repeaters for rudder angle, speed log, and propeller RPM or controllable pitch propeller pitch settings. [VPQ 4.1.9 & 4.1.10]	speed log	No change
D.13 The vessel **MUST** be fitted with a course recorder. [VPQ 4.1.1		No change
D.14 The vessel **MUST** be fitted with GPS. [VPQ 4.1.1]		No change
D.15 Real-Time (Live) Navigational Assessments by the Master **MUST** be conducted at least every three months, which **MUST** include as a minimum the following elements: evaluation of compliance with navigational procedures, compliance with Collision Regulations (COLREGS), bridge teamwork, Pilot/Master interface, skill sets of officers, situational awareness, emergency response (e.g. steering loss etc.) and bridge team communications. Observations identified **MUST** feed into the operator's close out and verification process.	Navigational Assessments by the Master	New
D.16 The vessels **MUST** be subjected to a navigational audit program commensurate with the operator's TMSA 3 level of attainment. Competencies listed in paragraph D.15 **MUST** be assessed as a minimum and gaps identified **MUST** be verified as closed during subsequent audits. It is **Strongly Preferred** that navigational auditors have appropriate Electronic Chart Display and Information System (ECDIS) and Electronic Chart System (ECS) training specific to the equipment on-board.	Amended: navigational audit program commensurate with the operator's TMSA 3 level of attainment. (Rev.1)	New
D.17 Vessels **MUST** implement procedures and controls for the effective use, setting, non-muting and adjustments of the anti-collision and navigational safety alarms on the - ECDIS, ECS, Radar, GPS, echo sounder, steering gear and other bridge equipment. Authority levels for adjusting or altering alarm set points **MUST** be part of vessel operator's Safety Management System.	procedures and controls for the effective use, setting, non-muting and adjustments of alarms	New
D.18 The Bridge Navigational Watch Alarm System (BNWAS) reset alarm **MUST** be fitted in the wheelhouse and the NOT in the chart room.	Strongly Preferred changed to MUST. BNWAS reset alarm fitted in the wheelhouse and the NOT in the chart room	No change

2017 CRITERIA	GAP	MAPPING
D.19 Vessels **MUST** be fitted with bridge wing gyro repeaters for taking bearings.	Bridge wing gyro repeaters fitted irrespective of vessel size.	No change
D.20 It is **Strongly Preferred** that vessels over 160k DWT, are fitted with a dual axis Doppler sonar speed log.	Vessels over 160k DWT, are fitted with a dual axis Doppler sonar speed log	New
D.21 Manuals covering navigation and bridge procedures **MUST** be maintained on-board and vessels **MUST** be navigated in a manner that ensures compliance with these procedures. To avoid errors by one individual during critical operational conditions (e.g. pilotage waters, heavy traffic, restricted visibility), these procedures **MUST** include appropriate bridge manning for all situations when the vessel is underway and at anchor. The following publications **MUST** be maintained on-board: flag state or national coastguard agency guidance notes pertaining to the safety of navigation, e.g. U.K. Maritime and Coastguard Agency Guidance Notes, Merchant and Marine Notices.		No change
D.22 Vessels **MUST** maintain an up-to-date record of events in sufficient detail to restore a complete record of the voyage in an appropriate Deck Log Book.	in sufficient detail to restore a complete record of the voyage	No change
D.23 There **MUST** be an established system to ensure that the vessels are provided with all up to date and latest editions of nautical publications and charts (paper or electronic) for the intended route. An effective system **MUST** be in place to maintain these publications and charts (paper and electronic) and keep them up to date.	paper and electronic charts and publications	No change
D.24 Vessels **MUST** receive regular Notice to Mariners updates appropriate to their trading areas. The vessel **MUST** have updated and corrected and the most recent edition charts (paper and electronic) of a suitable scale for the intended trade.		Previously under D.26
D.25 There **MUST** be a fully documented passage plan, approved by the Master, covering all legs of the voyage, both at sea and in port, including when a pilot is aboard. Special attention should be given to the in-port passage plan, the interface of the pilot with the Bridge Management Team, and in-port issues such as the effect of squat on under-keel clearance. As a minimum the plan should include the following elements: 1. Appraisal: A review of all relevant information pertaining to the voyage leg should be carried out; all potential hazards and scenarios as appropriate should be risk assessed. 2. Planning: A detailed written plan should be prepared, with items such as danger areas, tidal data, waypoints, etc. highlighted on the voyage charts (paper and/or electronic). 3. Execution: A process must exist to ensure that the bridge team reviews the plan and that controls are in place to ensure it is safely executed. 4. Monitoring: The bridge team should use all available means to monitor the passage including the actions of the pilot, and review against the plan. The passage plan **MUST** address all the risk and hazards associated with the voyage. When calling at non-routine new ports or navigational routes the passage plan **MUST** be reviewed by shore management	The passage plan MUST address all the risk and hazards associated with the voyage. When calling at non-routine new ports or navigational routes the passage plan MUST be reviewed by shore management	Previously under D.27

2017 CRITERIA	GAP	MAPPING
D.26 Vessels **MUST** post, on the bridge alongside other manoeuvring data, the results of a ZIG- ZAG test as per IMO MSC/Circ 1053 1.3.2.	Strongly Preferred changed to MUST	Previously under D.28
D.27 Vessels **MUST** be able to demonstrate that two independent means of obtaining navigational data are employed to verify vessel position.		Previously under D.29
D.28 Vessels **MUST** maintain a record of deviations for magnetic compasses and a record of error for gyrocompasses to enable corrections of bearings/courses to 'true' readings.		Previously under D.30
D.29 The operation of all navigation equipment and steering gear **MUST** be verified prior to each port entry and departure. The main propulsion system **MUST** be tested ahead and astern.		Previously under D.31
D.30 Comprehensive under-keel clearance (UKC) and air draft calculation(s) considering all significant allowances **MUST** be documented for the controlling depth(s) on passage. The calculation(s) **MUST** be relevant for tidal effects and speed of transit over the controlling depth(s).		Previously under D.32
D.31 Vessels at anchor **MUST** have a licensed officer on the bridge to maintain an effective anchor watch, and an appropriately qualified engineering officer in the engine room if the vessel is not operating Unattended Machinery Spaces (UMS), or available at all times during the period at anchor if the vessel is operating UMS.		Previously under D.33
ADDITIONAL CRITERIA FOR TERM CHARTERED TONNAGE		
D.1a On vessels over 160k DWT, a dual axis Doppler sonar speed log **MUST** be fitted.		No change
D.2a On vessels over 50k DWT a rate of turn indicator **MUST** be fitted.	rate of turn indicator	New
D.3a Vessels **MUST** be fitted with bridge wing repeaters for: ▪ Rudder angle; ▪ Speed log; ▪ Propeller RPM; and ▪ Pitch indication (where applicable)		No change
D.4a The magnetic compass **MUST** be fitted with an off-course alarm facility.		No change
D.5a Every vessel **MUST** have a steering system that complies with: ▪ SOLAS 11/1 Regulation 29 Paragraph 16; or ▪ Paragraph 20, if built prior to 1st September 1984,		No change
D.6a Vessels **MUST** have two gyro compasses or, one gyro compass and one transmitting magnetic compass. [VPQ 4.1.1.3]		No change
D.7a Vessels **MUST** be fitted with a depth finder with the capability of recording, a digital display and alarm setting facility. [VIQ 4.10.34]		No change
D.8a Vessels **MUST** be fitted with two GPS units.		No change
D.9a Vessel operator **MUST** carry out annual real time navigation audit by a competent external third party service provider.	External navigation audit	New
D.10a The vessel operator **MUST** have a policy on the training of the Chief Officer in ship-handling under Master's guidance.	Chief Officer ship handling	New

SECTION E SAFETY AND SECURITY MANAGEMENT

2017 CRITERIA	GAP	MAPPING
E.1 Appropriate Personal Protective Equipment (PPE) **MUST** be provided for all anticipated operations. Procedures **MUST** be in place for the routine inspection and replacement of PPE. The vessel operators **MUST** ensure that all crew members working in hazardous areas use personal protective equipment (PPE) appropriate to the operations being conducted and the risk involved.	PPE MUST be provided. Procedures MUST be in place for the routine inspection and replacement of PPE	No change
E.2 Vessels **MUST** have means of embarkation and disembarkation in port, such as gangways and accommodation ladders.		Previously under E.3
E.3 Vessels **MUST** operate a documented Permit to Work (PTW) system. The PTW system **MUST** have specific procedures for (but not limited to) any electrical work, hot work, enclosed space entry, working over the side, working aloft or at height, and lock out/tag out procedures.	PTW	New
E.4 It is **Strongly Preferred** that operator has a 'Stop the Job' policy or statement. The policy or statement should develop and encourage a 'Stop the Job' culture if anyone feels unsafe or uncertain about any aspect of a task or operation.	Stop work policy	New
E.5 Vessels **MUST** carry Emergency Procedures that cover, as a minimum, action to be taken in the event of a collision, grounding, pollution, fire and explosion, and also gas releases from gas ships and toxic vapor releases from chemical carriers.		No change
E.6 For double hull vessels, it is **Strongly Preferred** that vessels are fitted with fixed gas detection system to sample for flammable atmospheres in all ballast tanks, cofferdams, or other such spaces within the hazardous zones of the vessel where flammable vapor can accumulate.	Deleted: with recorders (Rev.1)	New
E.7 In addition to statutory requirements for double hull vessels, vessels **MUST** have on-board a documented system or procedure to sample for flammable atmospheres at frequent intervals in all ballast tanks, cofferdams, or other such spaces within the hazardous zones of the vessel where flammable vapor can accumulate. The frequency of testing will be dependent on the voyage length, vessel condition, type of cargo etc., but **MUST** be clearly stated within the vessel Safety Management System. [VIQ 5.25]	Deleted: If a fixed system where the recorder is not fitted, the procedure **MUST** include sampling with portable equipment. Records of monitoring of these spaces **MUST** be maintained. (Rev.1)	No change
E.8 Equipment no longer active (e.g., obsolete or having been replaced) **MUST** be clearly and permanently marked and isolated, or removed if it presents a hazard or could adversely affect the safe operation of the vessel. A system of '**DO NOT OPERATE**' and '**WITHDRAWN EQUIPMENT**' tagging is to be in place.	A system of 'DO NOT OPERATE' and 'WITHDRAWN EQUIPMENT' tagging is to be in place.	No change
E.9 A vessel having Carbon Dioxide (CO_2) as a fixed firefighting extinguishing system **MUST** have two separate releasing controls.		No change

2017 CRITERIA	GAP	MAPPING
E.10 While in port, a vessel **MUST** maintain sufficient personnel on-board to handle emergency and security situations. The vessel operator **MUST** include guidelines within the Safety Management System to ensure compliance. [VIQ 3.1] [VPQ CH. 3.1]	sufficient personnel on-board to handle emergency and security situations	Previously under E.12
E.11 Vessels which carry or may carry cargoes containing concentrations of Hydrogen Sulfide (H_2S) **MUST** have on-board dedicated and certified personal devices for measuring H_2S, sufficient for at least every crew member working on exposed deck or area. [VIQ 5.31] Where the vessel is handling bunkers likely to contain H2S then the operator MUST have procedures clearly identifying the additional precautions and equipment required.	Where the vessel is handling bunkers likely to contain H2S then the operator MUST have procedures clearly identifying the additional precautions and equipment required.	Previously under E.13
E.12 Vessels **MUST** carry a minimum two of each of the following individual or multi - portable gas detection equipment: 1.Explosimeters (% volume hydrocarbon and LEL analyser); 2.Oxygen Analyzers; 3.Toxic gas detectors or analyzers suitable for the range of products being carried; 4.On vessels operating with Inert Gas Systems (IGS), instruments capable of measuring hydrocarbon content in an oxygen deficient atmosphere **MUST** be provided. It is **Strongly Preferred** that personal multiple gas detecting alarm units are used by each person working in a potentially hazardous area (as a minimum on deck during cargo, tank cleaning or bunkering operations, or entry into tanks, enclosed space or pump room etc.) [VIQ 5.27]	as a minimum on deck during cargo, tank cleaning or bunkering operations, or entry into tanks, enclosed space or pump room etc.	Previously under E.14
E.13 Toxic gas detectors for measuring H_2S **MUST** be certified specifically for use in air or in an inert gas atmosphere.		Previously under E.15
E.14 Vessels **MUST** have on-board records of tests to show that all gas detection equipment (fixed and portable) is routinely maintained and calibrated. [VIQ 5.27]		Previously under E.16
E.15 Officers on-board **MUST** be trained in and familiar with the use and calibration of portable oxygen and hydrocarbon Analyzers. Appropriate span and calibration gas maintenance kits and batteries (for portable gas detectors) to enable performance checks of the equipment **MUST** be carried.	Officers on-board MUST be trained in and familiar with the use and calibration of portable oxygen and hydrocarbon Analyzers.	Previously under E.17

2017 CRITERIA	GAP	MAPPING
E.16 Vessels **MUST** have an automatic system of fire detection in the accommodation, wheelhouse, Cargo Control Room (CCR), laundry, drying room, fire control station, pantry and galley areas. It is **Strongly Preferred** that the fire detection system covers all cabins, in addition to public rooms. The auto fire detector **MUST** be connected to the ship main fire alarm system.	Automatic system of fire detection in the accommodation, wheelhouse, Cargo Control Room (CCR), laundry, drying room, fire control station, pantry and galley areas. It is Strongly Preferred that the fire detection system covers all cabins, in addition to public rooms. The auto fire detector MUST be connected to the ship main fire alarm system.	Previously under E.18
E.17 Where the vessel has a CCR, it is **Strongly Preferred** that the CCR is equipped with an anemometer display and monitoring repeater with the capability to record (paper or digital) wind speed and direction. Dynamic Positioning (DP) vessels are **Strongly Preferred** to have additional anemometer displays on the bridge and in the engine control room designed to be capable of setting a minimum of two desired wind speed alarm limits with associated audible and visual alarms in the CCR and on deck if the set limits are exceeded.	Dynamic Positioning (DP) vessels are Strongly Preferred to have additional anemometer displays on the bridge and in the engine control room designed to be capable of setting a minimum of two desired wind speed alarm limits	Previously under E.19
E.18 A vessel **MUST** ensure that sufficient time prior to departure is allocated to all officers, ratings, and contractors joining the vessel to familiarize themselves with, but not limited to: 1. Personal survival techniques, medical care, emergency fire and safety equipment as delineated in Chapter VI, Section A-VI/1, of Standards of Training, Certification, and Watchkeeping for Seafarers (STCW 2010). 2. The ship's emergency firefighting and lifesaving equipment. 3. Equipment which they may use or operate in safely carrying out their duties. 4. Any watch keeping, safety, environmental protection and emergency procedures or arrangements that they need to know to be able to carry out their assigned duties properly. 5. Their duties and responsibilities under the ship's Vessel Response Plan (VRP), Shipboard Oil Pollution Emergency Plans (SOPEP) and Ship Security Plan (SSP) as applicable. 6. The vessel operator's drug and alcohol policy.		Previously under E.20

2017 CRITERIA	GAP	MAPPING
E.19 Every vessel **MUST** have a Fire Plan which complies with SOLAS regulation	Strongly Preferred changed to MUST. Entire section deleted and replaced with new wording. (Rev.1)	Previously under E.21
E.20 All portable ladders **MUST** have a unique identifying number clearly marked on the ladder. The company **MUST** have in place a procedure for regular inspection.		Previously under E.22
E.21 All derricks, cranes and chain blocks **MUST** be clearly marked with their Safe Working Load (SWL), and where appropriate, the operating angle and identifying reference number. [VIQ 8.81]		Previously under E.23
E.22 All lifting slings, strops and wires **MUST** have mechanical spliced eyes or manufactured webbed eye as applicable. All lifting slings, strops and wires **MUST** be marked with the SWL with a unique identification number.	Mechanical spliced eyes or manufactured webbed eye as applicable	Previously under E.24
E.23 Portable lifting devices such as chain blocks, strops, slings, and shackles etc. **MUST** be supplied with original test certificates. These **MUST** be subjected to a regular periodical inspection and **MUST** be inspected prior to each use. [VIQ 8.81]		Previously under E.25
Criteria E.24 to E.30 apply to vessels transiting Piracy infested waters		
E.24 Vessels **MUST** at all time, whether in port or at sea, maintains adequate security measures. When transiting through piracy-infested areas, vessel **MUST** perform a region-specific risk assessment, use all available support, and utilize region-specific Best Management Practices (BMP) to enhance security and safety on-board. In addition to performing a risk assessment, the Vessels **MUST** also have a vessel-specific Hardening Plan which includes as a minimum detail of hardening arrangements that prevent access to the accommodation block, bridge, engine room and funnel casing. Vessels transiting these piracy infested waters **MUST** implement their Hardening Plan and all preventative and mitigating measures identified within their risk assessment.	Security measures	New
E.25 Vessels **MUST** participate in all voluntary reporting schemes applicable to its voyage routing. These may include but are not limited to: Maritime Security Centre Horn of Africa (MSC-HOA); United Kingdom Maritime Trade Operations (UKMTO); Marine Domain Awareness for Trade – Gulf of Guinea (MDAT-GoG); Information Fusion Centre (IFC) (Voluntary Community Report); and the Mediterranean Voluntary Reporting Scheme.	Security reportings	New
E.26 Vessels **MUST** have copies of the Admiralty Maritime Security Planning charts (Q Series, paper or electronic) relevant to its planned passage on-board.	Security planning charts	New

2017 CRITERIA	GAP	MAPPING
E.27 Vessels transiting through piracy-infested areas **MUST** have a designated safe muster point so that in the event of a suspicious approach, members of the crew not required on the bridge or the engine control room can muster in a short-term safe haven location with nominal ballistic protection should the vessel be fired on with small arms.	Designated safe muster point	New
E.28 Vessels **MUST** be provided with high-intensity searchlights available on the bridge.	High-intensity searchlights	New
E.29 It is **Strongly Preferred** that vessels are equipped with a citadel. Vessels with a citadel **MUST have an independent means of communication with the vessel operator's Security Officer.**	Citadel	New
E.30 It is **Strongly Preferred** that vessels are fitted with an independent tracking device so that its position and speed can be monitored by the vessel operator's Security Officer. It is **Strongly Preferred** that this tracking device has an independent transmitter from the Global Maritime Distress and Safety System (GMDSS) equipment and a concealed antenna.	Independent tracking device	New
ADDITIONAL CRITERIA FOR TERM CHARTERED TONNAGE		
E.1a Vessels **MUST** be fitted with an anemometer display or monitoring repeater in the CCR with the capability to record (paper or digital) wind speed and direction, and designed to be capable of setting a minimum of two desired wind speed limits with audible and visual alarms in the CCR and on deck if the set limits are exceeded. Dynamic Positioning (DP) vessels MUST have additional anemometer displays in the Engine Control Room (ECR)	Anemometer	New
E.2a Personal multiple gas detecting alarm units **MUST** be used by each person working in a potentially hazardous area, including: on deck during cargo, bunkering, tank cleaning, gas freeing, purging and inerting operations, and entry to tanks, enclosed space, and pump rooms.	Personal multiple gas detecting	New
E.3a Double hull vessels **MUST** be fitted with fixed gas detection system to sample for flammable atmospheres in all ballast tanks, cofferdams, or other such spaces within the hazardous zones of the vessel where flammable vapor can accumulate.	Deleted: with recorders (Rev.1)	New

SECTION F POLLUTION PREVENTION

2017 CRITERIA	GAP	MAPPING
F.1 The vessel operator **MUST** provide IMT with office and after-hours telephone numbers and details of their shore emergency response organization in order to facilitate operator/charterer communications in the event of a vessel casualty or escape of cargo. This information should be communicated to MSOwner@exxonmobil.com and kept updated at all times.		No change
F.2 Cargo transfer systems **MUST** be hydrostatically tested annually to maximum allowable working pressure (MAWP). Vessels **MUST** have on-board records verifying annual pressure testing of the cargo system. Records of individual cargo valves maintenance and tests **MUST** be kept on-board and available. For LNG/LPG and Chemical Gas carriers refer to Section S of this document. [VIQ 8.21]	Hydrostatically tested annually to maximum allowable working pressure (MAWP). For LNG/LPG and Chemical Gas carriers refer to Section S of this document.	No change
F.3 Bunker transfer systems **MUST** be hydrostatically tested annually to the designed working pressure. The vessel **MUST** have on-board records verifying annual pressure testing of the bunker system. [VIQ 6.21] [VPQ 6.1.14]	Hydrostatically tested	No change
F.4 If the vessel is fitted with a dedicated facility or line to supply water ballast to cargo tanks from the segregated ballast system, there **MUST** be at least two-valve segregation or positive block (blind) between the segregated ballast system and the cargo tanks, and at least one of the valves **MUST** be fitted with a non-return device.	If the vessel is fitted with a dedicated facility or line to supply water ballast to cargo tanks from the segregated ballast system, at least one of the valves **MUST** be fitted with a non-return device.	No change
F.5 Vessels **MUST** be fitted with a continuous deck edge fishplate that encloses the main deck area, from bow to stern, such that escape of cargo or bunker oil tank contents will be contained.		No change
F.6 It is **Strongly Preferred** on ships fitted with stern anchors that the poop deck is fully protected with an appropriate fish plate or gutter bar and should have a means to prevent the escape of liquid through the hawse pipe. For vessels with continuous decks, a transverse fishplate **MUST** be fitted aft of the last cargo tank to prevent the flow of cargo around the poop or accommodation deck area. A means of draining or removing oil from the enclosed deck containment area **MUST** be provided. [VPQ 6.1.1]		No change
F.7 All bunker manifolds, cargo manifolds, slop manifolds and bunker tank vents including service and storage oil tank vents, deck hydraulic machinery **MUST** have spill containment arrangements which are of permanent construction. The spill containment arrangement and its drain plugs (if provided) **MUST** be regularly tested for effectiveness. [VIQ 6.20] [VPQ 6.1.2]	Strongly Preferred changed to MUST. The spill containment arrangement of permanent construction and regularly tested for effectiveness.	No change
F.8 All flanged connections requiring bolts **MUST** be fully bolted at all times.		No change

2017 CRITERIA	GAP	MAPPING
F.9 All open-ended cargo, bunker or ballast pipe work and unused manifolds including pipeline drains and stub pieces **MUST** be blanked and fully bolted (or capped in the case of small diameter lines). Any blank flange fitted on the vessel **MUST** be of sufficient strength for the certified pipeline design working pressure. Bunker and cargo manifold drains **MUST** lead to a spill containment arrangement of permanent construction. [VIQ 6.22]	Including pipeline drains and stub pieces. Blank flange strength as per certified pipeline design working pressure. Bunker and cargo manifold drains MUST lead to a spill containment arrangement of permanent construction.	No change
F.10 Blank flanges **MUST** be fitted on all cargo related overboard discharge pipelines, unless impracticable, in which case double block valves are acceptable if they are fitted with a system to monitor the integrity of the space between the valves. [VIQ 6.17] [VPQ 6.1.10]		No change
F.11 Scuppers **MUST** be effectively plugged and physically verified prior to commencement and during all cargo, ballast and bunker handling operations, and at all other times when in port, except when clearing rainwater. The scupper plugs **MUST** be tested for its tightness at frequent intervals. Where the ship is fitted with a scupper drain system this **MUST** be checked prior to arrival in port to ensure that the lines are clear and the valves operate correctly. Scupper drain system valves **MUST** be clearly identified and **MUST** be kept closed whilst the ship is in port. Mechanical scupper plugs are **Strongly Preferred**. Wooden plugs with cement are acceptable provided they are properly maintained.Scuppers on gas carriers **MUST** be effectively plugged during bunkering and cargo operation when carrying any type of pollutants (MARPOL Annex 1 and 2 in its form or if mixed with water).	Scuppers physically verified prior to commencement.Scuppers on gas carriers MUST be effectively plugged during bunkering and cargo operation when carrying any type of pollutants (MARPOL Annex 1 and 2 in its form or if mixed with water).	No change
F.12 Pollution control equipment **MUST** be available in accordance with the Oil Pollution Preparedness, Response, and Coordination (OPRC) Convention 1990. As a minimum, the following equipment **MUST** be available: 1.Sorbents; 2.Non-sparking hand scoops, shovels, and buckets; 3.Containers suitable for holding recovered waste; 4.Emulsifiers for deck cleaning; 5.Protective clothing; and 6.Two non-sparking portable pumps of sufficient capacity with hoses in good operating condition. Unless otherwise stated in the manufacturers' instructions, all portable pumps **MUST** be earthed when in use. For vessels fitted with fixed dump valves, portable pumps are not required. [VPQ. 6.1.5]	Portable pumps of sufficient capacity.	No change
F.13 Vessels **MUST** be fitted with at least two valves on each cargo sea chest. A system to monitor the integrity of the space between the valves for product leakage and sea valve integrity **MUST** be fitted, unless the sea chest is isolated from the cargo system by a spool piece or blank. (OCIMF publication 'Prevention of Oil Spillages through Cargo Pump Room Sea Valves' may be used as a guide). [VPQ. 6.1.8 & 6.1.6]		No change

2017 CRITERIA	GAP	MAPPING
F.14 Where installed, the cargo sea chest valves **MUST** be kept closed and sealed at all times when not in use. All portable spool pieces between the cargo pumps and sea valves, if fitted, **MUST** be removed and the pipeline ends blanked, during normal cargo operations when the connections to the sea valves are not required.		No change
F.15 Operators **MUST** have in place an Environmental Policy covering pollution from the following sources, as appropriate: 1.Oil, associated products, and chemicals, Liquid Natural Gas (LNG) and Liquid Petroleum Gas (LPG), sludge, bilge water, tank cleaning residue; 2.Noxious liquid substances; 3.Sewage; 4.Dangerous goods; 5.Garbage; 6.Ballast water (including the transfer of micro-organisms); 7.Cargo vapor and engine exhaust emissions; 8.Refrigerants, halons and chlorofluorocarbons (CFCs); 9.Noise; and 10.Anti-fouling paints. Guidelines issued by the International Chamber of Shipping (ICS) 'Shipping and the Environment – a Code of Practice' should be used as a reference.	Sludge, bilge water, tank cleaning residue. Refrigerants.	No change
F.16 Vessels provided with temporary connection arrangements between cargo and ballast or cargo and Inert Gas Systems (IGS) or ballast and IGS **MUST** be equipped with dedicated portable spool pieces or similar arrangements, which **MUST** be disassembled and kept stowed in a conspicuous position when not in use.	Temporary connection. Cargo and Inert Gas Systems (IGS). Dedicated portable spool pieces or similar arrangements. Stowed in a conspicuous position when not in use.	No change
F.17 The Oily Water Separator (OWS) and Oil Discharge Monitoring Equipment (ODME) **MUST** be regularly tested and verified fully operational, prior to each use. The OWS and ODME **MUST** be calibrated by manufacturers or persons authorized by the manufacturer annually, or alternatively, the measuring unit sensor must be renewed. The OWS and ODME piping systems **MUST** be tamper proof and in accordance with MARPOL regulations and the approved system drawings.	Calibrated by manufacturers or persons authorized by the manufacturer. Or alternatively, the measuring unit sensor must be renewed.	No change
F.18 The switch for the electric power supply for the Engine Room OWS **MUST** be located on the Bridge.	Strongly Preferred changed to MUST	No change
F.19 The vessel operator **MUST** have in place a procedure for inspection, testing, and replacement of all flexible hydraulic hoses on deck. All flexible hydraulic hoses exposed on deck **MUST** be replaced at least every 5 years.	Strongly Preferred changed to MUST. All flexible hydraulic hoses MUST be replaced at least every 5 years.	No change
F.20 It is **Strongly Preferred** that vessels are constructed with double hull (double side shell and bottom) bunker tanks, lube oil tanks and other tanks and spaces containing any type of pollutants (MARPOL Annex 1 & 2 in its form or if mixed with water).	Double hull (double side shell and bottom). Containing any type of pollutants (MARPOL Annex 1 & 2 in its form or if mixed with water).	No change
F.21 It is **Strongly Preferred** that ballast tanks have protective coatings and that vessels comply with performance standards referred to in (IMO) Resolution MSC 215 (82).		No change

2017 CRITERIA	GAP	MAPPING
F.22 It is **Strongly Preferred** that vessels are provided with adequate means for quick sampling and visual inspection of the segregated ballast water for any oil contamination prior to discharge. [VIQ 6.31]	For any oil contamination.	No change
F.23 Vessels fitted with ballast water treatment systems that alters the chemistry of the ballast water in the tanks versus ambient seawater (namely Active Substance Systems as defined by IMO) **MUST** have on file a statement from the ballast tank coating supplier confirming compatibility of the ballast tank coating type with said system.	Ballast water treatment systems	New
F.24 It is **Strongly Preferred** that cargo and ballast overboard pipelines do NOT pass through bunker tanks. Vessels with cargo and ballast overboard pipelines passing through bunker tanks **MUST** have the overboard valves installed outboard of the bunker tank or if the latter option is not possible then as adjacent to the vessel side shell as is practical.	Cargo and ballast overboard pipelines	New
F.25 Vessels **MUST** fully comply with the MARPOL Annex VI provisions for the control of sulphur emissions whilst trading in special SOx Emission Control Areas (SECAs) or Emission Control Areas (ECAs). When chartered for worldwide trade, the vessel **MUST** be capable of meeting relevant latest local and national marine fuel sulphur content and emission regulations, for example EU Directive 2012/33/EU.	Control of sulphur emissions	New
ADDITIONAL CRITERIA FOR TERM CHARTERED TONNAGE		
F.1a Mechanical type scupper plugs **MUST** be fitted in the deck edge fishplate.		No change
F.2a For vessels that have the option, deck dump valves with loop seals into the slop tanks **MUST** be provided. For vessels where deck dump valves are not an option, at least 2 suitably sized non-sparking spill pumps **MUST** be provided. The discharge to the slop tank **MUST** be hard piped, with suitable connections along the deck to accommodate spill location. Unless otherwise stated in the manufacturer's instructions, these portable pumps **MUST** be earthed at all times. For gas carriers, at least 2 suitably sized non-sparking spill pumps MUST be provided with sufficient storage space on-board to collect or contain oil spilled on deck.	For vessels that have the option… For gas carriers, at least 2 suitably sized non-sparking spill pumps MUST be provided with sufficient storage space on-board to collect or contain oil spilled on deck.	No change
F.3a Vessels delivered after 30th November 2017 **MUST** be constructed with double hull (double side shell and bottom) cargo tanks, bunker tanks, lube oil tanks and other tanks and spaces containing any type of pollutants (MARPOL Annex 1 and 2 in its form or if mixed with water).	Double hull	New
F.4a Vessels **MUST** be provided with adequate means for quick sampling and visual inspection of the segregated ballast waters for any oil contamination prior to discharge.	for any oil contamination	No change
F.5a It is **Strongly Preferred** that vessels install additional independent tamper-proof equipment that samples the overboard discharge between the Oily Water Separator (OWS) and the OWS overboard valve, and records (as a minimum) oil content, flow through the oil content monitor, flow overboard, overboard valve position, vessel GPS position, and time.	OWS	New

SECTION G STRUCTURAL CONDITION

2017 CRITERIA	GAP	MAPPING
G.1 Vessel operators of all types of tankers over 15 years of age **MUST** provide their most recent Special Survey documentation for review by IMT. **For Oil and Chemical vessels** with Enhanced Survey Program (ESP) notation IMT requires, as a minimum, copies of the following documents for review. Additional documentation may be requested. 1.Survey Planning document for the last Special Survey; 2.Executive Hull Summary/Condition Evaluation Report (EHS/CER) for the last Special Survey; 3.All survey reports listed in the EHS/CER; 4.All Thickness Measurement reports listed in the EHS/CER; 5.All Hull Survey reports issued since the last Special Survey; 6.All Thickness Measurement reports issued since the last Special Survey; 7.Latest Condition Assessment Program (CAP) certificate and report for the Hull (for vessels over 5,000 tonnes DWT); 8.Thickness Measurement report employed for the Hull CAP report (for vessels over5,000 tonnes DWT); 9.CAP Fatigue Assessment (for vessels over 5,000 tonnes DWT); 10.Latest CAP certificate and report for Machinery & Cargo systems; 11.Latest cargo tank, ballast tank, cofferdam and void space coating condition reports; and 12.Latest Class Survey Status report, including the section detailing Conditions of Classand Memoranda. **Gas and bitumen/asphalt vessels** which have not been assigned with ESP notation and are not subject to an Enhanced Special Survey, are still required to undertake a Special Survey. IMT requires, as a minimum, copies of the following documentation for review: 1.All survey reports related to the last Special Survey; 2.All Hull Survey reports issued since the last Special Survey; 3.All Thickness Measurement reports relating to the last Special Survey; 4.All Thickness Measurement reports issued since the last Special Survey; 5.Latest CAP certificate and Hull CAP report (for vessels over 5,000 tonnes DWT); 6.Thickness Measurement report employed for the Hull CAP report (for vessels over5,000 tonnes DWT); 7.CAP Fatigue Assessment (for vessels over 5,000 tonnes DWT); 8.Latest CAP certificate and report for Machinery and Cargo Systems; 9.Latest ballast tank, cofferdam and void space coating condition reports; and 10.The latest Class Survey Status report, including the section detailing Conditions of Classand Memoranda. **Additionally, for all type of vessels** that have undergone major conversion such as from single hull to double hull (DH), Oil Bulk Ore (OBO) to DH tanker etc., the vessel technical operator **MUST** provide the following additional document(s) for IMT review: 1.A Certificate/Attestation from Class confirming that the vessel has been converted in accordance with the approved drawings and the rules and regulations of the society; 2.Management of Change documentation for the conversion; 3.Details of supervision of the conversion while in the shipyard; and 4.Details of inspection on completion of the conversion and relevant trials conducted to verify the integrity of the conversion. It is essential for the submitted documentation to be complete so that reviews can be carried out expediently to determine if the vessel is suitable for the ExxonMobil Affiliate service. All communication with IMT related to this process should be directed by email to MSess@exxonmobil.com.	Special survey documentations	No change

2017 CRITERIA	GAP	MAPPING
G.2 Vessels over 15 years of age and more than 5,000 tonnes DWT **MUST** provide a Hull CAP Certificate with Grade 1 or 2 rating issued by a Classification Society which is a member of the International Association of Classification Societies (IACS). All types of tankers over 15 years of age **MUST** provide CAP Certificate for Machinery and Cargo Systems with a Grade 1 or 2 rating, issued by a Classification Society which is a member of IACS. The CAP certificate **MUST** be renewed every 5 years. If the vessel is older than 20 years, the CAP Certificate **MUST** be renewed every 30 months. [VPQ CH. 1.4.6] [VIQ 2.12]	CAP certificate	No change
G.3 Aluminium anodes **MUST NOT** be used in CARGO tanks. If used in BALLAST tanks, they **MUST** meet the following criteria: 1.Anodes **MUST NOT** be placed higher than 1.8m or higher than a position that may cause an impact-energy greater than 20kgm in the event of a fall; 2.Anodes **MUST** be shielded from objects falling from directly overhead (specially designed box shields); and 3.Anode alloys **MUST** contain no more than 0.02% magnesium or 0.1% silicone or **MUST** meet US Coast Guard Requirements if applicable. (Code of Federal Regulations - 35.01-25(b) (4). [VPQ 7.1.3]		No change
G.4 For vessels engaged in the carriage of chemicals or clean products, tanks **MUST** either be stainless steel or be fully coated with a coating suitable for the range of products intended to be carried. A record of cargo tank coating condition **MUST** be maintained on-board showing the status of the coating condition in each tank. On vessels that are used for carrying aviation grade kerosene, the cargo tanks, including heating coils, heat exchanger, cargo pumps, and cargo lines **MUST** be free of galvanized steel, copper, zinc, cadmium, and their alloys.	Including heating coils, heat exchanger, cargo pumps, and cargo lines MUST be free of galvanized steel.	No change
G.5 A Vessel Special Survey or Enhanced Special Survey should not be extended and **MUST** be conducted within the Classification Society issued survey cycle for vessel age and type.	No extension on Special Survey	New
G.6 All steel diminution that falls within the Classification Society definition of 'substantial corrosion' or 'renewal (minimum allowable thickness)' **MUST** be repaired to the satisfaction of the attending Classification Society surveyor. Doubler plates **MUST NOT** be used as a permanent method of repair in way of shell plating, deck plating, cargo/slop tanks and fuel oil tanks.	No substantial corrosion or doubler plates.	New
ADDITIONAL CRITERIA FOR TERM CHARTERED TONNAGE		
G.1a Where Thermo-Mechanical Controlled Process (TMCP) steel is employed it is **Strongly Preferred** that at least the bottom plating of all cargo tanks are protected by a hard coating.		No change
G.2a Aluminium anodes are **NOT** permitted in ballast tanks.		No change
G.3a For vessels built to classification rules other than the Common Structural Rules (CSR) for Double Hull Oil Tankers, the use of high-strength steel should be limited to no more than 30% of the vessel's steel weight. If this is exceeded, a structural analysis **MUST** be carried out by a recognized Classification Society. The analysis should incorporate a fatigue analysis that takes into account the anticipated trading pattern of the vessel.		No change

2017 CRITERIA	GAP	MAPPING
H.1 The vessel **MUST** have on-board cargo operation and handling procedures in addition to documentation showing maximum loading rates, venting capacities and the maximum permissible pressure and vacuum each tank can withstand. [VIQ 8.1]		No change
H.2 A detailed and documented cargo-handling plan written in the working language of the vessel **MUST** be prepared and available for every cargo or ballast operation undertaken. This cargo plan **MUST** be read and signed by all Deck Officers and the Master. [VIQ 8.16]	Working language of the vessel. This cargo plan MUST be read and signed by all Deck Officers and the Master.	No change
H.3 Material Safety Data Sheets (MSDS) for all products being handled **MUST** be displayed. Where applicable, a copy of the USCG Data Guide should be on-board.		No change
H.4 Cargo pumps **MUST** have emergency stops located: 1.in the Cargo Control Room (CCR); 2.at manifold(s); and 3.just outside the pump room entrance and pump room bottom (if the vessel is fitted with a cargo pump room). The Remote stops **MUST** be tested within 24 hours of expected cargo operations. [VIQ; 8.22] [VPQ. 9.6.3]	Strongly Preferred changed to MUST. Emergency stops are a MUST at all 3 locations. The Remote stops MUST be tested within 24 hours of expected cargo operations.	No change
H.5 All main cargo and ballast pumps located in a pump room, their bearings and casings **MUST** be fitted with high-temperature alarms and trips. It is **Strongly Preferred** that vacuum pumps as part of an Automatic Unloading System (AUS) are fitted with high-temperature alarms and trips. All main cargo & ballast pump drive shaft bulkhead bearings and glands located in the pump room **MUST** be fitted with high-temperature alarms monitoring system. It is **Strongly Preferred** that rotary positive displacement pumps are fitted with alarms and trips for high flash point cargoes, and **MUST** be so fitted for cargoes with flash points below 60ºC.	All main cargo and ballast pumps. It is Strongly Preferred that vacuum pumps as part of an Automatic Unloading System (AUS) are fitted with high-temperature alarms and trips. All main cargo & ballast pump drive shaft bearings and glands MUST have this fitted.	No change
H.6 Vessels **MUST** have appropriate cargo and ballast logbook(s) on-board containing an up-to- date record of events.	Cargo and ballast logbook(s).	No change

2017 CRITERIA	GAP	MAPPING
H.7 Vessels free of inherent intact stability problems are **Strongly Preferred**. Where the vessel is not free from inherent intact stability problems, the operator **MUST** determine all conditions of cargo and ballast operations where IMO stability criteria are not satisfied. Vessels that are not free from inherent intact stability problems or have large width cargo tanks, 'U' section ballast tanks, or double bottom tanks without watertight centreline bulkheads **MUST** have operating instructions that: 1.Indicate the number of tanks which may be slack and still satisfy IMO stability criteria under all possible conditions of liquid (cargo and/or ballast) transfer; 2.Are understandable to the officer-in-charge of transfer operations; 3.Require no extensive mathematical calculations by the officer-in-charge; 4.Illustrate corrective actions to be taken by the officer-in-charge in case of departure from planned values, and in case of emergency situations, such as negative stability causing an angle of loll; and 5.Are prominently displayed in the approved trim and stability booklet, at the Cargo/ballast transfer control station, and in any computer software by which stability calculations are performed. [VIQ 8.8]	Vessels free of inherent intact stability problems.	No change
H.8 A Class-approved cargo computer, or equivalent, **MUST** be provided to enable stability calculations prior to and at any stage of the cargo operation and to calculate hull stresses and **MUST** provide a warning (alert) of unstable or potentially unstable conditions. The loading computer MUST be regularly tested against Class-approved data to ensure operational accuracy; records of this testing are to be maintained. [VIQ 8.5, 8.6; 8.13; 8.10, 8.11] [VPQ CH. 9.5.5]	Strongly Preferred changed to MUST. A Class-approved cargo computer. MUST provide a warning (alert) of unstable or potentially unstable conditions. Regularly tested against Class-approved data to ensure operational accuracy; records of this testing are to be maintained.	No change
H.9 Vessels **MUST** be fitted with bilge alarms in pump rooms, including ballast pump rooms, bow and stern thruster rooms, steering gear room, fore peak store and emergency fire pump room.	Bow and stern thruster rooms, steering gear room, fore peak store and emergency fire pump room.	No change
H.10 Vessels carrying low flash point cargoes **MUST** be fitted with a fixed system capable of continuously monitoring for a potentially flammable atmosphere in cargo pump rooms. [VIQ 8.77] [VPQ. 9.13]	Potentially flammable atmosphere	No change
H.11 The flammable gas detection system in cargo pump rooms **MUST** be fitted with an alarm to indicate the presence of significant concentrations of flammable vapor. It is **Strongly Preferred** that sensors and sampling points for monitoring flammable atmospheres are distributed throughout pump rooms. Ref: OCIMF Information Paper on Pumproom Safety (Reprinted September 1995). [VIQ 8.77] [VPQ. 9.13]	The flammable gas detection system in cargo pump rooms. (Reprinted September 1995)	No change

2017 CRITERIA	GAP	MAPPING
H.12 Vessels **MUST** have pressure gauges with valves or cocks fitted, port and starboard, at each manifold connection outboard of cargo manifold valves. This requirement may be waived on application and justification for chemical carriers and multi-product carriers which have an excessive number of manifolds, and where acceptable alternate arrangements are in place	Strongly Preferred changed to MUST. Vessels MUST have pressure gauges with valves or cocks fitted.	No change
H.13 It is **Strongly Preferred** that vessels are fitted with a Cargo Control Room (CCR) with centralized cargo pump control, valve operation and remote tank level gauges and alarms.	Centralized CCR	New Previously under Appdx A section H - Additional criteria
H.14 Cargo tank venting **MUST** be through approved systems that expel vapor clear of the tank deck area in accordance with the International Safety Guide for Oil Tankers and Terminals (ISGOTT). Where independent full flow P/V valves are installed, they **MUST** be so fitted that they cannot be isolated from the tanks they protect and **MUST** be capable of flowing sufficient volume of gas to prevent damage at the tank's maximum loading/discharge rates. [VIQ 8.35] [VPQ. 9.10.6]		No change
H.15 Vessels **MUST** be able to undertake cargo operations under controlled venting, closed gauging and closed sampling. [VPQ.9.8.1]	No opening of hatch	No change
H.16 A vapor recovery system is required at certain terminals. If fitted on-board, it **MUST** be Class approved. Manifolds **MUST** comply with the OCIMF 'Recommendations for Oil Tanker Manifolds and Associated Equipment' and vessel personnel conducting cargo operations **MUST** be familiar with the safety implications associated with the use of vapor recovery systems. [VPQ CH.9.9.2 & 9.11.1]	Use of vapor recovery systems.	No change
H.17 Tank level measuring devices **MUST** be available for all cargo tanks, slop tanks and bunker tanks (including storage, service and settling tanks). Automatic (fixed) tank gauges are **Strongly Preferred**. Where automatic tank gauges are fitted, these **MUST** have remote readings in the CCR. It is **Strongly Preferred** that tank level measuring devices or automatic (fixed) tank gauges were fitted for all cargo, slop and bunker tanks (including storage, service and settling tanks) are calibrated and certified at least every five years by a recognized company. [VPQ. 9.8.1]	Including storage, service and settling tanks. Tank level measuring devices or automatic (fixed) tank gauges were fitted for all cargo, slop and bunker tanks (including storage, service and settling tanks) are calibrated and certified at least every five years by a recognized company.	No change
H.18 Irrespective of the automatic tank gauging system, vessels **MUST** be fitted with vapor locks capable of drawing liquid samples, and of measuring ullage, temperature, and interface with portable sonic tapes. Cargo tank vapor locks **MUST** be independently calibrated and certified so that measurements taken from them can be used with the vessel's original ullage tables.	Both criteria were combined	Previously under H.19 & H.20

2017 CRITERIA	GAP	MAPPING
H.19 Portable sonic measuring tapes **MUST** be provided on-board to gauge each tank being topped off.Vessel **MUST** have sufficient portable sonic measuring tapes capable of measuring ullage, temperature, and interface in addition to the fixed gauging system for independent monitoring of ullages for tanks being topped off, along with a sufficient number of closed samplers.Vessels **MUST** annually assign a responsible officer to check the accuracy of all the portable sonic measuring tapes against a recently calibrated tape. At any given time, at least one tape **MUST** be within a year from the last calibration date. Calibration of tapes must be performed in accordance with manufacturer's recommendations. Certificates of calibration for the portable sonic measuring tapes **MUST** be available on-board.It is **Strongly Preferred** that calibration frequency for all portable sonic measuring tapes not exceed five years.	Portable sonic measuring tapes	New
H.20 Use of portable measuring equipment, including sonic tapes and sampling devices when loading products in non-inerted tanks **MUST** be in accordance with the precautions to prevent electrostatic ignition recommended in ISGOTT. Except where tanks are fitted with perforated full depth sounding pipes, portable measuring and sampling devices **MUST NOT** be introduced into non-inerted tanks until 30 minutes after cargo flow to the tank stops. Vessels **MUST** be able to safely top off in full compliance with these requirements. If sounding pipes are fitted, they **MUST** be perforated, constructed to extend the full depth of the tank, and be effectively bonded. Full depth sounding pipes **MUST** be fitted to the vapor lock if the vessel has no IG system and carries static accumulating cargoes.		Previously under H.21
H.21 All cargo, ballast and bunker line-up, including a manifold jumper and flexible hose line-up and cargo venting line-up, **MUST** be independently verified by at least two responsible individuals.	Verification by two individuals	New
H.22 Independent high-level alarms **MUST** be fitted for all cargo tanks, slop tanks, fuel and diesel oil bunker tanks in addition to the high-level alarms incorporated in the fixed/automatic tank gauging system. The independent high-level alarms **MUST** have separate wires (feeders) back to the CCR. They **MUST** be used during all cargo, slop and bunker transfer operations and suitably located on deck and CCR to alert personnel conducting cargo, slop or bunker operations. Independent high-level alarms **MUST** be tested prior to cargo, bunker or slop operations, and the tests properly recorded. [VPQ 9.8.7.3]	The independent high-level alarms MUST have separate wires (feeders) back to the CCR. And tested prior to cargo, bunker or slop operations and the tests properly recorded.	No change
H.23 An operational high-level alarms **MUST** be fitted for all fuel and diesel oil service and settling tanks. They **MUST** be used during all bunker transfer operations and suitably located in the engine room to alert personnel conducting bunker transfer. High-level alarms **MUST** be tested at frequent intervals	Operational high-level alarms	New
H.24 Vessel cargo and bunker manifolds and associated valves, reducers and spool pieces **MUST** be fabricated of steel. Flexible hose connections **MUST** be via bolted steel flanges, unless the connection system is supplied and designed for a specifically designated purpose. Grey cast iron and aluminium are **NOT** permitted. Ductile iron may be used if of appropriate strength, yield strength, and elongation.		Previously under H.23

2017 CRITERIA	GAP	MAPPING
H.25 Vessels used for the carriage of more than one grade of cargo **MUST** be capable of maintaining a two valve or equivalent separation between grades at all times during the execution of the voyage, including loading and discharging operations. Gas carriers **MUST** have a distance piece connection and blind flange arrangement for segregation between grades. If a spool is used it should be of same thickness and material as the cargo pipeline flanges. It is Strongly Preferred that such spool pieces are made of SUS 316 material. [VPQ. 9.5.1]	Strongly Preferred changed to MUST. Capable maintaining two valve separation. Gas carriers MUST have a distance piece connection and blind flange arrangement for segregation between grades.	Previously under H.24
H.26 Vessels having conventional pump rooms **MUST** be equipped with at least two operational main cargo pumps.		Previously under H.25
H.27 Vessels **MUST** have on-board documented maintenance procedures and test records that relate to cargo handling equipment, systems, and alarms. Cargo handling equipment, systems, and alarm include but are not limited to the cargo pumps, piping, valves, inert gas system, independent high-level alarms and cargo instrumentation. The vessel **MUST** have defined schedules within their PMS to test these equipment, systems and their alarms and trips.The vessel **MUST** establish and carry minimum spares for cargo handling equipment, systems, and alarms.	Cargo handling equipment, systems, and alarms.Independent high-level alarms.The vessel MUST have defined schedules within their PMS to test these equipment, systems and their alarms and trips.The vessel MUST establish and carry minimum spares for cargo handling equipment, systems, and alarms.	Previously under H.26
H.28 It is **Strongly Preferred** that vessels are fitted with a device in their CCR capable of monitoring and recording the load and discharge manifold pressure outboard of each port and starboard manifold valve.	Outboard of each port and starboard manifold valve.	Previously under H.27
H.29 All the cargo equipment such as pressure gauges, vacuum gauges, thermometers etc. **MUST** be checked annually for accuracy by a responsible vessel engineer using a recently calibrated and certified master gauge. All cargo pressure and vacuum gauges including thermometers **MUST** be calibrated and certified at least every five years by a recognized company. For gas carriers refer to Section S of this document.	Checked for accuracy by a responsible vessel engineer using a recently calibrated and certified master gauge. All cargo pressure and vacuum gauges including thermometers MUST be calibrated and certified at least every five years by a recognized company. Section S for gas.	Previously under H.28

2017 CRITERIA	GAP	MAPPING
H.30 Irrespective of vessel complying with the (IMO) International Convention for the Safety of Life at Sea (SOLAS) primary and secondary venting system, vessels **MUST** have fixed individual cargo tank pressure monitoring equipment fitted with a visual display unit installed in the CCR. The system shall include the manufacturer's set high and low-pressure alarms as detailed within OCIMF SIRE 6 VIQ CH. 8.33, and additionally a further minimum two adjustable, user-defined, alarm limits which can be set as required. These alarms should provide an audible and visual alarm in the CCR if the set limits are exceeded.	Irrespective of vessel complying with the IMO primary and secondary venting system. Adjustable alarm limits which can be set as required.	Previously under H.29
H.31 It is **Strongly Preferred** that vessels are fitted with a cargo tank pressure monitor display and alarm unit on the bridge in addition to the display and alarm unit installed in the CCR.		Previously under H.30
H.32 Vessels **MUST** use appropriate design standard manufacturer supplied and certified cargo hoses compatible for the cargo being transferred. As a minimum, hoses on-board **MUST** meet the following specifications: 1. The Maximum Working Pressure (MWP) of the cargo hoses **MUST** be not less than13.8 bar; 2. For petroleum and chemical vessels: • Rubber cargo hoses **MUST** comply with BS EN 1765; • Composite cargo hoses **MUST** comply with BS EN 13765; 3. For asphalt/bitumen and molten sulphur vessels: BS EN 13482. Vessels **MUST** carry cargo hose certificates on-board issued by the manufacturer confirming that the cargo hoses meet the appropriate European Standards (ENs)	Cargo hose standard	New
H.33 All cargo hoses on-board **MUST** be inspected prior to each use to ensure they are free of kinks or any other deterioration or damage. Cargo hose assembly exhibiting deterioration or damage **MUST NOT** be used. For those connections where an external gasket is used, vessels **MUST** use a new gasket for each connection compatible for the cargo being transferred.	Cargo hose inspection	New
H.34 All cargo hoses on-board in service **MUST** have a documented inspection and testing at least annually to confirm their suitability for continued use. This should include: 1. A visual check for deterioration/damage; 2. Pressure test to 1.5 times the MWP but not less than 22.5 bar. In addition vacuum test smooth bore rubber cargo hoses to 0.85 bar; 3. Permanent and/or temporary elongations; and 4. Electrical continuity test.Each cargo hose **MUST** be marked with the test date and rated MWP, and be individually numbered for identification purpose linked to their certificates.	Cargo hose testing	New
H.35 Each cargo hose type on-board **MUST** have retirement age defined in consultation with the cargo hose manufacturer. The cargo hose on-board **MUST** be withdrawn from service at their defined retirement age but not exceeding 6 years for rubber cargo hoses and 4 years for composite cargo hoses.	Cargo hose retirement age	New
ADDITIONAL CRITERIA FOR TERM CHARTERED TONNAGE		
H.1a The vessel **MUST** have MARPOL Segregated Ballast Tanks (SBT). If double-hulled, the vessel **MUST** have a continuous longitudinal bulkhead in the cargo tanks in addition to the longitudinal bulkheads forming the cargo block (this does not apply to vessels with cargo wing tanks).	Does not apply to vessels with cargo wing tanks.	No change

2017 CRITERIA	GAP	MAPPING
H.2a The vessel **MUST** be capable of handling at least three grades of cargo whilst maintaining double valve segregation between grades.		No change
H.3a The vessel **MUST** be equipped with at least three operational main cargo pumps. Reciprocating main cargo pumps are NOT acceptable.		No change
H.4a Cargo manifolds, bunker connections, vapor recovery connections and lifting equipment **MUST** meet OCIMF 'Recommendations for Oil Tanker Manifolds and Associated Equipment'. Class approved vapor recovery connections **MUST** be provided forward and aft of the cargo manifolds. For gas carriers, the cargo manifolds **MUST** meet SIGTTO recommendations.	vapor recovery connections Class approved. For gas carriers, the cargo manifolds MUST meet SIGTTO recommendations.	No change
H.5a Cargo valves on the manifold, sea-chest, and pump room bulkhead **MUST** be steel or approved ductile iron.		No change
H.6a The vessel **MUST** be fitted with a Cargo Control Room (CCR) with centralized cargo pump control, valve operation and remote tank level gauges and alarms.		No change
H.7a Automatic fixed tank gauges, tank level measuring devices and independent high-level alarms **MUST** be installed in all cargo, slop and bunker tanks (including storage, service, and settling tanks) with remote readout and alarms in the CCR. Automatic fixed tank gauges for all cargo, slop and bunker tanks (including storage, service, and settling tanks) **MUST** be calibrated and certified by a recognized company at intervals not exceeding five years.	Automatic fixed tank gauges…... including storage, service, and settling tanks MUST be calibrated and certified by a recognized company at intervals not exceeding five years.	No change
H.8a Term charter vessels **MUST** have heating coils fitted in cargo slop tank(s)		No change
H.9a Vessels **MUST** have a fixed system to monitor for flammable atmospheres in the cargo pump room(s), cofferdams and other spaces adjacent to the cargo block. (For example, ballast spaces on double side or double bottom vessels where explosive vapours may accumulate, sensors **MUST** be fitted at the top and bottom of the pump room).		No change
H.10a In addition, if carrying cargoes that may contain H2S, the vessel **MUST** have a fixed system to monitor for H2S in the pump room.		
H.11a The vessel **MUST** be fitted with a cargo tank pressure monitor display and alarm unit on the bridge in addition to the display and alarm unit installed in the cargo control room (H.30)	Monitor display and alarm on bridge	New

2017 CRITERIA	GAP	MAPPING
J.1 An Inert Gas system (IGS), where fitted, **MUST** be used for the carriage of all petroleum cargoes. It is **Strongly Preferred** that all vessels, irrespective of DWT, are fitted with IGS or Nitrogen System as applicable to cargo type.	It is Strongly Preferred that all vessels, irrespective of DWT, are fitted with IGS or Nitrogen System as applicable to cargo type.	No change
J.2 An IGS, Nitrogen System, or Dry Air System where fitted, **MUST** be maintained in full working order and have documented maintenance procedures, including maintenance and test records. Maintenance records **MUST** include scrubber tower, blowers, deck seal, P/V breakers, P/V valves, mast risers, oxygen analyser, pumps, non-return valves, dehumidifiers and driers, chiller unit, fittings and instrumentation containing critical components, and inspection and examination of the inert gas pipe sections for corrosion or leakage. [VPQ. 9.15] [VIQ 9.4]	Non-return valves, dehumidifiers and driers, chiller unit, fittings and instrumentation containing critical components.	No change
J.3 The IGS **MUST** be operated as per a detailed manual approved by the vessel's classification society. It is **Strongly Preferred** that the IMO publication 'Inert Gas' is carried on IGS fitted vessels. A log of inerting and gas freeing operations **MUST** be maintained on-board. [VPQ 9.15]	And gas freeing operations.	No change
J.4 IGS or Nitrogen Systems Alarms and trips **MUST** be tested prior to use of the system and tests properly recorded. It is **Strongly Preferred** that IGS or Nitrogen System alarms and trips are tested 24 hours prior to use.	Or Nitrogen Systems. MUST be tested prior to use of the system. It is Strongly Preferred that IGS or Nitrogen System alarms and trips are tested 24 hours prior to use.	No change
J.5 A calibration check of the oxygen analyser **MUST** be carried out prior to putting IG system into use and records should be maintained. It is **Strongly Preferred** that oxygen analyser is calibrated 24 hours prior to a cargo discharge.	It is Strongly Preferred that oxygen analyser is calibrated 24 hours prior to a cargo discharge.	No change
J.6 All vessels fitted with IGS system **MUST** have a complete spare IGS oxygen (O2) analyser unit. It is **Strongly Preferred** that this spare IGS O2 analyser is permanently fitted as an additional IGS O2 analyser to serve as a back-up in case of failure of the main IGS O2 analyser.	All vessels fitted with IGS system MUST have a complete spare IGS oxygen (O2) analyser unit. Permanently fitted as an additional.	No change
J.7 In regard to cargo tank pressure and vacuum protection, all vessels **MUST** comply with the provisions of SOLAS regardless of their build date.		No change

2017 CRITERIA	GAP	MAPPING
J.8 The IGS deck seal **MUST** be of the 'Wet' or 'Semi-dry' type. 'Dry' deck seals are not acceptable. For vessels delivered after 30th November 2017, 'Semi-dry' deck seals relying on venturi or equivalent are **not acceptable**; new 'Semi-dry' deck seals **MUST** be of the water displacement type. For all deck seals, the maintenance procedures (see J.2) **MUST** include frequent inspection for blocking or clogging of piping and internal openings critical to the function of the seal. Chemical carriers fitted with inert gas systems but no deck seals **MUST** comply with the enhanced requirements for block and bleed systems identified by the OCIMF paper 'Inert Gas Systems: Block And Bleed Valve Arrangements For Chemical Carriers Carrying Chemicals And Petroleum Products' (published January 2000). [VPQ 9.15.11]	For vessels delivered after 30th November 2017, 'Semi-dry' deck seals relying on venturi or equivalent are not acceptable; new 'Semi-dry' deck seals MUST be of the water displacement type. For all deck seals, the maintenance procedures MUST include frequent inspection for blocking or clogging of piping and internal openings critical to the function of the seal.	No change
J.9 The IGS lines **MUST** be inspected and drained at regular intervals, and records maintained.	Record maintained.	No change
J.10 The procedure in J.9, **MUST** be carried out immediately in the event of a tank overfill. Crude oil vessels fitted with a Crude Oil Washing (COW) system **MUST** have clearly established procedures for crude oil washing. A class approved COW manual **MUST** be available on-board. [VIQ 8.52] [VPQ 9.15.20.1]	Crude oil vessels fitted with a Crude Oil Washing (COW) system MUST have clearly established procedures for crude oil washing. A class approved COW manual MUST be available on-board.	No change
J.11 All officers in charge of COW operations **MUST** have knowledge of the on-board COW procedures. [VIQ 8.54]		Previously under J.12
J.12 Operators **MUST** establish a COW checklist to be followed by vessel staff when conducting operations. This checklist **MUST** cover pre- and post-operation checks. [VIQ 8.53]		Previously under J.13
J.13 Current IMO publication of 'Crude Oil Washing System **MUST** be available on-board for reference.		Previously under J.15
ADDITIONAL CRITERIA FOR TERM CHARTERED TONNAGE		
J.1a: The vessel **MUST** have individual pressure/vacuum devices on each tank capable of venting at the maximum tank rate during loading or discharging.		No change
J.2a: A stand-by oxygen (O2) analyser **MUST** be permanently fitted as an additional IGS O2 analyser to serve as a back-up means in case of failure of the main O2 analyser.	permanently fitted as an additional IGS O2 analyser	No change

SECTION K MOORING

2017 CRITERIA	GAP	MAPPING
Vessels **MUST** comply with the OCIMF Mooring Equipment Guidelines (MEG).		No change
K.1 The following table lists minimum mooring requirements by vessel size. Some terminals may require additional mooring lines to supplement those listed. **(SEE TABLE)** **IMPORTANT NOTE** All mooring lines for vessels 45k DWT and above required by the table **MUST** be fitted on self-stowing mooring winch drums (split type is **Strongly Preferred**) and fitted with brakes having a holding capacity in accordance with the OCIMF MEG. **HIGH-MODULUS SYNTHETIC FIBER ROPES** Mooring lines required by the table may be high-modulus synthetic fibre ropes with equivalent breaking strength. However, if so fitted, the rope manufacturer's guidance and OCIMF MEG **MUST** be fully complied with. If fitting high-modulus synthetic fibre ropes in place of wire ropes, Operators **MUST** be aware that some terminals may continue to insist on wire ropes being used.		No change
K.2 Vessels **MUST NOT** use mooring lines (wire, high-modulus or regular synthetic fibre ropes) of differing elasticity, running in the same direction (i.e. mixed mooring).	Vessels MUST NOT use mixed mooring.	No change
K.3 Synthetic mooring tails, if fitted to wire ropes, **MUST** be connected to the wire with Mandel, Boss or Tonsberg shackles. Where tails are fitted to high-modulus synthetic fibre ropes, the connection **MUST** be made in compliance with the recommendations laid down by the manufacturer of the high-modulus synthetic fibre rope. [VIQ 9.2] [VPQ 10.1.5]		No change
K.4 When used, synthetic mooring tails **MUST** meet the latest OCIMF guidelines. [VIQ 9.2]	Latest OCIMF guidelines.	No change
K.5 Mooring wires and synthetic lines **MUST** be reeled on their drums in the direction which enhances brake holding power.		No change
K.6 All conventional tankers greater than 100,000 DWT other than shuttle tankers with bow loading system **MUST** be fitted with two bow stoppers.	All conventional tankers. Other than shuttle tankers with bow loading system.	No change
K.7 Conventional tankers outfitted for mooring at SPMs **MUST** be fitted with equipment in accordance with OCIMF guidelines. It is **Strongly Preferred** that the vessel outfitted for mooring at SPMs are **NOT** fitted with Smit type brackets. Refer to: The OCIMF 'Recommendations for Equipment Employed in the Bow Mooring of Conventional Tankers at Single Point Moorings' and OCIMF 'Mooring Equipment Guidelines'	Conventional tankers. It is Strongly Preferred that the vessel outfitted for mooring at SPMs are NOT fitted with Smit type brackets.	No change

2017 CRITERIA	GAP	MAPPING
K.8 Vessels intended for Multi Buoy Moorings (MBMs) **MUST** have closed chocks which **MUST** be of sufficient number to moor to typical MBM configurations as described in the OCIMF MEG. Vessels intended for specific MBM terminals **MUST** have sufficient closed chocks to meet the terminal mooring requirements.	Sufficient number to moor to typical MBM configurations as described in the OCIMF MEG. Vessels intended for specific MBM terminals MUST have sufficient closed chocks to meet the terminal mooring requirements.	No change
K.9 All mooring ropes, wires, winches, brakes, tails and shackles **MUST** be in good condition.		No change
K.10 Operators **MUST** ensure that winch brake holding capacity at the rendering point is tested annually and that the proper setting is recorded. For example, a tag, stating the proper torque, attached to a screw brake and provision of a torque wrench for proper setting in service. (See OCIMF MEG). [VIQ 9.5]		No change
K.11 It is **Strongly Preferred** that all mooring wires eyes have mechanically spliced eyes. Certificates listing the breaking strength of each wire and rope **MUST** be kept on-board. Records **MUST** identify the wires or rope to the winches on which they are deployed.	It is Strongly Preferred that all mooring wires eyes have mechanically spliced eyes.	No change
K.12 Mooring winches, lines, and fittings **MUST** have documented maintenance procedures and test records. Maintenance **MUST** include brake and linkage inspection and overhaul, along with winch brake rendering tests. [VIQ 9.4]		No change
K.13 Hose lifting equipment **MUST** be sized so as to adequately handle the anticipated range of equipment.The following will serve as a guideline:Vessels up to 16,000 DWT = 1 to 5 ton SWL16,001 DWT to 25,000 DWT = 10 ton SWL25,001 DWT to 60,000 DWT = 10 ton SWL60,001 DWT to 160,000 DWT = 15 ton SWLAbove 160,001 DWT = 20 ton SWL. Gas carriers **MUST** meet the lifting equipment recommendations of the Society of International Gas Tanker and Terminal Operators (SIGTTO) Manifold Recommendations for Liquefied Gas Carriers.	Gas carriers MUST meet the lifting equipment recommendations of the Society of International Gas Tanker and Terminal Operators (SIGTTO) Manifold Recommendations for Liquefied Gas Carriers.	No change
K.14 Vessels intended for All Buoy Berths (ABBs) **MUST** have closed chocks both forward and aft with sufficient number to moor to typical ABB mooring configurations. Vessels intended for specific ABB terminals MUST **have** sufficient closed chocks to meet the terminal mooring requirements.	All Buoy Berths	New
K.15 The operator's Vessel Safety Management Systems **MUST** identify risks associated with mooring operations and include appropriate safeguards against those identified risks, including ensuring that vessel personnel are well aware of snap-back zones whilst performing mooring operations.	No marking requirement for snap-back zones	No change

2017 CRITERIA	GAP	MAPPING
K.16 All anchors and anchoring systems, inclusive of stern anchoring systems, including anchor chain, joining shackles, windlass, stoppers, pawl bar and bitter-end **MUST** be in full operational condition (no permanent or temporary defects or restrictions in operating).	All anchors and anchoring systems, inclusive of stern anchoring systems, including anchor chain, joining shackles, windlass, stoppers, pawl bar and bitter-end. No permanent or temporary defects or restrictions in operating.	No change
K.17 In line with the OCIMF MEG; separate strong points and chocks specifically for tug escort and pull-back duties **MUST** be fitted on all tankers over 20,000 DWT. Where 'Emergency Towing Arrangements' (ETA) are fitted as required by SOLAS this will meet the above requirements provided they are suitable for this dual purpose, and use should not compromise the deployment or effectiveness of the emergency towing arrangements.		No change
ADDITIONAL CRITERIA FOR TERM CHARTERED TONNAGE		
K.1a: Vessels outfitted for mooring at SPMs **MUST** be fitted with Bow Chain Stoppers. Refer to: The OCIMF 'Recommendations for Equipment Employed in the Bow Mooring of Conventional Tankers at Single Point Moorings' and OCIMF 'Mooring Equipment Guidelines'	Bow Chain Stoppers. Recommendations for Equipment Employed in the Bow Mooring of Conventional Tankers at Single Point Moorings.	No change

2017 CRITERIA	GAP	MAPPING
L.1 Vessels **MUST** be fitted with sufficient portable VHF or UHF intrinsically safe mobile units for use by key personnel involved with shipboard operations. These portable mobile units **MUST** have an adequate selection of channels available to prevent interference between vessels in congested ports. VHF radio telephones, required under SOLAS Reg. 6. 2.1.1, should **NOT** be used for this purpose. [VIQ 10.14] [VPQ11.1.11]	Shipboard operations. Portable mobile units. Should NOT.	No change
L.2 Where the vessel has a Cargo Control Room (CCR) sited in the safe area, a VHF radio telephone **MUST** be fitted. [VPQ 11.1.9]		No change
L.3 The vessel **MUST** be fitted with satellite communication equipment capable of data and voice communication.	Satellite communication equipment.	New
L.4 It is **Strongly Preferred** that the operators have established guidelines and procedures for the use of social media and mobile phones by the ship's staff during normal operations and in the event of an emergency.	Procedures for the use of social media and mobile phones.	New
ADDITIONAL CRITERIA FOR TERM CHARTERED TONNAGE		
No additional criteria.		

2017 CRITERIA	GAP	MAPPING
M.1 Vessels **MUST** be fitted with bilge alarms in the engine room. There **MUST** be a procedure to test bilge alarms weekly and a record maintained accordingly. It is **Strongly Preferred** that the bilge pump on-board the vessel has a long run alarm, and the alarm's reliability is periodically tested. [VIQ 11.39] [VPQ 12.7.1]	There MUST be a procedure to test bilge alarms weekly and a record maintained accordingly. It is Strongly Preferred that the bilge pump on-board the vessel has a long run alarm, and the alarm's reliability is periodically tested.	No change
M.2 One of the steering systems for the vessel **MUST** operate from the emergency power supply. It is **Strongly Preferred** that all vessels, irrespective of Gross Registered Tonnage (GRT), comply with SOLAS Chapter II-1, Regulation 29, Para.16, and Para.20.	Irrespective of Gross Registered Tonnage (GRT)	No change
M.3 Vessels greater than 16k DWT **MUST** be fitted with a main and an auxiliary steering system including two independent steering motors and hydraulic pumps.		No change
M.4 Main engine and steering gear **MUST** be tested prior to arrival and departure from port. Emergency steering drills **MUST** be carried out periodically and at least once in three months. Bridge and engine watch keepers **MUST** be familiar with the change-over procedures from main to emergency steering gear and operation in emergency mode. Clear written emergency change over instructions MUST be posted at relevant locations for bridge and engine watchkeepers on actions that need to be taken.	Clear written emergency change over instructions MUST be posted at relevant locations for bridge and engine watchkeepers on actions that need to be taken.	No change
M.5 All watch-keeping engineers **MUST** be familiar with local and emergency manoeuvring procedures of the main engine. Local and emergency manoeuvring **MUST** be tested during emergency manoeuvring drills, which **MUST** be carried out periodically and at least once every three months. Local and emergency manoeuvring instructions MUST be posted at all manoeuvring stations.	Local and emergency manoeuvring MUST be tested during emergency manoeuvring drills, which MUST be carried out periodically and at least once every three months. Local and emergency manoeuvring instructions MUST be posted at all manoeuvring stations.	No change
M.6 It is **Strongly Preferred** that senior engineering officers (Chief Engr and 2nd Engr) undergo a recognized industry training course in main engine manoeuvring and controls.	Main engine manoeuvring and controls training for C/E & 2/E	New

2017 CRITERIA	GAP	MAPPING
M.7 All Vessels **MUST** have a Planned Maintenance System (PMS) in place with maintenance routines based on manufacturer's recommendation and vessel experience. It is **Strongly Preferred** that the Planned Maintenance System (PMS) is Class approved.	Additional criteria for term chartered tonnage moved here.	Previously under M.13 & Appdx A section M - Additional criteria
M.8 Vessels **MUST** have a weekly test Program for communication equipment, lighting, emergency tools and local gauges at the local and emergency steering and manoeuvring stations.	Weekly test program	New
M.9 During engine stand-by conditions and manoeuvring (including thruster operations) in constrained or congested waters, vessels **MUST** have sufficient reserve electrical power available from running electrical generators such that if one were to fail, it would not affect the manoeuvrability of the vessel.	(including thruster operations) in constrained or congested waters	Previously under M.6
M.10 The relevant procedure covering the action and recovery to be taken in case of ship's loss of electrical power (black out) **MUST** be posted on the bridge, Engine Control Room (ECR), main switch board and emergency switch board for ready reference, as applicable.	Black out procedure	New
M.11 During engine stand-by conditions and when manoeuvring in constrained/congested or security sensitive waters, the vessel operators **MUST** have identified engine room manning criteria specified in their Safety Management System.	E/R manning criteria	New
M.12 Vessels **MUST** have a clearly identified list of critical systems and critical alarms which are crucial for the operational safety and manoeuvrability of the vessel.	crucial	Previously under M.7
M.13 Watchkeepers **MUST** have a clear understanding of actions to be taken for various critical alarms and trip indicators on the bridge and engine rooms.	Understanding critical alarms and trips	New
M.14 Roles and responsibilities for maintaining these critical systems (M.13 criteria) **MUST** be identified on-board and ashore. Critical systems include the main propulsion system and steering gear (see also TMSA Element 4). All vessels **MUST** have defined schedules within their PMS to test these critical systems and its alarms and trips.	Maintaining critical alarms and trips	New
M.15 There **MUST** be procedures in place on-board vessels to address failure, disarming or deactivation of any critical system, alarm, control or shutdown. These procedures **MUST** clearly identify how to address short term and long term defects.		Previously under M.8
M.16 The vessel **MUST** establish and carry minimum spares for critical systems and alarms.		Previously under M.9
M.17 The vessel operator **MUST** identify instruments critical to the safe and efficient operation of the ship's machinery, and their functionality **MUST** be verified at regular intervals with approved calibration equipment or by a certified calibration company.	And their functionality. Approved calibration equipment or by a certified calibration company.	Previously under M.16

2017 CRITERIA	GAP	MAPPING
M.18 Vessels **MUST** have the fuel quality tested by an independent laboratory prior to putting fuel into use. This fuel quality assessment test **MUST** include both Marine Gas Oil (MGO) and Heavy Fuel Oil (HFO). It is **Strongly Preferred** that vessels subscribe to a fuel quality assessment Program.	This fuel quality assessment test MUST include both Marine Gas Oil (MGO) and Heavy Fuel Oil (HFO).	Previously under M.10
M.19 Vessels **MUST** subscribe to a regular lube oil analysis Program by an independently recognized organization, in which a minimum the lube oil of the main engine, diesel generators, steering gear, stern tube, deck hydraulic machinery (winches, windlass, cranes etc.) and cargo hydraulics valves system are tested. It is **Strongly Preferred** that the regular testing period should not exceed three months.	Steering gear, stern tube, deck hydraulic machinery (winches, windlass, cranes etc.) and cargo hydraulics valves system are tested. It is Strongly Preferred that the regular testing period should not exceed three months.	Previously under M.11
M.20 Vessels **MUST** carry an on-board water content meter to check the water content in machinery circulatory lube oil systems of the main engine, diesel generators and steering every month. It is Strongly Preferred that the vessel also has on-board meters to check the viscosity and Total Base Number (TBN) content in Machinery lube oil systems of the main engine, diesel generators and steering gear every month.	Water content meter check	New
M.21 All flexible pressure hoses in the engine room **MUST** be identified and **MUST** be included in the on-board maintenance and inspection schedule. It is **Strongly Preferred** that expansion joints in the high-temperature cooling water system of main and auxiliary machinery should have a replacement and maintenance schedule in the PMS.	Strongly Preferred changed to MUST. It is Strongly Preferred that expansion joints in the high-temperature cooling water system of main and auxiliary machinery should have a replacement and maintenance schedule in the PMS.	Previously under M.12
M.22 Vessels **MUST** have a Defect Reporting System (DRS) in place. DRS on-board **MUST** have the capability of recording reported defects, follow-ups and close out. It is Strongly Preferred that the DRS is incorporated within the on-board PMS.	Defect reporting system	New
M.23 The vessel **MUST** follow a documented inventory system of spares for on-board machinery. There **MUST** be objective evidence that this is kept up to date.		Previously under M.14
M.24 There **MUST** be evidence that machinery or equipment under maintenance or repair has been satisfactorily tested on completion of repairs.		Previously under M.15

2017 CRITERIA	GAP	MAPPING
M.25 Vessels **MUST** have a procedure to test the operation of all standby machinery auto start functions.	Standby machinery testing	New
M.26 For vessels which have the capability to synchronize the emergency switchboard with the main switchboard, the emergency generator **MUST** be tested on load and for a reasonable period of time at least once a month. For all other vessels that do not have this capability, the emergency generator **MUST** be tested on load and for a reasonable period of time, at least once every three months. The procedure to carry out the test of the emergency generator at reasonable load **MUST** be posted near the emergency generator.	For vessels which have the capability to synchronize the emergency switchboard with the main switchboard,	Previously under M.17
M.27 Vessels **MUST** have weekly program in place for testing emergency and critical equipment and machinery such as the emergency generator, fire pump, compressor, lighting, fire detection and alarm system *etc*.In addition to the above tests, checks **MUST** also be performed on fuel oil tank, lube oil and sump tank, cooling water tank level gauges and battery pack etc.	Emergency and critical equipment weekly testing	New
M.28 A bunker transfer procedure for daily bunker transfers **MUST** be in place. This **MUST** be read and understood by the watch-keeping engineers.		Previously under M.18
M.29 A bunker plan **MUST** be prepared by the vessel prior to the commencement of bunkering operations. The individuals involved in the process **MUST** have a clear understanding of the procedures, their responsibilities, and actions to be taken in an emergency. A formal risk assessment **MUST** be carried out or an existing one reviewed prior to bunkering operations. Vessels conducting bunkering operations from a bunker barge alongside a scheduled load or discharge berth **MUST** conduct a risk assessment identifying risks associated with simultaneous operations, including identifying critical phases of cargo operations. Vessel **MUST NOT** conduct any other (non-cargo) operations simultaneously during such critical cargo operations.	Formal risk assessment Strongly Preferred changed to MUST. Vessels conducting bunkering operations from a bunker barge alongside a scheduled load or discharge berth MUST conduct a risk assessment. Vessel MUST NOT conduct any other (non-cargo) operations simultaneously during such critical cargo operations.	Previously under M.19
M.30 Bunker procedures **MUST** address potential dangers associated with a toxic gas such as Hydrogen Sulfide (H_2S) in the fuel. It is **Strongly Preferred** that the maximum H_2S content in the bunkers to be supplied is specified by the vessel operators.	It is Strongly Preferred that the maximum H2S content in the bunkers to be supplied is specified by the vessel operators.	Previously under M.20
M.31 Vessels **MUST** have clear written procedures for boiler operations and maintenance, including the exhaust gas economizer. These **MUST** include instructions for emergency operations specific to the vessel.		Previously under M.21

2017 CRITERIA	GAP	MAPPING
M.32 Vessels **MUST** carry sufficient spares and have PMS procedures in place to carry out regular checks and maintenance on intrinsically safe and explosion proof equipment and lighting.	Intrinsically safe and explosion proof equipment maintenance	New
M.33 Vessel's Safety Management System **MUST** identify risks associated with working on electrical equipment and include appropriate safeguards against those identified risks, including providing instructions on precautions to be taken when working on 'high voltage' and 'live' electrical equipment. The Safety Management System **MUST** address safeguards related to activities such as troubleshooting on live switchboards and the use of electrical test panels, if applicable.	Safety Management System "should" changed to MUST address…	Previously under M.22
M.34 Vessels which have been converted to comply with sulphur emission regulations **MUST** have procedures in place for the use of Low Sulphur Marine Gas Oil (LSMGO) in Boilers. (Reference – INTERTANKO and OCIMF Guidance Paper on using LSMGO in Marine Boilers.)		Previously under M.24
ADDITIONAL CRITERIA FOR TERM CHARTERED TONNAGE		
No additional criteria.	Moved to M.7	

SECTION N GENERAL APPEARANCE AND CONDITION

2017 CRITERIA	GAP	MAPPING
N.1 All vessel equipment and areas **MUST** be properly maintained, clean, painted, and in good fabric condition. All equipment **MUST** be in good working order.		No change
N.2 Hull markings **MUST** be correctly placed and clearly visible.	clearly visible	No change
N.3 All working area decks **MUST** have clearly identified and distinguished marked non-slip surfaces.	All working area decks... and distinguished marked	No change
N.4 The general condition of service pipe work **MUST** be satisfactory and it **MUST** be free from corrosion, pitting and soft patches or other temporary repairs.		No change
N.5 All deck openings, including watertight doors and portholes, **MUST** be in a satisfactory condition and capable of being properly secured.		No change
N.6 All fuel, ballast, space vents and air pipes **MUST** be clearly marked to indicate the spaces they serve.		No change
N.7 All alleyways and escape routes **MUST** be free of obstructions and their exits **MUST** be clearly marked.	and escape routes	No change
N.8 All public spaces, including smoke rooms, mess rooms, sanitary areas, food storerooms, food handling spaces, refrigerated spaces, galleys, and pantries **MUST** be clean, tidy and in a hygienically satisfactory condition.		No change
N.9 Personnel alarms in refrigerated spaces **MUST** be maintained in good order. These alarms **MUST** be tested periodically and records maintained.	Alarms Strongly Preferred changed to MUST be tested periodically and records maintained.	No change
ADDITIONAL CRITERIA FOR TERM CHARTERED TONNAGE		
No additional criteria.		

SECTION P SHIP TO SHIP TRANSFER SUPPLEMENT

2017 CRITERIA	GAP	MAPPING
P.1 All ship to ship transfers **MUST** be conducted per the ICS/OCIMF/SIGTTO/CDI Ship to Ship Transfer Guides for Petroleum, Chemicals and Liquefied Gases. [VPQ 13.1.1]	SIGTTO/CDI Ship to Ship Transfer Guides for Petroleum, Chemicals and Liquefied Gases.	No change
P.2 The Master and at least two Deck Officers **MUST** have previous appropriate experience in Ship to Ship (STS) operations.	At least two Deck Officers experience in Ship to Ship (STS) operations.	No change
P.3 Vessels **MUST** establish risk assessments for STS operations. These **MUST** include consideration of the constraints of the location, sea room, weather, seasonal constraints, spill response capabilities, comparison of vessel sizes, use of support vessels and experience of vessels' personnel. STS locations **MUST** be subjected to a risk assessment and approved by the vessel operator.	Risk assessment and approval	New
LIGHTERING IN THE GULF OF MEXICO (GOM) P.4 Special SRM criteria apply for STS Lightering in the Gulf of Mexico (GOM). The criteria may be obtained from SRM at the following email address: DS-SRM-Vetting@exxonmobil.com	SRM ……..... email address: DS-SRM-Vetting@exxonmobil.com	Previously under P.5
ADDITIONAL CRITERIA FOR TERM CHARTERED TONNAGE		
Criteria to be determined by the trade.		

SECTION Q ICE OPERATIONS - APPLICABLE TO VESSELS OPERATING IN SEVERE SUB-ZERO CONDITIONS

2017 CRITERIA	GAP	MAPPING
(Applicable to Vessels with an Ice Class Notation or Valid Winterization Certificate)	Applicability	Previously under Q.1
Q.1 The vessel's Safety Management System **MUST** identify risks associated with operations in sub-zero and ice conditions, and provide appropriate safeguards against those identified risks, including, procedures for personnel training, navigation, management of cargo and ballast system, operations and preparation of equipment including firefighting and lifesaving appliances in such conditions. [VIQ 13.1]	management of cargo and ballast system,... including firefighting and lifesaving appliances	Previously under Q.2
Q.2 Vessels **MUST** have means to prevent the icing up of cargo tank primary and secondary venting arrangements; air ventilation to settling and service tanks required for the operation of the main propulsion plant and essential auxiliaries. It is **Strongly Preferred** that there are means to prevent icing up of air vents for ballast, bunker and fresh water tanks. [VIQ 13.19 &13.20]	Cargo tank primary and secondary venting arrangements; air ventilation ….. It is Strongly Preferred that there are means to prevent icing up of air vents for ballast, bunker and fresh water tanks.	Previously under Q.3
Q.3 Vessels **MUST** have means to keep at least one machinery space sea water inlet ice-free. [VIQ 13.5]		Previously under Q.4
Q.4 Vessels **MUST** have means provided for ice observation and detection. Such means may include searchlight of a narrow beam type, thermal imaging, ice radar or a visual lookout forward, this includes specific training to identify types of ice and the relative threat that ice poses given the vessels intended operations. [VIQ 13.2]	Such means may include searchlight of a narrow beam type, thermal imaging, ice radar or a visual lookout forward, this includes specific training to identify types of ice and the relative threat that ice poses given the vessels intended operations.	Previously under Q.5
Q.5 One of the radars fitted **MUST** be of a type classed as being suitable for sub-zero temperatures. [VIQ 13.11]		Previously under Q.6
Q.6 Systems **MUST** be in place for the routine receipt of navigational, meteorological and environmental data, including ice data and ice charts. [VIQ 13.3]		Previously under Q.7
Q.7 Personal Protective Equipment (PPE) provided **MUST** be suitable for sub-zero conditions. [VIQ 13.7]		Previously under Q.8
ADDITIONAL CRITERIA FOR TERM CHARTERED TONNAGE		
Criteria to be determined by the trade.		

SECTION R CHEMICAL CARRIER SUPPLEMENT

2017 CRITERIA	GAP	MAPPING
The following minimum safety criteria for chemical carriers are additional to criteria described in the previous sections.		No change
R.1 Material Safety Data Sheets (MSDS) specific to the particular product grade **MUST** be available for all chemical products on-board. [VIQ 8.21]	specific to the particular product grade	No change
R.2 Vessels **MUST** have written procedures and supporting technical drawings for cleaning and emission control of the cargo system. [VIQ 8.21 & 8.30]	and supporting technical drawings	No change
R.3 It is **Strongly Preferred** that vessels are provided with closed process samplers which are to be connected to fixed sampling points installed at pump stacks and manifolds etc. for sampling toxic chemical cargoes.	Closed process samplers	New
R.4 When handling chemicals not previously carried either by the vessel operator or on the vessel, a review of the safety aspects and handling procedures **MUST** be carried out by the vessel operator and any change in procedures communicated to the vessel.	When handling chemicals not previously carried either by the vessel operator or on the vessel, a review of the safety aspects and….. By vessel operator	No change
R.5 All officers **MUST** be familiar and aware of the dangers associated with tank cleaning and ventilation operation after carriage of volatile or toxic products. A responsible officer **MUST** develop a tank cleaning plan prior to cleaning operation. All tank cleaning operations **MUST** be supervised by a responsible officer. [VIQ 8.30 & 8.31]	Tank cleaning operations	New
R.6 Appropriate PPE suitable for the grade of cargo carried and associated hazards **MUST** be provided, maintained and used by all crew members. [VIQ 8.86]	PPE suitable for the grade of cargo carried and associated hazards… maintained	Previously under R.7
R.7 Showers and eye baths **MUST** be provided, easily accessible on deck, capable of operating in all ambient conditions likely to be encountered, regularly tested, and available at all times. [VIQ 8.85] [IBC14.3.4]	regularly tested	Previously under R.8
R.8 Vessels **MUST** carry emergency procedures that cover, as a minimum, action to be taken in the event of chemical spill and pollution. [VIQ8.20 & 8.28]		Previously under R.9
R.9 An updated pipeline and mimic diagram of the cargo, inert gas and venting systems **MUST** be displayed in the cargo control room. [VIQ 8.3]	An updated diagram …. Strongly Preferred changed to MUST be displayed…	Previously under R.10
R.10 Cargoes which do not require heating **MUST** be isolated by blind flange from the heating system.	Heating system isolation	New
ADDITIONAL CRITERIA FOR TERM CHARTERED TONNAGE		
No additional criteria.		

SECTION S GAS CARRIER SUPPLEMENT

2017 CRITERIA	GAP	MAPPING
The following criteria are to be applied to LPG, LNG and chemical gas carriers and are additional to criteria described in the previous sections.		No change
S.1 Vessels **MUST** have, readily available, full details about the cargoes being carried including stowage plans and compatibility tables. Vessel Operators **MUST** inform IMT if the vessel has Certificate of Fitness to carry cargoes other than liquefied gasses.	IMT	No change
S.2 Gas carriers, particularly LNG carriers, **MUST** be aware of the phenomena of 'rollover' and have procedures on-board outlining the hazards and appropriate precautions.		No change
S.3 It is **Strongly Preferred** that LPG and chemical gas carriers are fitted with an Emergency Shutdown (ESD) pendant cable. Where fitted, the system **MUST** be tested and used. LNG carriers **MUST** be fitted with an ESD link. Where provision is available for linking ship and shore ESD systems, the system MUST be tested and used. Ref: SIGTTO - ESD Arrangements and Linked Ship/Shore Systems FOR Liquefied Gas Carriers	LPG and chemical gas carriers are fitted with ESD. Where fitted, the system MUST be tested and used.	Previously under S.4
S.4 Cargo-related pressure relief valves, alarms, trips, and emergency shutdown systems (ESD) **MUST** be used and maintained in accordance with the manufacturers' instructions and covered by a routine testing program with records maintained on-board.		Previously under S.5
S.5 All cargo ullage, temperature and pressure monitoring instrumentation and cargo plant instrumentation **MUST** be regularly tested and calibrated, with records kept on-board.	regularly tested	Previously under S.6
S.6 Cargo (liquid and vapor) pipelines **MUST** be maintained in good working order with no leaks. Insulation, where fitted, **MUST** be intact. Provision **MUST** be made to protect piping from excessive stresses due to temperature changes and movement of tanks and equipment to which the piping is attached.	(liquid and vapor)	Previously under S.7
S.7 It is **Strongly Preferred** that all liquid cargo pipelines are free of expansion joints or bellows. Where expansion joints or bellows are unavoidable, such as on Moss type vessels, then they **MUST** be subject to approval from the Classification Society.	MUST changed to Strongly Preferred that all cargo pipelines free of expansion joints or bellows. If unavoidable, MUST be approved by Class.	Previously under S.8
S.8 All liquid cargo lines, including accessory and instrumentation lines and up to and including isolation valves on these small lines, **MUST** be constructed with welded or flanged connections. Flanged connections, as far as practical, shall be kept to a minimum. Final connections on to pressure transmitters or pressure gauges may be screw-threaded' provided an isolation valve is fitted as above.	All liquid cargo lines Strongly Preferred changed to MUST be constructed with welded or flanged connection.	Previously under S.9
S.9 Cargo segregation **MUST** be achieved without risk of liquid to vapor crossover.		Previously under S.10

2017 CRITERIA	GAP	MAPPING
S.10 Inert gas system piping **MUST** be completely independent and segregated from the cargo system.		Previously under S.11
S.11 Liquid spill containment arrangements **MUST** be appropriate for the range of cargoes carried and suitable for low-temperature cargoes, where applicable.		Previously under S.12
S.12 There **MUST** be a system in place to routinely monitor and test, in accordance with the manufacturer's instructions, all gas tight seals fitted between the compressor room and motor room where these are separated by a bulkhead or deck.		Previously under S.13
S.13 Airlocks fitted to electrical motor rooms in the gas hazardous zone of the vessel **MUST** have a system for periodic testing of alarms, trips, and interlocks fitted to the vessel.		Previously under S.14
S.14 All earth bonding and continuity straps **MUST** be in good condition.		Previously under S.15
S.15 Where LNG carriers use cargo as fuel, they **MUST** have procedures on-board to ensure compliance with the requirements of the International Code of the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code) Ch.16 and precautions outlined in the ICS Tanker Safety Guide (Section 4.9.3.). Procedures should cover the whole system operation, and the routine testing and maintenance of the whole system, including such instrumentation which ensures the integrity of the fuel gas supply line (IGC Code 16.3). Documented records of the tests and maintenance carried out on the system **MUST** be maintained on-board	Whole system, including such instrumentation which ensures the integrity of the fuel gas supply line (IGC Code 16.3).	Previously under S.16
S.16 Cargo transfer systems **MUST** be tested annually to the 'working pressure' which is the highest pressure the vessel would experience in normal, steady state operations. Vessels **MUST** have on-board records verifying these tests have been completed. Records of individual cargo valve maintenance and tests **MUST** be kept on-board and available. [VIQ 8.26 & 8.28]	Cargo transfer systems annual testing	New
S.17 Gas carriers carrying toxic gasses **MUST** have at least three personal toxic gas meters capable of detecting such toxic gas concentrations and used by the crew members during the cargo operations.	Personal toxic gas meters	New
S.18 The vessel operator **MUST** have documented procedures for LPG and chemical gas carriers that address the following, as a minimum:1.Dedicated cargo sampling arrangement system;2.Drain valve arrangement;3.Testing of valves; and4.Sampling hoses.(Ref: SIGTTO - Liquefied Petroleum Gas Sampling Procedures.)	LPG and chemical gas carriers cargo valves and sampling procedures	New
ADDITIONAL CRITERIA FOR TERM CHARTERED TONNAGE		
No additional criteria.		

SECTION T COMBINATION CARRIER SUPPLEMENT

2017 CRITERIA	GAP	MAPPING
NIL		Has been completely removed

SECTION U. ENERGY EFFICIENCY AND FUEL MANAGEMENT:

2017 CRITERIA	GAP	MAPPING
ADDITIONAL CRITERIA FOR TERM CHARTERED TONNAGE		
U.1a Vessels **MUST** have systems and practices which will foster the pursuit of energy efficiency and Green House Gas (GHG) reduction. The objective is to have a proactive approach to energy efficiency and fuel management that includes improvement of vessel and voyage efficiencies aimed at reducing GHG emitted by use of auditable, prioritized methodologies. Systems will include identification of roles and responsibilities, with targets and methods for monitoring performance.		No change
U.2a It is **Strongly Preferred** that the vessel be outfitted with a Vessel Performance Monitoring System (VPMS) that complies with the requirements of the most recent version of ISO 19030 Part 2.	VPMS	New
U.3a In order to measure progress, a baseline criterion is to be established. For compliance, management tools such as IMO recommended Energy Efficiency Operational Index (EEOI) MEPC Circ 684 may be adopted.		No change
U.4a To enable monitoring, real-time performance monitoring processes could be used by both vessel and shore office, thus enabling implementation of prompt corrective action and comparison with similar vessels. This may provide benchmarking related to energy efficiency and process improvement.		No change

SECTION V. GAS-FUELLED VESSELS SUPPLEMENT

2017 CRITERIA	GAP	MAPPING
ADDITIONAL CRITERIA FOR TERM CHARTERED TONNAGE		
V1.a: It is **Strongly Preferred** that the bunkering procedures are developed considering applicable recommendations of the Society for Gas as a Marine Fuel (SGMF)'s guideline.	Bunkering procedures	New
V2.a: It is **Strongly Preferred** that the vessel and bunkering source be fitted with a single, common Emergency Shut-Down (ESD) cable.	ESD	New

APPENDIX A: ADDITIONAL CRITERIA FOR TERM CHARTERED TONNAGE.

GENERAL INFORMATION

The following criteria for vessels wishing to be directly employed in ExxonMobil affiliate term charter business are additional to those described in the preceding sections. It should be noted that any deviation from the full requirements will be subject to review on a case-by-case basis and will be dependent on the size of vessel, type of vessel and products carried and trading area.

ADDITIONAL REQUIREMENTS

REPORTING REQUIREMENTS

All vessels employed under the terms and conditions of ExxonMobil affiliate term charter are required to submit within the first week of every month 'Key Performance Indicators' (KPI's) for the previous month. These are to be sent directly to the Chartered Tonnage Team Lead by e-mail to msterm@exxonmobil.com. The exact reporting requirements will be provided prior to the vessel being employed.

THIRD PARTY VESSEL INSPECTIONS

All term chartered vessels shall be inspected (SIRE) by IMT prior to delivery or lifting of technical subjects. Thereafter, all term chartered vessels **MUST** be inspected (SIRE) at an interval not exceeding SIX months; of which every alternate inspection (SIRE) will be carried out by an IMT appointed inspector.

Term charter vessel inspections (SIRE) are to be requested by contacting the Chartered Tonnage Team Lead via the email address: msterm@exxonmobil.com. Vessel operators **MUST** make adequate and timely arrangements to meet the above requirements. Vessel operators **MUST** also ensure that the respective vessels are available to be inspected by the IMT appointed inspector if so requested.

IMT may also carry out on-board TMSA, Physical MESQAC compliance checks and security inspection on-board ExxonMobil term chartered vessels as and when necessary.

REPORTING INCIDENTS

An incident notification related to ExxonMobil affiliate term chartered vessel **MUST** also be copied to msterm@exxonmobil.com.

APPENDIX B: DRUG AND ALCOHOL DECLARATION

Drug and Alcohol Policy (sample)
Blanket Declaration

To: International Marine Transportation
Email: MSOWNER@exxonmobil.com
Re: Drug and Alcohol Policy

The undersigned warrants and represents that it has a policy on Drug and Alcohol Abuse ('Policy') applicable to all tanker vessels which the undersigned now owns and/or operates and which, after the date of this certificate, the undersigned may own and/or operate. This Policy meets or exceeds the standards in the Oil Companies International Marine Forum Guidelines for the Control of Drugs and Alcohol On-board Ship. Under the Policy, alcohol impairment shall be defined as a Blood Alcohol Content (BAC) of 40 mg/100ml and equivalent alcohol in breath or greater; the appropriate seafarers to be tested shall be all vessel officers and ratings. The drug/alcohol testing and screening shall include unannounced testing in addition to routine medical examinations.

An objective of the Policy should be that the frequency of unannounced testing be adequate to act as an effective abuse deterrent, and that all officers and ratings be tested at least once a year through a combined program of unannounced testing and routine medical examinations. The policy must be such that it meets the objective of always ensuring that prior to going on scheduled duty the blood alcohol content of the seafarer is theoretically zero.

The undersigned further warrants that the Policy will remain in effect unless you are otherwise specifically notified and that the undersigned shall exercise due diligence to ensure compliance with the Policy. It is understood that an actual impairment or any test finding of impairment shall not in and of itself mean the undersigned has failed to exercise due diligence.

Vessel Operator / Technical Manager based in the USA with USA flag vessels that are required to comply with USCG D&A regulations will be treated as compliant with ExxonMobil D&A requirement. The same applies to Canadian-based vessel operator and their registered vessels.

The undersigned understands and acknowledges that while the provision of and compliance with this declaration is a necessary condition for the Vessel to perform ExxonMobil affiliate service**, it does not automatically qualify the vessel to perform ExxonMobil affiliate service**, which is the subject of a separate review by ExxonMobil's independent marine quality assurance organization.

*** Please note that, in this context, 'ExxonMobil affiliate service' includes but not limited to: Chartered by ExxonMobil affiliate or carrying ExxonMobil affiliate cargo, or calling at ExxonMobil affiliate facilities, or Third Party facility, or at facilities in which ExxonMobil affiliate have a joint venture interest to load or discharge.*

Technical Operator Name:

Technical Operator IMO Number:

Person signing on behalf of Company:

Title or Authority held by person signing:

Date:

APPENDIX C: MESQAC COMPLIANCE DECLARATION

Marine Environmental, Safety and Quality Assurance Criteria (MESQAC) for Seagoing Tanker vessels in ExxonMobil Affiliate Service

(Sample)
Blanket MESQAC 2017 Compliance Declaration

To: International Marine Transportation
Email: MSSCREEN@exxonmobil.com
Re: MESQAC Compliance Declaration

This document is the undersigned vessel operator's (technical manager's) confirmation of its understanding and compliance with the Marine Environmental, Safety and Quality Assurance Criteria (MESQAC) for seagoing tanker vessels offered for ExxonMobil affiliate service**

The undersigned vessel operator / technical manager warrants that it currently complies with and shall exercise due diligence to maintain compliance with such requirements while on ExxonMobil affiliate service.

The undersigned vessel operator / technical manager further warrants that all listed vessels*, operated by the undersigned meet or exceed the requirements and standards in the MESQAC for seagoing vessels, including appendix A for vessel(s) on time charter to ExxonMobil. If additional vessel(s) enter service the undersigned will submit an updated Blanket Declaration for the vessel(s).

The undersigned vessel operator / technical manager acknowledges that third party operated vessels that do not meet the '**MUST**' criteria will not be considered for ExxonMobil affiliate service, unless meeting certain of these criteria involves gas freeing or dry docking the vessel, or requires long lead times, in which case a limited period for further consideration of the vessel may be granted upon receipt of written confirmation that actions will be taken at the earliest opportunity, and an approved mitigating measure is in place. The undersigned further acknowledges that third party operated vessels not meeting those environmental and safety expectations described as '**Strongly Preferred**' may be disadvantaged in the selection process versus other vessels meeting those requirements.

The undersigned also understands and acknowledges that while the provision of and compliance with this declaration is a necessary condition for the Vessel to perform ExxonMobil affiliate service, it does not automatically qualify the vessel to perform ExxonMobil affiliate service, which is the subject of a separate review by IMT marine quality assurance organization.

** Please note that, in this context, 'ExxonMobil affiliate service' includes but not limited to: Chartered by ExxonMobil affiliate or carrying ExxonMobil affiliate cargo, or calling at ExxonMobil affiliate facilities, or Third Party facility, or at facilities in which ExxonMobil affiliate have a joint venture interest to load or discharge.

Technical Operator Name:

Technical Operator IMO Number:

Person signing on behalf of Company:

Title or Authority held by person signing:

Date:

Blanket MESQAC 2017 Compliance Declaration
*Listed MESQAC Compliant Seagoing Vessels

Name of Technical Operator: _____

IMO No.	Vessel Name	Compliant Yes / No	MUST Criteria's not met	Date expected to be fully compliant

Mitigation steps for not meeting MUST criteria's that operator plans to address but require lead time / dry dock (As applicable)
MUST Criteria: _____Vessel Name(s): _____
Mitigation Step:
_____

ISO 9001:2008
Certificate Number: 33714

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