



Fleet Safety Manual

Table of Contents

| Section | Title | Latest Version # |
|---------|---|------------------|
| | Policy – Responsibility - Authority | |
| 1.0 | Safety Management System | 4-1 |
| 2.0 | Health, Safety, Security and Environmental Policy - Drug, Alcohol and Psychoactive Substances Policy | 4-1 |
| 3.0 | Responsibilities and Authorities | 4-0 |
| 4.0 | Designated Person(s) Ashore | 4-0 |
| 5.0 | Commanding Officer's Responsibility and Authority | 4-0 |
| 6.0 | Resources and Personnel | 4-0 |
| | Ship's Crew | |
| 6.A.1 | Crew Complement | 4-0 |
| 6.A.2 | Medical Fitness for Seagoing Personnel | 4-0 |
| 6.B.1 | Familiarization | 4-0 |
| 6.C.1 | Training for Vessel and Shore Management Positions | 4-0 |
| 6.D.1 | Supernumerary Personnel Carried Aboard Vessels | 4-0 |
| 7.0 | Development of Plans for Shipboard Operations | 4-0 |
| | Administrative and Guidance Section | |
| 7.A.1 | Assessing Risk | 4-0 |
| 7.A.2 | Crew Changes / Change of Command | 4-0 |
| 7.A.3 | Management of Watches and Hours of Rest | 4-0 |
| 7.A.4 | Safety of Navigation | 4-0 |
| 7.A.5 | Pre-Departure and Pre-Arrival | 4-0 |
| 7.A.6 | Vessel Manoeuvring Data | 4-0 |
| 7.A.7 | Maintenance of Watertight Integrity | 4-0 |

| Section | Title | Latest Version # |
|----------------|---|-------------------------|
| 7.A.8 | Stability | 4-0 |
| 7.A.9 | Engineroom Watchkeeping | 4-0 |
| 7.A.10 | Handling and Containing Asbestos Materials | 4-0 |
| 7.A.11 | Hotel Services | 4-0 |
| 7.A.12 | Potable Water Quality | 4-0 |
| | Safety Procedures (checklist required) | |
| 7.B.1 | Diving Operations | 4-0 |
| 7.B.2 | Fall Protection | 4-0 |
| 7.B.3 | Entry Into Confined Spaces | 4-0 |
| 7.B.4 | Hotwork | 4-0 |
| 7.B.5 | Lockout and Tagout | 4-0 |
| 7.B.6 | Electrical Safety – Energized Circuits | 4-0 |
| | Fleet Operational Procedures | |
| 7.C.1 | Hovercraft Operations | 4-0 |
| 7.C.2 | Small Craft Operations | 4-0 |
| 7.C.3 | Combined Operations With Helicopters | 4-0 |
| 7.C.4 | Towing Operations | 4-0 |
| 7.C.5 | Carriage and Use of Firearms Aboard Ships and Helicopters | 4-0 |
| | Client Based Operational Procedures | |
| 7.D.1 | Search and Rescue Operations | 4-0 |
| 7.D.2 | Marine Aids to Navigation Operations | 4-0 |
| 7.D.3 | Science Operations | 4-0 |
| 7.D.4 | Marine Environment Emergency Response Operation | 4-0 |
| 7.D.5 | Icebreaking | 4-0 |
| 7.D.6 | Enforcement Boarding Operations | 4-0 |
| | Environmental Section | |
| 7.E.1 | Handling Petroleum Products | 4-0 |

| Section | Title | Latest Version # |
|----------------|--|-------------------------|
| 7.E.2 | Handling and Discharge of Oily Water | 4-0 |
| 7.E.3 | Handling and Discharge of Black and Grey Water | 4-0 |
| 7.E.4 | Discharge of Ballast Water | 4-0 |
| 7.E.5 | Handling, Storage, and Disposal of Hazardous Materials | 4-0 |
| 7.E.6 | Handling and Discharge - Solid Waste | 4-0 |
| 7.E.7 | Environmental Stewardship | 4-0 |
| 7.E.8 | Use of Halocarbons | 4-0 |
| 8.0 | Emergency Preparedness | 4-0 |
| | Emergency Management | |
| 8.A.1 | Vessel and Shore-Based Contingency Plans | 4-0 |
| 8.A.2 | Vessel and Shore-Based Emergency Exercises | 4-0 |
| 8.B.1 | Security of the Vessel | 4-0 |
| 8.B.2 | Fire Prevention and Detection | 4-0 |
| 8.B.3 | First Aid and Medical Services Aboard Ships | 4-0 |
| 9.0 | Reports and Analysis of Non-Conformities, Accidents, Security Accidents and Hazardous Occurrences | 4-0 |
| | Emergency Management | |
| 9.A.1 | Safety Management System Reports of Non-Conformities and Observations | 4-0 |
| 9.B.1 | Reports of Hazardous Occurrences and Injuries, Unsatisfactory Conditions and Significant Near Misses | 4-0 |
| 9.B.2 | Major Hazardous Occurrence – Formal Investigation | 4-0 |
| 9.C.1 | Shipboard Occupational Health and Safety (OHS) Committees | 4-0 |
| 10.0 | Maintenance of the Ship and Equipment | 4-0 |
| | Vessel Maintenance and Equipment | |
| 10.A.1 | Identification of Critical Systems | 4-0 |
| 10.A.2 | Maintenance and Refits | 4-0 |
| 10.A.3 | Lay-up and Return to Service | 4-0 |
| 10.A.4 | Dry-docking | 4-0 |

| Section | Title | Latest Version # |
|----------------|---|-------------------------|
| 10.A.5 | Cold Weather Precautions | 4-0 |
| 10.A.6 | Paint and Other Coatings | 4-0 |
| 10.A.7 | Contractor Safety and Security | 4-0 |
| 10.B.1 | Maintenance of Lifting Appliances and Cargo Handling Gear | 4-0 |
| 10.B.2 | Maintenance and Inspection of Lifesaving Equipment | 4-0 |
| 11.0 | Documentation | |
| | Vessel Maintenance and Equipment | |
| 11.A.1 | Document Control – Internal | 4-0 |
| 11.A.2 | Document Control – External | 4-0 |
| 11.A.3 | Vessel Certificates | 4-0 |
| 11.A.4 | Maintenance of Vessel Logs | 4-0 |
| 11.B.1 | Procedure Approval and Change Process | 4-0 |
| 11.C.1 | Sailing Orders | 4-0 |
| 12.0 | Fleet Verification, Review, and Evaluation | 4-0 |
| | System Review | |
| 12.A.1 | Audits | 4-0 |
| 12.A.2 | Safety Management System Review | 4-0 |
| 13.0 | Certification and Verification | 4-0 |
| | Annexes | |
| Annex A | Abbreviations Glossary and Bibliography | 4-0 |
| Annex B | Index | 4-0 |
| Annex C | Guidance Documents | 4-0 |
| Annex D | Forms | 4-0 |

Note: Current amendments to this manual are indicated by a left margin vertical bar for the convenience of the reader.

Note: Questions or comments related to the ISM Code and the Fleet Safety Manual can be sent via e-mail to ism@dfm-mpo.gc.ca or by regular mail to the Director Fleet Safety and Security.



Fleet Safety Manual

Table of Concordance

| New Sections | Old Section | Title |
|--------------|----------------|--|
| | | Policy – Responsibility - Authority |
| 1.0 | 1.0 | Safety Management System |
| 2.0 | 2.0 | Health, Safety, Security and Environmental Policy - Drug, Alcohol and Psychoactive Substances Policy |
| 3.0 | 3.0 | Responsibilities and Authorities |
| 4.0 | 4.0 | Designated Person(s) Ashore |
| 5.0 | 5.0 & 5.A | Commanding Officer's Responsibility and Authority |
| 6.0 | 6.0 | Resources and Personnel |
| | | Ship's Crew |
| 6.A.1 | 6.B.1 | Crew Complement |
| 6.A.2 | 6.B.2 | Medical Fitness for Seagoing Personnel |
| 6.B.1 | 6.C.1 | Familiarization |
| 6.C.1 | 6.D | Training for Vessel and Shore Management Positions |
| 6.D.1 | 6.C.2 | Supernumerary Personnel Carried Aboard Vessels |
| 7.0 | 7.0 | Development of Plans for Shipboard Operations |
| | | Administrative and Guidance Section |
| 7.A.1 | 7.B.3 & 7.E.2 | Assessing Risk |
| 7.A.2 | 7.D.13 | Crew Changes / Change of Command |
| 7.A.3 | 7.D.20 | Management of Watches and Hours of Rest |
| 7.A.4 | 7.A.1 & 7.A.2 | Safety of Navigation |
| 7.A.5 | 7.D.7 | Pre-Departure and Pre-Arrival |
| 7.A.6 | 11.B.4 | Vessel Manoeuvring Data |
| 7.A.7 | 10.C.3 | Maintenance of Watertight Integrity |
| 7.A.8 | 11.B.5 & 8.C.4 | Stability |
| 7.A.9 | 7.C.1 | Engineroom Watchkeeping |

| New Sections | Old Section | Title |
|------------------------|--------------------|---|
| 7.A.10 | 7.F.8 | Handling and Containing Asbestos Materials |
| 7.A.11 | 7.D.6 | Hotel Services |
| 7.A.12 | 7.F.12 | Potable Water Quality |
| | | Safety Procedures (Checklist Required) |
| 7.B.1 | 7.D.16 | Diving Operations |
| 7.B.2 | 7.B.2 | Fall Protection |
| 7.B.3 | 7.D.9 | Entry into Confined Spaces |
| 7.B.4 | 7.D.11 | Hotwork |
| 7.B.5 | 7.D.19 | Lockout and Tagout |
| 7.B.6 | <i>New</i> | Electrical Safety – Energized Circuits |
| | | Fleet Operational Procedures |
| 7.C.1 | 7.D.17 | Hovercraft Operations |
| 7.C.2 | 7.D.14 | Small Craft Operations |
| 7.C.3 | 7.D.15 | Combined Operations with Helicopters |
| 7.C.4 | 7.A.3 & 7.E.8 | Towing Operations |
| 7.C.5 | 7.D.18 | Carriage and Use of Firearms Aboard Ships and Helicopters |
| | | Client Based Operational Procedures |
| 7.D.1 | 7.E.6 | Search and Rescue Operations |
| 7.D.2 | 7.E.1 | Marine Aids to Navigation Operations |
| 7.D.3 | 7.E.3 | Science Operations |
| 7.D.4 | 7.E.4 | Marine Environment Emergency Response Operation |
| 7.D.5 | <i>New</i> | Icebreaking |
| 7.D.6 | 7.E.7 | Enforcement Boarding Operations |
| | | Environmental Section |
| 7.E.1 | 7.F.1 | Handling Petroleum Products |
| 7.E.2 | 7.F.2 | Handling and Discharge of Oily Water |
| 7.E.3 | 7.F.4 & 7.F.5 | Handling and Discharge of Black and Grey Water |
| 7.E.4 | 7.F.3 | Discharge of Ballast Water |
| 7.E.5 | 7.F.6 | Handling, Storage, and Disposal of Hazardous Materials |
| 7.E.6 | 7.F.7 | Handling and Discharge - Solid Waste |
| 7.E.7 | 7.F.11 | Environmental Stewardship |
| 7.E.8 | 7.F.10 | Use of Halocarbons |

| New Sections | Old Section | Title |
|------------------------|-----------------------------|--|
| 8.0 | 8.0 | Emergency Preparedness |
| | | Emergency Management |
| 8.A.1 | 8.B.1 & 8.C.1 | Vessel and Shore-Based Contingency Plans |
| 8.A.2 | 8.B.2 & 8.C.1 | Vessel and Shore-Based Emergency Exercises |
| 8.B.1 | 8.C.2 | Security of the Vessel |
| 8.B.2 | 8.C.3 | Fire Prevention and Detection |
| 8.B.3 | 8.C.5 | First Aid and Medical Services Aboard Ships |
| 9.0 | 9.0 | Reports and Analysis of Non-Conformities, Accidents, Security Accidents and Hazardous Occurrences |
| | | Reporting |
| 9.A.1 | 9.A.1 | Safety Management System Reports of Non-Conformities and Observations |
| 9.B.1 | 9.A.2 | Reports of Hazardous Occurrences and Injuries, Unsatisfactory Conditions and Significant Near Misses |
| 9.B.2 | 9.A.3 | Major Hazardous Occurrence – Formal Investigation |
| 9.C.1 | 9.B | Shipboard Occupational Health and Safety (OHS) Committees |
| 10.0 | 10.0 | Maintenance and Inspection of Vessels and Equipment |
| | | Vessel Maintenance and Equipment |
| 10.A.1 | 10.B | Identification of Critical Systems |
| 10.A.2 | 10.A.1 10.C.1 10.C.10 | Maintenance and Refits |
| 10.A.3 | 7.D.2 | Lay-Up and Return to Service |
| 10.A.4 | 7.D.10 | Dry-Docking |
| 10.A.5 | 7.D.8 | Cold Weather Precautions |
| 10.A.6 | 7.F.9 | Paint and Other Coatings |
| 10.A.7 | 10.A.2 | Contractor Safety and Security |
| 10.B.1 | 10.C.2 | Maintenance of Lifting Appliances and Cargo Handling Gear |
| 10.B.2 | 8.C.6 | Maintenance and Inspection of Lifesaving Equipment |
| 11.0 | 11.0 | Documentation |
| | | Records and Reference |
| 11.A.1 | 11.A.1 | Document Control – Internal |
| 11.A.2 | 11.A.2 | Document Control – External |
| 11.A.3 | 11.B.1 | Vessel Certificates |

| New Sections | Old Section | Title |
|---------------------|--------------------|--|
| 11.A.4 | 11.B.2 | Maintenance of Vessel Logs |
| 11.B.1 | 12.B.2 | Procedure Approval and Change Process |
| 11.C.1 | 7.D.12 | Sailing Orders |
| 12.0 | 12.0 | Fleet Verification, Review, and Evaluation |
| | | System Review |
| 12.A.1 | 12.A | Audits |
| 12.A.2 | 12.B.1 | Safety Management System Review |
| 13.0 | 13.0 | Certification and Verification |
| | | Annexes |
| Annex A | New | Abbreviations Glossary and Bibliography |
| Annex B | New | Index |
| Annex C | New | Guidance Documents |
| Annex D | New | Forms |



Fleet Safety Manual

1.0 – SAFETY MANAGEMENT SYSTEM

OBJECTIVES OF THE *ISM CODE*

1. The objectives of the *International Safety Management Code for the Safe Operation of Ships and for Pollution Prevention* (ISM Code) are to ensure prevention of human injury or loss of life, safety at sea, and avoidance of damage to the environment, in particular to the marine environment and to property.
2. The many Acts, Regulations, Policies and Guidelines that the Canadian Coast Guard (CCG) abide by; referenced within this Manual and together with the *ISM Code* requirements, make up the framework of our Safety Management System (SMS). This publication, inclusive of all areas, references and associated documentation contained within, shall be referenced as the Fleet Safety Manual (FSM).

DEPARTMENT OF FISHERIES AND OCEANS' (DFO) SAFETY MANAGEMENT OBJECTIVES

- a) Ensuring health, safety and security protection for all employees and anyone granted access to DFO's workplaces.
- b) Providing and maintaining a work environment that complies with and at times exceeds DFO's regulatory health, safety and security requirements. DFO will strive to protect employees from any known or foreseeable hazards which could result in personal injuries, illnesses, losses or damage to property. This Department is committed to promoting a healthy and safe work environment by providing programs and information sessions on both Occupational Health and Safety (OHS) and employee assistance.
- c) Providing adequate OHS training to all managers and supervisors and inform them of their responsibilities under Part II of the Canada Labour Code. Managers and supervisors shall comply with the Department's OHS requirements specified in the Canada Labour Code Part II, the National Joint Council OHS directives and the DFO Health and Safety Manual.
- d) All employees shall perform their work in accordance with established safe work procedures, legislative requirements and departmental OHS policies, directives and guidelines.

FUNCTIONAL REQUIREMENTS

1. The major functional requirements of the *ISM Code* are covered in detail by the following procedures:
 - Reporting procedures for accidents, hazardous occurrences, and non-conformities.

- Procedures covering preparation for, and response to, emergency situations.
- Procedures for internal audits, management reviews, and dealing with non-conformities.
- Procedures covering shipboard maintenance and associated records for propulsion, electrical, auxiliary and domestic equipment and systems that have been fitted to ensure safe vessel operation and environmental protection.
- Procedures covering management of shore-based operations and vessel's with respect to the Code.
- Procedures covering document control and the maintenance of records.
- Procedures covering the assignment of competent and qualified shipboard personnel.

DESCRIPTION OF VESSELS

1. The CCG owns and/or operates vessels, small craft, and dynamically supported craft of the following classes:
 - Polar Icebreaker
 - Heavy Icebreaker
 - Medium Icebreaker
 - High-Endurance Multi-Tasked Vessel
 - Medium-Endurance Multi-Tasked Vessel
 - Offshore Oceanographic Science Vessel
 - Offshore Fishery Science Vessel
 - Offshore Patrol Vessel
 - Mid-Shore Patrol Vessel
 - Air Cushion Vehicle
 - Special Nav aids Vessel
 - SAR Lifeboat
 - Mid Shore Science Vessel
 - Channel Survey and Sounding Vessel
 - Near-Shore Fishery Research Vessel
 - Specialty Vessel
 - Small craft

The vessels above are capable of performing in one or more of the following capacities:

- Icebreaking

- Aids to Navigational Work and Lighthouse Resupply
- Search and Rescue (SAR)
- Hydrographic and Scientific Research
- Fisheries Research
- Fisheries Management and Enforcement Operations
- Environmental Response
- Security Patrol
- Training

LOCATION

The CCG has its Headquarters in Ottawa.

Commissioner
Canadian Coast Guard
6th Floor
200 Kent Street
Ottawa, Ontario
K1A 0E6

Tel: (613) 998-1571
Fax: (613) 990-2780

Director General, Operations
Canadian Coast Guard
6th Floor
200 Kent Street
Ottawa, Ontario
K1A 0E6

Tel: (613) 998-1571
Fax: (613) 995-4700

There are three regional offices located as follows:

Assistant Commissioner, CCG
Atlantic Region
Canadian Coast Guard
P.O. Box 5667
St. John's, Newfoundland and Labrador
A1C 5X1

Tel: (709) 772-5150
Fax: (709) 772-4194

Assistant Commissioner, CCG
Central and Arctic Region
Canadian Coast Guard
105 Rue McGill
Montreal, Quebec
H2Y 2E7

Tel: (514) 283-0050
Fax: (514) 283-0056

Assistant Commissioner, CCG
Western Region
Canadian Coast Guard
25 Huron Street
Victoria, British Columbia
V8V 4V9

Tel: (250) 480-2765
Fax: (250) 480-2702

TYPE OF MANAGEMENT

- a) CCG vessels and craft on behalf of the owner, Her Majesty the Queen in Right of Canada, are represented by the Minister of Fisheries and Oceans.
- b) The Authorized Representative (formerly referred to as Managing Owner) of the CCG, for the purposes of the Canada Shipping Act 2001, is the office of the Commissioner of the CCG.

PRECEDENCE

- a) The *FSM (DFO/5737)* is the primary source of reference for the conduct of all vessel-related operations in the CCG Fleet. With the exception of current CCG Fleet Orders (CGFOs), Operations Circulars (OCs), CCG Technical Bulletins (CGTBs) and Operations Safety Bulletins (OSBs), the FSM takes precedence over all other orders, procedures, instructions, or guidelines unless specifically excepted. Directives specified in the noted excepted documents shall take precedence over the FSM for the specified subject matter only.
- b) CCG Fleet Orders (CGFOs) are authority documents that govern operations and management of the fleet other than safety and security.
- c) Operations Circulars (OCs) are authority documents issued by the Director General, Operations to communicate operational policies and guidelines in support of CCG Agency operations. An Operations Circular is meant to communicate information which initiate or govern actions, conduct or procedures relevant to the management and operations of the CCG Agency. An Operations Circular may: be issued on an interim basis pending the development of a policy or guideline on the operations of the Coast Guard; indicate the mandatory feature of a policy or how a policy ought to be interpreted and applied; or provide guidelines that apply in exceptional circumstances (e.g. during special events).

- d) CCG Technical Bulletins (CGTBs) are used to communicate urgent, time sensitive technical information regarding health, safety and/or the environment which are related to systems and/or equipment. They include updated information and/or requirements for the physical operation, maintenance and repair of the related system(s) and/or equipment. They also provide necessary technical direction to achieve implementation of the new requirement(s), repair(s), maintenance, alteration(s), inspection(s), etc. CGTBs have a limited lifespan and if necessary, the other related “long standing” technical documentation shall be amended, within a reasonable time, to include the necessary information and/or direction. CGTBs take precedence over other related technical documentation until the CGTB, as appropriate to the individual CGTB, expires, is cancelled, repairs / maintenance / alterations / inspections etc. as directed is/are completed or the other related technical documentation is appropriately amended. In most instances a CGTB will only affect a procedure or document which is referenced in the FSM and will not directly affect the FSM. On rare occasions a CGTB will directly affect the FSM and in such instances the CGTB shall have precedence over the FSM. The FSM shall be amended to reflect these requirements.
- e) Operations Safety Bulletins (OSBs) are a tool to communicate quickly, items of interest and importance directly affecting the health and safety of Operational personnel. An Operations Safety Bulletin will be issued on an “as required” basis to communicate information **with respect to health and safety** related issues, as a follow-up to increase awareness on matters brought forward by the marine industry, new regulations, incidents, Transport Safety Board recommendations, internal investigations, etc.



Fleet Safety Manual

2.0 - HEALTH, SAFETY, SECURITY AND ENVIRONMENTAL POLICY – DRUG, ALCOHOL AND PSYCHOACTIVE SUBSTANCES POLICY

1 HEALTH, SAFETY, SECURITY AND ENVIRONMENTAL POLICY (HSSE)

1.1 GENERAL

- a) The Canadian Coast Guard (CCG) is an organization committed to the safety and security of its employees and anyone granted access to our workplace.
- b) The CCG is an organization committed to protecting the environment while remaining operational by meeting or exceeding all applicable environmental legislation.
- c) The CCG uses integrated management systems based upon the ISM Code for vessels and CSA Z1000 and ISO 14001 standards for shore side. These systems provide amplifying information and instructions to our supervisors and employees on how to comply with the codes, acts, regulations and operational guidelines for a safe, healthy and violence free workplace.
- d) The CCG, through its Health, Safety, Security and Environmental Management Systems shall:
 - Ensure that all personnel are active participants in the development and implementation of new procedures, and continuous improvement to Health, Safety, Security and Environmental management practices.
 - Maintain and operate vessels and worksites in a manner that provides a safe, secure, healthy and violence free working environment while respecting the environment.
 - Identify, assess and eliminate or mitigate all known or reasonably foreseeable health, safety, security and environmental risks.
 - Establish and maintain clear levels of authority and lines of communication both internally and externally.
 - Ensure that a sufficient number of personnel, trained and suitably qualified, are provided to safely operate, maintain and support our vessels, deliver CCG Programs, protect the environment, and safeguard our assets.
 - Ensure compliance with; Canadian-recognized international, national, provincial, municipal and; departmental; health, safety, security and environmental protection legislation, regulations, directives and policies.
 - Ensure that incidents and non-conformities are reported, are analyzed, and that corrective actions are effectively implemented.
 - Ensure that procedures are in place and periodically exercised for dealing with foreseeable emergencies.

- Continuously improve the health, safety, security and environmental management skills of personnel through: formal and on the job training; system audits; evaluation of the audit results; management reviews; routine drills and training exercises.
- Appoint “Designated Persons” to ensure that the management system is established, maintained, and periodically reviewed. They provide reports to senior management of the overall performance of the system and identify any need for improvement.

1.2 ALL CCG EMPLOYEES

- a) All CCG employees are required to comply with the laws of Canada at all times, to faithfully apply the procedures developed under this Policy, and to take any necessary precautions to protect themselves, their colleagues, CCG assets, cargoes, and the environment.

2 DRUG, ALCOHOL AND PSYCHOACTIVE SUBSTANCES POLICY (DAPS)

- a) Canadian Coast Guard (CCG) vessels and aircraft are multi-taskable platforms that can be engaged in escort, fisheries enforcement, search and rescue or maritime security activities with little or no warning.
- b) In addition to their program-related duties, CCG vessels are required to be self-sustaining in the event of on-board emergencies such as fire, collision, equipment failure, personnel injury or sudden illness. Each member of the crew is assigned an emergency duty and this duty is contained in the Emergency Muster List required by Section 7 of the *Fire and Boat Drill Regulations* of the *Canada Shipping Act 2001 (CSA 2001)*.
 - It is incompatible with these roles and these responsibilities, for persons aboard the vessels or aircraft to be unable to perform their duties due to being impaired by psychoactive substances.
- c) Under the *Criminal Code of Canada* (Section 253), an offence is committed by anyone who operates a motor vehicle, a vessel or aircraft, or who has the care and control of a motor vehicle, a vessel or aircraft, whether the motor vehicle, vessel or aircraft is in motion or not, while that person’s ability is impaired by a psychoactive substance. This would include all persons required to be on watch as defined in *CSA 2001 Marine Personnel Regulations*.
- d) The following policy shall apply on all CCG vessels, aircraft and CCG shore based work areas and shall be enforced:
 - All persons boarding CCG vessels or aircraft and those conducting work activities ashore are to be made aware of the rules of conduct and behaviour expected of them. The familiarization routine for persons boarding CCG vessels and aircraft (Section 6.B.1 of the FSM) shall include a reference to this policy.
 - No person shall perform, or attempt to perform, any duties while impaired by a psychoactive substance.
 - No person shall consume any mood-altering substance while on watch or duty. A person may consume a legal prescription or non-prescription drug, provided it does not cause the person to become impaired.
 - No person shall consume a beverage containing alcohol, or consume any other psychoactive substance which causes them to be impaired, in the eight-hour period immediately prior to their scheduled period of work.

- No person shall turn over the conduct of a watch or duty to any other person who appears, on reasonable grounds, to be impaired.
 - While engaged as crew to a CCG vessel that is tasked to primary duties in Search and Rescue, Environmental Response, Conservation and Protection, Maritime Security or enforcement-related duties, no person shall consume a beverage containing alcohol or consume any other psychoactive substance which causes them to be impaired. Permitted consumption aboard other vessels shall cease whenever these vessels are temporarily assigned to, and for the duration of, these duties.
 - Any contravention of this policy shall be regarded as a serious misconduct that could potentially lead to severe disciplinary penalties including discharge.
 - Any person, over whom the Commanding Officer or shore side manager has no line authority, who is found to be in contravention of this policy shall be formally reported to the Assistant Commissioner, CCG, who shall report the incident, in detail, to the appropriate person having authority over the individual concerned.
 - The Commanding Officer or shore side manager has the absolute authority to remove any person from the vessel or aircraft or workplace who is in violation of this policy.
- e) No person shall carry or offer to transport any illegal substances on any CCG motor vehicle, vessel or aircraft unless specifically tasked as part of an enforcement tasking from the Regional Operations Center (ROC).
- f) The Department of Fisheries and Oceans has an Employee Assistance Program which can provide professional assistance to employees who have alcohol or chemical dependencies. It is the responsibility of the employee to request this assistance. Contacts with the Employee Assistance Program are confidential and shall not be revealed to the supervisor.

3 POSTING

- a) These policies shall be prominently posted aboard vessels and in all work areas ashore where CCG staff may be located. On small vessels, where space requirements make it difficult to post these policies, in lieu of posting a copy of these policies, they shall be included with the familiarization signed by each employee.

4 DOCUMENTATION

- Posted Policies
- Site-Specific Familiarizations

Drug, Alcohol and Psychoactive Substances Policy

Canadian Coast Guard (CCG) vessels and aircraft are multi-taskable platforms that can be engaged in escort, fisheries enforcement, search and rescue or maritime security activities with little or no warning.

In addition to their program-related duties, CCG vessels are required to be self-sustaining in the event of on-board emergencies such as fire, collision, equipment failure, personnel injury or sudden illness. Each member of the crew is assigned an emergency duty and this duty is contained in the Emergency Muster List required by Section 7 of the *Fire and Boat Drill Regulations* of the *Canada Shipping Act 2001 (CSA 2001)*.

It is incompatible with these roles and these responsibilities, for persons aboard the vessels or aircraft to be unable to perform their duties due to being impaired by psychoactive substances.

Under the *Criminal Code of Canada*, (Section 253) an offence is committed by anyone who operates a motor vehicle, a vessel or aircraft, or who has the care and control of a motor vehicle, a vessel or aircraft, whether the motor vehicle, vessel or aircraft is in motion or not, while that person's ability is impaired by a psychoactive substance. This would include all persons required to be on watch as defined in *CSA 2001 Marine Personnel Regulations*.

The following policy shall apply on all CCG vessels, aircraft and CCG shore based work areas and shall be enforced;

- .1 All persons boarding CCG vessels or aircraft and those conducting work activities ashore are to be made aware of the rules of conduct and behaviour expected of them. The familiarization routine for persons boarding CCG vessels and aircraft (Section 6.B.1 of the FSM) shall include a reference to this policy.
- .2 No person shall perform, or attempt to perform, any duties while impaired by a psychoactive substance.
- .3 No person shall consume any mood-altering substance while on watch or duty. A person may consume a legal prescription or non-prescription drug, provided it does not cause the person to become impaired.
- .4 No person shall consume a beverage containing alcohol, or consume any other psychoactive substance which causes them to be impaired, in the eight-hour period immediately prior to their scheduled period of work.
- .5 No person shall turn over the conduct of a watch or duty to any other person who appears, on reasonable grounds, to be impaired.
- .6 While engaged as crew to a CCG vessel that is tasked to primary duties in Search and Rescue, Environmental Response, Conservation and Protection, Maritime Security or enforcement-related duties, no person shall consume a beverage containing alcohol or consume any other psychoactive substance which causes them to be impaired. Permitted consumption aboard other vessels shall cease whenever these vessels are temporarily assigned to, and for the duration of, these duties.
- .7 Any contravention of this policy shall be regarded as a serious misconduct that could potentially lead to severe disciplinary penalties including discharge.
- .8 Any person, over whom the Commanding Officer or shore side manager has no line authority, who is found to be in contravention of this policy shall be formally reported to the Assistant Commissioner, CCG, who shall report the incident, in detail, to the appropriate person having authority over the individual concerned.
- .9 The Commanding Officer or shore side manager has the absolute authority to remove any person from the vessel or aircraft or workplace who is in violation of this policy.
- .10 No person shall carry or offer to transport any illegal substances on any CCG motor vehicle, vessel or aircraft unless specifically tasked as part of an enforcement tasking from the Regional Operations Center (ROC).
- .11 The Department of Fisheries and Oceans has an Employee Assistance Program which can provide professional assistance to employees who have alcohol or chemical dependencies. It is the responsibility of the employee to request this assistance. Contacts with the Employee Assistance Program are confidential and shall not be revealed to the supervisor.

Commissioner, Canadian Coast Guard

Health, Safety, Security and Environmental Policy

The Canadian Coast Guard (CCG) is an organization committed to the safety and security of its employees and anyone granted access to our workplace.

The CCG is an organization committed to protecting the environment while remaining operational by meeting or exceeding all applicable environmental legislation.

The CCG uses integrated management systems (based upon the ISM code for vessels and CSA Z1000 and ISO 14001 standards for shore side). These systems provide amplifying information and instructions to our supervisors and employees on how to comply with the codes, acts, regulations and operational guidelines for a safe, healthy and violence free workplace.

The CCG, through its Health, Safety, Security and Environmental Management Systems shall:

- .1 Ensure that all personnel are active participants in the development and implementation of new procedures, and continuous improvement to Health, Safety, Security and Environmental management practices.
- .2 Maintain and operate vessels and worksites in a manner that provides a safe, secure, healthy and violence free working environment while respecting the environment.
- .3 Identify, assess, and eliminate or mitigate all known or reasonably foreseeable health, safety, security and environmental risks.
- .4 Establish and maintain clear levels of authority and lines of communication both internally and externally.
- .5 Ensure that a sufficient number of personnel, trained and suitably qualified, are provided to safely operate, maintain and support our vessels, deliver CCG Programs, protect the environment, and safeguard our assets.
- .6 Ensure compliance with Canadian-recognized international, national, provincial, municipal and departmental; health, safety, security and environmental protection legislation, regulations, directives and policies.
- .7 Ensure that incidents and non-conformities are reported, are analyzed, and that corrective actions are effectively implemented.
- .8 Ensure that procedures are in place and periodically exercised for dealing with foreseeable emergencies.
- .9 Continuously improves the health, safety, security and environmental management skills of personnel through: formal and on the job training; system audits; evaluation of the audit results; management reviews; routine drills and training exercises.
- .10 Appoint "Designated Persons"; to ensure that the management system is established, maintained, and periodically reviewed. They provide reports to senior management of the overall performance of the system and identify any need for improvement,

All CCG employees are required to comply with the laws of Canada at all times, to faithfully apply the procedures developed under this Policy, and to take any necessary precautions to protect themselves, their colleagues, CCG assets, cargoes, and the environment.



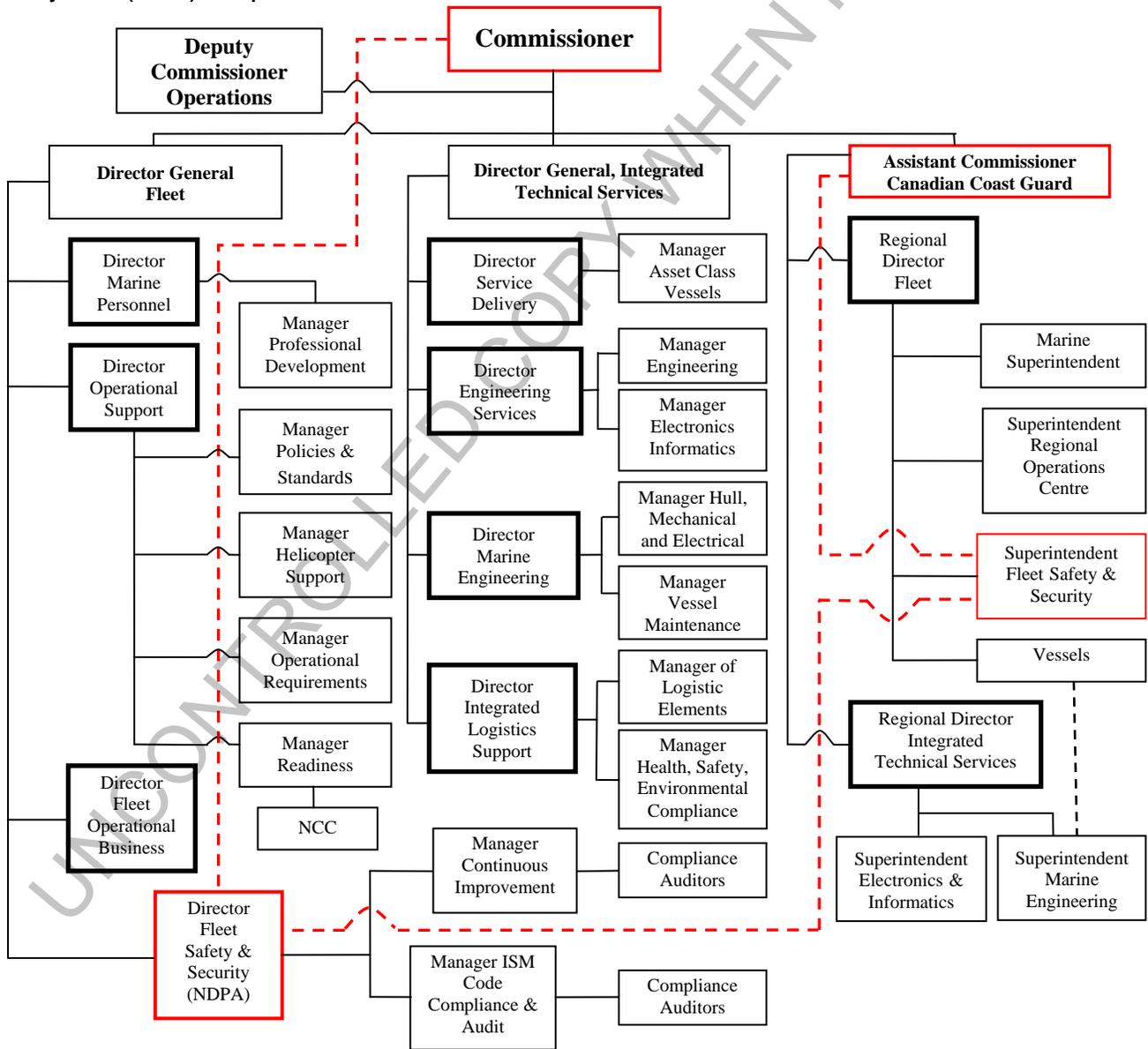
Commissioner, Canadian Coast Guard

Fleet Safety Manual

3.0 - RESPONSIBILITIES AND AUTHORITIES

1 SHORE-BASED ORGANIZATION CHART

Depicts Only Those Positions Ashore Having Safety Management System (SMS) Responsibilities



2 WORK DESCRIPTIONS – SHORE-BASED PERSONNEL - HEADQUARTERS

2.1 COMMISSIONER / DEPUTY COMMISSIONER, OPERATIONS CANADIAN COAST GUARD (CCG)

- a) The Commissioner, and in the Commissioner's absence - the Deputy Commissioner, Operations, is designated as the Authorized Representative (Managing Owner) of the Department of Fisheries and Oceans - CCG Fleet, and is accountable for the development of national policies governing the composition and operation of the CCG.
- b) As the Authorized Representative, the Commissioner is responsible for acting with respect to all matters relating to CCG vessels and is also bound by the acts or omissions of Coast Guard employees with respect to any matter relating to CCG vessels.

2.2 DIRECTOR GENERAL, FLEET

- a) The Director General, Fleet is accountable for providing executive leadership within the context of an integrated matrix management model, for the formulation, development, implementation and monitoring of a management framework for the effective and efficient operation of the national CCG Fleet, including operational policies, standards, approaches, and mechanisms required to optimize the composition, deployment, and utilization of fleet units (predominately vessels, helicopters, and aircraft) and personnel in support of the delivery of mission critical programs and services, ensuring that outcomes and outputs are in alignment with allocated resources and business plans in support of the CCG's strategic directions and operational requirements.
- b) The Director General Fleet provides functional guidance for the implementation of these services to the operators in the five (5) regions, and to this end ensures the development of national plans, programs and projects, as well as national regulations, procedures, standards, and related international agreements.

2.3 DIRECTOR MARINE PERSONNEL

- a) The Director, Marine Personnel reports to the Director General, Fleet and is accountable for the development and delivery of national plans and standards to ensure that the CCG Fleet is crewed with competent personnel who possess the appropriate level of formal certification. The Director is also responsible for the development of competency standards for all tasks completed by CCG crews and the development of performance standards and training objectives to support the competency standards.

2.4 MANAGER, PROFESSIONAL DEVELOPMENT

- a) The Manager, Professional Development reports to the Director, Marine Personnel and is responsible for ensuring that there are competency standards for Fleet seagoing personnel including a certification standard for shipboard officers (CGFO 530) and that a national training plan is developed to address deficiencies in those competencies. The Manager is responsible for the implementation and monitoring for the examination and certification system for the award of CCG Certificates of Competency.

2.5 DIRECTOR, OPERATIONAL SUPPORT

- a) The Director, Operational Support reports to the Director General, Fleet and is accountable for implementing and monitoring national policies, plans, and standards governing the operation of the CCG's marine and aircraft fleets. The Director is accountable for the provision or co-ordination of aircraft support to the Departmental programs. The Director is the link between Headquarters program users of Fleet resources and the Headquarters Fleet staff for the definition of vessel operational requirements. The Director provides direction and advice on marine security and vessel and aircraft operationally-related matters to regional and Headquarters senior management.

2.6 MANAGER, POLICIES AND STANDARDS

- a) The Manager, Policies and Standards reports to the Director, Operational Support and is generally responsible for providing strategic leadership, development, expert advice, analysis, direction and recommendations to support the decision-making activities of the Director General, Fleet, senior management and specialists in the management of Fleet national policy issues and strategies. The Manager, Policies and Standards develops and promulgates departmental policies, bulletins, circulars, Coast Guard Fleet Orders, Standard Operating Procedures, etc. for the various types and classes of vessels in the departmental Fleet of vessels and aircraft.

2.7 MANAGER, HELICOPTER SUPPORT

- a) The Manager, Helicopter Support reports to the Director, Operational Support and is responsible for the provision of expert advice to support the Director and for the drafting of operational requirements for aircraft, equipment, operational audits, training, and analysis. The Manager, Helicopter Support directs the preparation of a comprehensive system of Coast Guard Fleet Orders, various operational instructions and manuals, and determines that the procedures employed meet the safety standards laid down by Coast Guard Fleet Orders and other relevant instructions. The Manager conducts audits of CCG shipboard helicopter flight deck operating procedures to determine the level of competency exhibited and recommends approval of CCG shipboard and land-based facilities' operational suitability and safety standards.

2.8 MANAGER, OPERATIONAL REQUIREMENTS

- a) The Manager, Operational Requirements reports to the Director, Operational Support and is responsible for the preparation and follow-up of projects for the construction, modernization, addition or modification to the configuration of vessels in the present and future Fleet. The Manager, Operational Requirements plans and conceptualizes the development and implementation of an integrated, national system of policies, plans, standards and methodology governing Fleet Operational Requirements Planning. The Manager, Operational Requirements offers current operational advice on the capabilities of all Fleet vessels.

2.9 MANAGER, READINESS

- a) The Manager, Readiness reports to the Director, Operational Support and is responsible, in the safety management context, for ensuring that the Headquarters Emergency Management Team is supplied with sufficient fleet information and support logistics so that the team can effectively discharge its collective responsibilities. The Manager, Readiness shall ensure that the National Coordination Centre (NCC) or an alternate facility is equipped and staffed to provide support to the Headquarters Fleet Emergency Management Team.
- b) The NCC is used as the Headquarters Fleet Emergency Management Centre. The NCC is the national focal point for all communications relating to the emergency and ensures that regular Situation Reports and Briefing Notes are prepared for approval by the Director General, Fleet. When the Headquarters Fleet Emergency Management Plan is invoked, the Communicator and NCC staff shall ensure that liaison is maintained with the appropriate ROC.

2.10 DIRECTOR, FLEET OPERATIONAL BUSINESS

- a) The Director, Fleet Operational Business reports to the Director General, Fleet and is accountable for providing professional leadership for the planning, developing and monitoring the implementation of strategic program direction, for the integrated management of the strategic plan, business plan, operational planning, budgeting, costing, resource allocation, capital planning and performance measurement system that guide the delivery of all CCG Fleet Services across the country.

2.11 DIRECTOR, FLEET SAFETY AND SECURITY

- a) The Director, Fleet Safety and Security, is the National Designated Person Ashore for the Canadian Coast Guard and has a reporting relationship to, the Director General, Fleet and the Commissioner of the Coast Guard. The details for this position are found in Section #4 of this Manual.

2.12 MANAGER, ISM CODE COMPLIANCE & AUDIT

- a) The Manager, ISM Code Compliance & Audit reports to the Director, Fleet Safety and Security and is responsible for monitoring the effectiveness of the FSMS. They coordinate the scheduling of audits, review audit reports and Non-Conformities and develop policies, procedures and guidelines where weaknesses have been identified.

2.13 MANAGER, CONTINUOUS IMPROVEMENT

- a) The Manager, Continuous Improvement reports to the Director, Fleet Safety and Security and is responsible for managing the development and implementation of policies, plans and strategies to improve effectiveness and efficiency of the FSMS resulting in the identification and resolution of trends in incidents.

2.14 COMPLIANCE AUDITORS, SAFETY AND SECURITY

- a) Compliance Auditors, Safety and Security report to the Manager, ISM Code Compliance and the Manager, Continuous Improvement and are responsible for the conduct of audits for the purpose of ensuring compliance with applicable international conventions as well as Canadian legislation, regulations, policies and standards.

2.15 DIRECTOR GENERAL, INTEGRATED TECHNICAL SERVICES

- a) The Director General, Integrated Technical Services is responsible for the effective and efficient through-life material support of all Coast Guard physical assets.
- b) The Director General, Integrated Technical Services provides functional guidance for the implementation of these services to the operators in the five (5) regions, and to this end ensures the development of national plans, programs and projects, as well as national regulations, procedures, standards, and related international agreements. As the Coast Guard National Technical Authority, the Director General is responsible to the Commissioner of the Coast Guard to ensure that the Director General, Fleet is provided with technical and engineering support, counsel and advice to assist the Fleet in meeting their organisational goal.
- c) The Director General, Integrated Technical Services is responsible for the management methodologies for: Quality, Project Management, and Risk and Knowledge Management that are the core of the Integrated Technical Services' systems. The DG is responsible for the development and maintenance of a formal quality management methodology in Integrated Technical Services based on the International Organization for Standardization ISO9000 standard that are complementary to the International Management Code for the Safe Operation of Ships and Pollution Prevention (The ISM Code). The DG is the primary contact for ITS matters related to the ISM Code. The DG coordinates Integrated Technical Services' involvement in ISM audits and ensures that corrective action is taken to address any Integrated Technical Services' non-conformities identified during an audit

2.16 DIRECTOR, SERVICE DELIVERY

- a) The Director, Service Delivery reports to the Director General, Integrated Technical Services and is accountable for the (class-level) life cycle management of nationally managed asset classes and for the delivery of research and development, acquisition, in-service, and disposal projects. The Director is responsible to manage the acquisition, in-service support, and disposal of vessels and their installed equipments and systems to meet the Statement of Requirements developed by the Fleet directorate, to develop management procedures that shall ensure that the vessels in-service support responds to regulatory, operational and fiscal requirements, and other relevant standards, throughout their in-service operations.

2.17 MANAGER, ASSET CLASS - VESSELS

- a) The Manager, Asset Class - Vessels is accountable to the Director, Service Delivery for the effective life-cycle management of CCG capital assets by Vessel Class and Sub-Class. The Class Manager, Vessels is also responsible for the effective planning, implementing, controlling and close-out of national acquisition, in-service and disposal projects.

2.18 DIRECTOR, ENGINEERING SERVICES

- a) The Director, Engineering Services reports to the Director General, Integrated Technical Services and is accountable for development and to keep current national engineering and maintenance standards and procedures as well as monitor compliance. Ensures the integrity of technical data necessary to execute maintenance activities on vessels during the in-service phase. To conduct technical reviews and investigations of CCG vessels. Monitor emerging technologies and advise CCG personnel of their potential application. Undertake the conceptual, preliminary and detailed design, procurement and/or systems development and manage technical projects required to transform Fleet's statements of operational requirements into affordable, cost effective solutions.

2.19 DIRECTOR MARINE ENGINEERING

- a) The Director Marine Engineering reports to the Director General, Integrated Technical Services and is responsible for the Hull, Mechanical, and Electrical disciplines for the through-life design integrity and the life cycle management of nationally managed equipment and systems.

2.20 MANAGER, HULL MECHANICAL AND ELECTRICAL

- a) The Manager, Hull Mechanical and Electrical reports to the Director, Marine Engineering and is responsible for develop and keep current national hull, mechanical and electrical engineering and maintenance standards and procedures in accordance with legislation, manufacturer's recommendations and industry best practices. Monitor emerging technologies and advise CCG personnel of their potential application. Transform Fleet's statements of operational requirements into affordable cost-effective solutions

2.21 MANAGER, VESSEL MAINTENANCE

- a) The Manager, Vessel Maintenance reports to the Director, Marine Engineering and is responsible for monitoring compliance with maintenance standards and procedures. Conducts technical reviews and investigations of CCG vessels. Provide technical solutions and support in the area of vessel maintenance. Provide ongoing technical support to regional personnel. Conducts surveys of vessel conditions.

2.22 THE DIRECTOR, INTEGRATED LOGISTICS SUPPORT

- a) The Director, Integrated Logistic Support reports to the Director General, Integrated Technical Services and is responsible to develop, maintain and monitor compliance to processes and procedures for the following integrated logistic support areas: configuration management and technical data management, supply chain management, maintenance management and technical training management.

2.23 THE LOGISTIC ELEMENT MANAGERS

- a) The Logistic Element Managers (configuration management and technical data management, Supply Chain Management, Maintenance Management and technical training management), report to the Director, Integrated Logistic Support and are responsible for exercising national functional authority in these disciplines by establishing and maintaining the necessary frameworks, policies, standards and procedures.

2.24 MANAGER, HEALTH, SAFETY AND ENVIRONMENTAL COMPLIANCE

- a) The Manager, Health, Safety and Environmental Compliance reports to the Director, Integrated Logistic Support and is responsible for developing, maintaining and monitoring the national Health, Safety and Environmental Compliance Management System (HSECMS) for shore-based personnel including the development of related frameworks, policies, standards and procedures to ensure effectiveness.

3 WORK DESCRIPTIONS – SHORE-BASED PERSONNEL – REGIONS

3.1 ASSISTANT COMMISSIONER, CCG

- a) The Assistant Commissioner, CCG is accountable for developing and implementing operational plans, guidelines, standards, processes, and procedures for the cost-effective management of the delivery of the Department of Fisheries and Oceans' programs and services related to the mandate of the Canadian Coast Guard for human life and safety and the safe and expeditious movement of waterborne traffic through Canadian waters and waters over which Canada exercises jurisdiction.

3.2 REGIONAL DIRECTOR, FLEET

- a) The Regional Director, Fleet is responsible for developing and implementing plans and processes and managing and directing the cost-effective operation and deployment of CCG vessels, small craft, aircraft, and other delivery platforms to fulfill the operational program requirements of the Region.

3.3 MARINE SUPERINTENDENT

- a) The Marine Superintendent reports to the Regional Director, Fleet and is responsible for advising the Regional Director, Fleet on fleet operational matters and providing day-to-day management of the regional fleet and personnel on behalf of the Regional Director, Fleet. Duties vary according to regional preference and a full description of the duties of this position is contained in regional procedures.

3.4 SUPERINTENDENT, REGIONAL OPERATIONS CENTRE

- a) The Superintendent, Regional Operations Centre reports to the Regional Director, Fleet and is responsible for planning, organizing, and coordinating the day-to-day utilization of regional vessels, aircraft, and specialized vehicles on behalf of the Regional Director, Fleet for the delivery of Departmental programs and services. Duties vary according to regional preference and a full description of the duties of this position is contained in regional procedures.

3.5 THE SUPERINTENDENT, FLEET SAFETY AND SECURITY

- a) The Superintendent, Fleet Safety and Security is the Regional Designated Person Ashore and has a reporting relationship to both the Regional Director, Fleet and the Assistant Commissioner, Coast Guard as well as a functional relationship to the Director, Fleet Safety and Security in the role of the National Designated Person Ashore to the Commissioner of the CCG. The details for this position may be found in Section #4 of this manual.

3.6 REGIONAL DIRECTOR, INTEGRATED TECHNICAL SERVICES

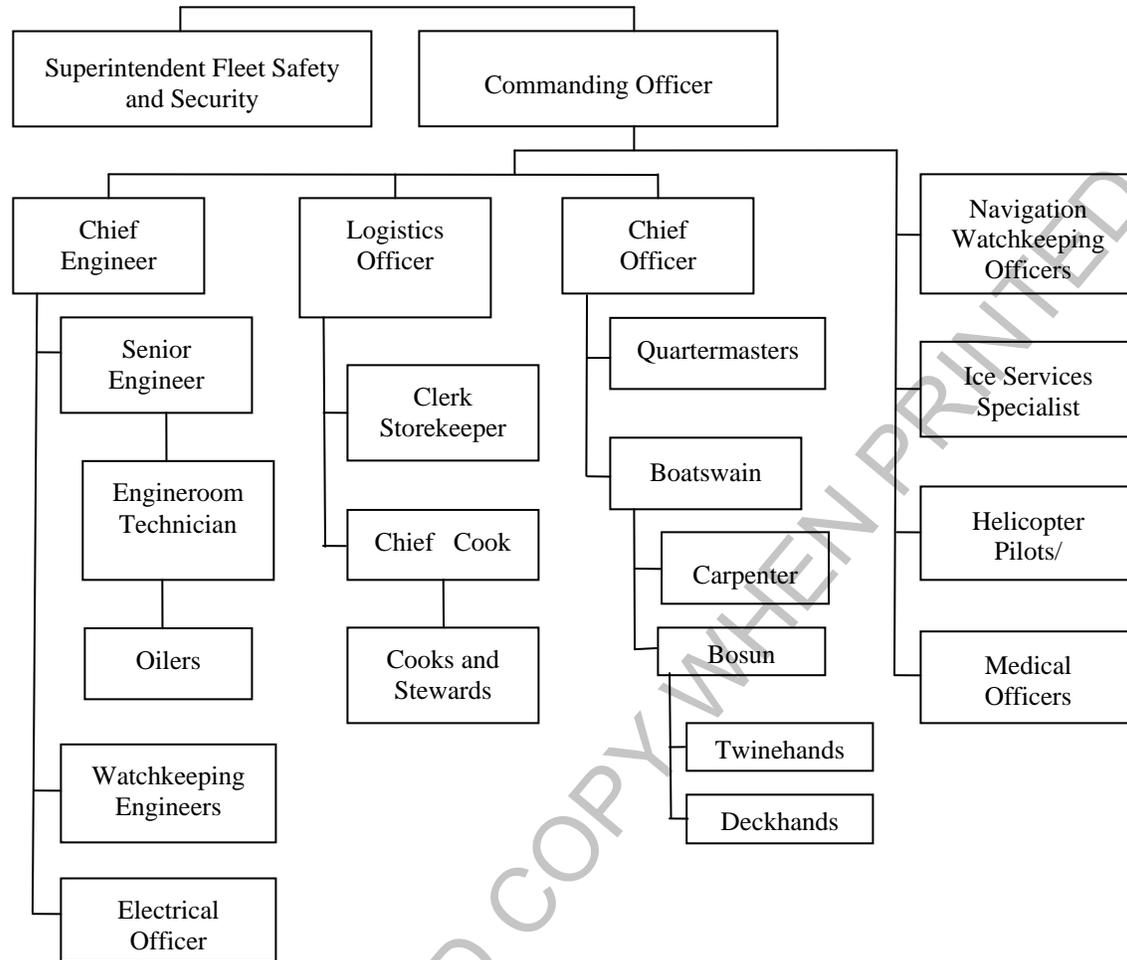
- a) The Regional Director Integrated Technical Services is responsible for developing and implementing plans, processes, and procedures for the cost-effective management of the delivery of engineering and technical services in support of program delivery and capital investments.

3.7 SUPERINTENDENT, MARINE ENGINEERING

- a) The Superintendent, Marine Engineering reports to the Regional Director, Integrated Technical Services and provides engineering and technical advice on behalf of the Director, Integrated Technical Services to regional managers on vessel refit, maintenance management, and associated support functions. Duties vary according to regional preference and a full description of the duties of this position is contained in regional procedures.

4 SHIP-BASED ORGANIZATION CHART**4.1 GENERAL**

- a) Due to the differences between the types of CCG vessels and the types of work performed aboard those vessels, there is not a standard vessel organization chart for the CCG.
- b) An example of a typical arrangement for a large vessel is shown here. Each vessel shall post in a conspicuous location aboard, the organization structure that is employed aboard the vessel for the shipboard Safety Management System to an equivalent level of detail as the example.



5 WORK DESCRIPTIONS – SEAGOING PERSONNEL

5.1 GENERAL

- a) The work descriptions for seagoing personnel are maintained aboard each vessel, with copies held ashore in the offices of the Regional Director of Operational Services and the Marine Superintendent.
- b) A copy of the work description for their position is to be provided to each member of the vessels complement upon first joining or upon a change in their position aboard the vessel.
- c) Work Descriptions shall contain a general description of the duties of the position.

5.2 COMMANDING OFFICER

- a) The detailed description of this position can be found in Section 5.0 of this manual.

5.3 CHIEF OFFICER

- a) As second-in-command, the Chief Officer is responsible to the Commanding Officer for the general work, cleanliness and good order of the vessel excepting that which is the responsibility of the Chief Engineer or the Logistics Officer (where carried).
- b) The Chief Officer shall have charge of all deck stores and is to keep an account of their receipt and expenditure in the proper forms and be responsible for stores and cargo in transit. The Chief Officer is responsible for maintaining the CCG Fleet Tackle Register and for the recording and keeping of the certificates which accompany the Register (T2 to T5).
- c) The Chief Officer is to carry out general superintendence of all work carried out by the deck department and is always to be present (or a responsible person designated by the Chief Officer) when loading or discharging stores, cargo or equipment.
- d) The Chief Officer is to keep watch when required.

5.4 NAVIGATION OFFICERS

- a) The Navigation Officers support the Commanding Officer in the conduct of the navigation of the vessel and the general direction of the navigation watch by closely following the pertinent regulations of the *CSA 2001*, by diligently respecting the common practices of seamen, and by observing the Commanding Officer's Standing Orders.
- b) The Navigation Officers stand watches on the Bridge as assigned by the Commanding Officer.
- c) The Navigation Officers supervise parts of the vessel when coming alongside or leaving a jetty or berth, during docking and undocking operations, during anchoring and unmooring, or when shifting the vessel. The Navigation Officers may also supervise the working deck of the vessel during hoisting, lowering and helicopter operations.
- d) The Navigation Officers maintain navigational charts and publications and are responsible for the care of navigational and communications appliances and equipment.
- e) The Navigation Officers are responsible for the good order and condition of lifeboats, rafts, life-saving appliances and fire-extinguishing equipment.
- f) The Navigation Officers take charge of the vessel's boats and barges when and where required.

5.5 CHIEF ENGINEER

- a) The Chief Engineer is responsible, as the ship's technical expert and manager, for planning, developing, and implementing procedures designed to manage the mechanical operation of the vessel and to ensure the safe, efficient, and cost-effective operation and maintenance of the machinery, equipment, ship's potable water supply and physical integrity of the hull.
- b) The Chief Engineer is responsible for the development and delivery of contingency plans dealing with any mechanical emergency or undesired result of mechanical or structural failure aboard the vessel.

- c) The Chief Engineer is directly responsible to the Commanding Officer for the working efficiency, cleanliness and entire management of the Engine Room Department and for the conduct of all staff who are under the Chief Engineer's general control.
- d) The Chief Engineer is to ensure that an engine room logbook is kept, and is to prepare the abstract of that log.
- e) The Chief Engineer is to ensure adequate quantities of engineering/mechanical supplies.
- f) The Chief Engineer or his delegate is to ensure that all activities concerning the vessel's potable water supply and production is monitored and logged.

5.6 SENIOR ENGINEER

- a) The Senior Engineer is the Chief Engineer's second and as such is responsible to the Chief Engineer for the general work, cleanliness and good order of the Engineering department.
- b) The Senior Engineer shall have charge of the day-to-day maintenance of the vessel.
- c) The Senior Engineer supervises and participates in preventative maintenance and time-based maintenance on machinery, equipment, services and systems. The Senior Engineer supervises and participates in the refit and the repair of the vessel's machinery, hull, equipment and systems.
- d) The Senior Engineer is to carry out general superintendence of all work carried out by the Engineering Department with the exception of watchkeeping.
- e) The Senior Engineer is to keep watch when required.

5.7 ENGINEER OFFICERS

- a) All watchkeeping Engineer Officers shall be regarded as the representatives of the Chief Engineer while they are in charge of machinery in the engine room.
- b) In general, the Engineer Officer in charge of the Watch is responsible for the safe, economical and efficient operation of all machinery and compartments under their charge.
- c) The watchkeeping Engineer Officers shall be responsible to the vessel in general at all times and conduct themselves accordingly. They shall ensure that all the Chief Engineer's standing orders are carried out.

5.8 ELECTRICAL OFFICERS

- a) The Electrical Officer provides technical advice to the Chief Engineer and other vessel personnel on electrical matters. They make recommendations regarding the engine room's electrical material resource needs.
- b) The Electrical Officer Plans and executes the maintenance and repair of the electrical components of the main propulsion plant, electrical plant, auxiliary machinery, deck machinery, hotel equipment and miscellaneous systems.

- c) The Electrical Officer assists in the creation, modification and/or upgrading of electrical/electronic equipment on board. They compile and recommend electronic refit specifications, vessel's additions and alterations, and other contract work required for the upkeep of the vessel.

5.9 LOGISTICS OFFICERS

- a) The Logistics Officer is directly responsible to the Commanding Officer for planning, organizing, directing, and controlling the operation of the vessel's Logistics Department. The Logistics Department provides to the vessel a support in management of the materiel, finance, administration, and hotel services.
- b) The Logistics Officer organizes and supervises subordinates and provides on-the-job training.
- c) The Logistics Officer is responsible for the provisioning of the vessel and must hold appropriate records, of the reception and the consumption of this provisioning
- d) The Logistics Officer is responsible for the maintenance of material management systems and the safekeeping of the vessel's major stores.
- e) The Logistics Officer coordinates and controls all hotel services activities.
- f) The Logistics Officer administers the vessel's administration and financial management activities.
- g) The Logistics Officer participates in multiple activities such as health, safety and security, which are assigned responsibilities.

5.10 ICE SERVICE SPECIALIST

- a) The Ice Service Specialist shall carry out any special instructions regarding ice observations and reports laid down by the Director, Weather and Environmental Prediction & Services, Environment Canada.
- b) The Ice Service Specialist shall make helicopter ice reconnaissance flights as instructed by the Commanding Officer. The Ice Observer shall interpret ice and weather reports as necessary and shall brief the Commanding Officer and Navigation Officers on ice conditions and forecasts as soon as possible after the receipt of messages.
- c) The Ice Service Specialist shall co-ordinate arrangements for tactical support from the field ice reconnaissance unit as instructed by the Commanding Officer.

5.11 HELICOPTER PILOT AND ENGINEER

- a) The Helicopter Pilot is responsible to the Commanding Officer for the safe and efficient operation of the helicopter. The pilot shall advise the Commanding Officer on joining the vessel of any anticipated helicopter maintenance that is likely to curtail helicopter availability and to provide forewarning in this regard throughout the voyage.
- b) The Helicopter Pilot is responsible for communication with helicopter's base concerning operational and administrative matters. If more than one pilot is on board, one shall be designated as the Senior Pilot and charged with the above responsibilities.

- c) When the Helicopter Engineer is not available the Helicopter Pilot shall be present during helicopter refuelling operations and shall check fuel samples when so involved. The pilot shall be responsible for securing the helicopter when the Helicopter Engineer is not available and shall provide advice and direction to the Flight Deck Officer regarding flight operations.
- d) When available, the Helicopter Engineer shall be a member of the Flight Deck Party during flight operations. The Engineer shall be responsible for moving and securing the helicopter, and shall be present, when available, during helicopter refuelling and check the fuel samples.
- e) The Helicopter Engineer is responsible for all maintenance associated with the helicopter and related equipment, and for ensuring that the aircraft is in an airworthy state ready for safe and efficient flight operations.
- f) The Helicopter Engineer shall advise the Helicopter Pilot, and in the absence of the pilot, the Commanding Officer of anticipated maintenance requirements that may impact on helicopter availability.
- g) The Helicopter Engineer is responsible for communication with the helicopter's base concerning maintenance and related administrative matters. When there are more than one helicopter crews on board, one engineer shall be designated the Senior Engineer and charged with the above responsibilities.

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

4.0 - DESIGNATED PERSON(S) ASHORE

1 DESIGNATED PERSON(S) ASHORE

- a) Designated Person(s) Ashore are assigned one to each region with the National Designated Person Ashore (NDPA) based at Canadian Coast Guard (CCG) Fleet Headquarters. The Director Fleet Safety and Security (DFSS) is the National Designated Person Ashore while within the regions the Superintendent Fleet Safety and Security (SFSS) is the Regional Designated Person Ashore (RDPA).

2 THE DIRECTOR OF FLEET SAFETY AND SECURITY

- a) The Director of Fleet Safety and Security reports directly to the Director General, Fleet on a day-to-day basis and reports immediately to the Commissioner of the Coast Guard on issues arising from the employment of the Fleet Safety Management System (FSMS) which have an impact on vessel safety or security, a persons health and safety, or potential pollution not immediately correctable within the normal reporting structure. The DFSS has a functional relationship with the Superintendents Fleet Safety and Security and provides general guidance and direction regarding the employment of the CCG FSMS.

3 THE SUPERINTENDENT FLEET SAFETY AND SECURITY

- a) The Superintendent Fleet Safety and Security (SFSS) reports directly to the Regional Director, Fleet on a day-to-day basis and reports immediately to the Assistant Commissioner CCG and the DFSS at Headquarters on issues arising from the employment of the FSMS which have an impact on vessel safety or security, a persons health and safety, or potential pollution not immediately correctable within the normal reporting structure.

4 THE DIRECTOR FLEET SAFETY AND SECURITY AND SUPERINTENDENT FLEET SAFETY AND SECURITY

- a) The DFSS and SFSS, within their area of operation, are responsible for ensuring overall conformity with the FSMS as defined in this manual. Specific requirements and responsibilities are outlined in the procedures contained within this manual but include the following:
 - Providing effective implementation and maintenance for the FSMS.

- Ensuring proper scheduling of both shipboard and shore-based audits of the FSMS.
 - Monitoring reports made by the fleet.
 - Investigating reported non-conformances with Commanding Officers and shore management staff.
 - Ensuring that investigation teams are established to determine root causes of hazardous occurrences.
 - Verifying that recommendations to correct hazardous situations are implemented.
 - Holding regular system review meetings and keeping records of same.
 - Verifying that the FSMS is understood by seagoing staff and shore support employees.
 - Liaising with Commanding Officers and other officials with concurrent interests on routine issues of the Safety FSMS.
 - Identifying training requirements for personnel involved with the FSMS.
 - Ensuring adequate resources and shore-based support are applied to regional Fleet operations.
 - Controlling and maintaining an effective documentation system.
 - Act as mediator, when concerns are raised regarding FSMS and refer them to the NDPA when all parties cannot agree.
- b) No duties or responsibilities related to the active management of the operation of the Fleet shall be assigned to either the Director or Superintendent; Fleet Safety and Security. When it is intended that a person who normally occupies one of these positions will be used to act in place of a Fleet manager, they must be relieved of their responsibilities under this section of the manual and an appropriate individual assigned with those duties.
- c) In the event of an absence or the departure of the incumbent Director / Superintendent Fleet Safety and Security, the Director General, Fleet or Regional Director, Fleet, as appropriate must assign a responsible replacement immediately.
- d) The name and contact information for the incumbent or replacement as appropriate shall be made available to all personnel within the area of responsibility for the individual assigned and additionally for vessels and stations, be posted in a conspicuous location.

Contact Numbers for the Designated Persons Ashore

Director, Fleet Safety and Security
200 Kent St
Ottawa, Ontario
K1A 0E6
(613) 991-6722 – Office
995-4700 – Fax

Superintendent Fleet Safety and Security
(Newfoundland & Labrador)
Box 5667
St. John's, Newfoundland
A1C 5X1
(709) 772-6279 – Office
772-7732 – Fax

Superintendent Fleet Safety and Security
(Maritimes)
50 Discovery Dr.
PO Box 1000
Dartmouth, Nova Scotia
B2Y 3Z8
(902) 426-3927 – Office
426-6977 – Fax

Superintendent Fleet Safety and Security
(Québec)
101 Champlain Boulevard
Québec, Québec
G1K 7Y7
(418) 648-7513 Office
648-3074 – Fax

Superintendent Fleet Safety and Security
(Central and Arctic)
105 Christina St., S.,
Sarnia, Ontario
N7T 7W1
(519) 383-1892 – Office
383-1995 – Fax

Superintendent Fleet Safety and Security
(Pacific)
25 Huron Street
Victoria, British Columbia
V8V 4V9
(250) 480-2636 – Office
480-2698 – Fax

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

5.0 - COMMANDING OFFICER'S RESPONSIBILITY AND AUTHORITY

1.1 COMMANDING OFFICER

The Commanding Officer is accountable to the Commissioner (Authorised Representative of the CCG Fleet) for ensuring that the vessel under their command is operated in accordance with policies and procedures established for the safe, secure and efficient operation for the CCG Fleet.

- a) The Commanding Officer, although accountable to the Commissioner, is responsible to the Regional Director Fleet for day to day operation of the vessel.
- b) The Commanding Officer is considered the "Employer" as it relates to responsibilities under the *Canada Labour Code* and associated Regulations. In the absence of a Commanding Officer, an individual assigned with delegated authority shall assume the responsibilities of the Commanding Officer for the health and safety of the crew, safety and security of the vessel and for the protection of the environment from pollution from the vessel.
- c) The Commanding Officer has the ultimate authority and responsibility for taking all necessary actions to ensure the health and safety of the crew, the passengers and supernumeraries, safety and security of the vessel, and protection of the environment. In certain situations this may mean that a deviation from documented procedures is necessary.
 - *"The owner, the charterer, the company operating the ship ... or any other person shall not prevent or restrict the master of the ship from taking or executing any decision which, in the master's professional judgement, is necessary for safety of life at sea and protection of the marine environment". (SOLAS - V - 34-1)*
- d) The Commanding Officer shall be responsible for verifying that specified orders, instructions and standards are observed. This shall be done by the day-to-day monitoring of the activities on board the vessel, as well as inspections, internal audits, and regular review of the logbooks and safety meeting minutes. The Commanding Officer shall also ensure that on board safety, security and emergency training and drills and exercises and shipboard familiarization training are all conducted as required. The Commanding Officer shall liaise with shore management where training and familiarization deficiencies have been identified.
- e) For additional assistance in dealing with any situation onboard the vessel the Commanding Officer may, at anytime, request assistance of the ROC, the Regional Director, Fleet or any law enforcement agency.

- f) If a conflict between safety and security requirements applicable to the vessel arises during the vessel's operations, the Commanding Officer shall give precedence to requirements to maintain safety of the vessel and, in such a case, shall use any temporary procedures that the Commanding Officer determines appropriate under the circumstances and, to the highest possible degree, satisfy the security requirements of the prevailing MARSEC Level.
- g) The Commanding Officer shall ensure that proper reporting takes place on all matters which affect or may affect health, safety, security or the environment, whether that be a non conformity/observation or an incident report, to the Superintendent Fleet Safety and Security (SFSS).
- h) The Commanding Officer is responsible for the Safety Management System (SMS) on board the vessel/station. The Commanding Officer should be fully conversant with the policies and documented procedures associated with the system. The Commanding Officer shall continually motivate the crew in the execution of the Health, Safety, Security and Environmental Policy and must take steps to ensure that the vessel's personnel are conversant with their duties and responsibilities through familiarization, training and drills. The fact that drills, briefings, training sessions and familiarizations have been conducted must be documented.
- i) The Commanding Officer shall issue, in a clear and concise manner, appropriate written orders or instructions to subordinates to guide those individuals in the proper completion of routine tasks aboard the vessel. Examples of written orders are Standing Orders, Night Orders or notices on bulletin boards. All such orders shall be signed and dated by the Commanding Officer and signed by the recipient if appropriate.
- j) To ensure the effectiveness of the onboard system the Commanding Officer shall assign SMS roles to senior officers aboard the vessel.
- k) To ensure that the system is kept up to date the Commanding Officer shall conduct periodic reviews of the vessels' SMS. These reviews are to be held outside the regularly established OSH Committee meetings but may include, at the Commanding Officers discretion, representatives from the OSH Committee in addition to those required by 12.A.2, the reviews shall include the on-board contingency plans and site specific work Instructions / Procedures / Checklists. Any deficiencies reports, request for onboard procedure approval for amendments or scheduling of audits shall be sent to the SFSS.



Fleet Safety Manual

6.0 - RESOURCES AND PERSONNEL

1 VESSEL COMPLEMENT

1.1 COMMANDING OFFICER

- a) In addition to meeting the certification requirements for command, the position of the Commanding Officer shall also meet the Canadian Coast Guard (CCG) Fleet's own requirements for any Commanding Officer.
- b) The CCG shall ensure that the Commanding Officer is fully conversant with the Fleet Safety Management System (FSMS).
- c) The CCG shall ensure that adequate resources are available both ashore and afloat to support the Commanding Officer in the safe and efficient operation of their vessel.

1.2 CREW CERTIFICATION

- a) The CCG shall ensure that each vessel is adequately manned with qualified crew members in accordance with the standards (*Seafarers' Training, Certification and Watchkeeping Code — STCW Code*), National and CCG Fleet standards and that they are medically fit in accordance with Public Service standards for seagoing occupations.

1.3 CREWING LEVEL

- a) The CCG shall ensure that each vessel is crewed with both certified officers and crewmembers, as a minimum, in accordance with the predetermined, vessel-specific crewing levels for each planned mode of operation on the voyage. Crewing Profiles shall be respected for the purpose of conducting operations relating to CCG programs and services. Crewing Profiles also establish a minimum complement for the purpose of transit only which is not part of an operational tasking. No CCG operations shall be performed while the vessel is operating with a minimum complement except where for the purpose of Safety of Life at Sea.

2 SAFETY MANAGEMENT SYSTEM — FAMILIARIZATION

- a) The CCG shall ensure through suitable instructions, checklists, information packages, etc., that shipboard personnel are aware of their individual responsibility for safe operation of the vessel and overall protection of the environment.
- b) CCG personnel shall be made aware of international regulations, codes, and national standards, etc. that are both applicable to the safe operation of the vessel and are relevant to their position.

- c) Canada is a bilingual country and the use of both official languages shall be promoted throughout the CCG. However, a single language of work for the purpose of issuing orders and instructions necessary for navigation, direction, and control shall be established for each vessel.
- d) The CCG shall ensure that all shipboard personnel receive relevant SMS information in the official language of Canada that is understood by them. The CCG shall ensure that individuals are able to communicate effectively in the performance of their duties in the official language of Canada used aboard the vessel.
- e) To ensure that new personnel and personnel transferred to new assignments related to safety and protection of the environment are given proper familiarization to their duties, certain essential instructions associated with the FSMS have been defined aboard each vessel.

3 TRAINING

- a) The CCG shall continually identify training requirements which may be required for both shore and seagoing personnel in support of the FSMS, and commits to provide training that is deemed necessary.
- b) Training requests are to be identified in the employees annual Performance Review and Appraisal Report, and/or employee's Personal Learning Plan. Relevant training necessary to employee's current position, or the current and future needs of the Agency are to be identified, and commitments to provide training that is deemed necessary are to be made.

4 SUPERNUMERARY PERSONNEL CARRIED ABOARD CCG VESSELS

- a) There are many risks associated with bringing inexperienced, unprepared personnel onboard a CCG vessel. Supernumerary Personnel shall be made aware of associated risks in advanced to allow time for them to be better prepared when joining a CCG vessel.
- b) The state of health for the supernumeraries must be evaluated prior to them joining the vessel. In cases this evaluation may be conducted by a physician but in all cases the supernumerary shall ensure that they are medically fit to join a CCG vessel.
- c) Security clearances for all supernumeraries must be in place in order to have access to the CCG workplace.



Fleet Safety Manual

6.A.1 - CREW COMPLEMENT

1 PURPOSE

- a) To ensure that Canadian Coast Guard (CCG) vessels are operated by qualified, certified and medically fit personnel who are trained, competent and proficient individuals.

2 RESPONSIBILITIES

2.1 REGIONAL DIRECTOR, FLEET

- a) The Regional Director, Fleet is responsible for monitoring the engagement and assignment of persons in seagoing positions to ensure that this procedure is fully respected and applied.
- b) The Regional Director, Fleet is to sign and date all vessels crewing profiles required by this procedure.

2.2 MARINE SUPERINTENDENT

- a) The Marine Superintendent is responsible for ensuring that all personnel assigned to seagoing positions meet the qualifications as identified in the crewing profile established for the respective vessel.
- b) The Marine Superintendent shall ensure that all requests for the following are routed through the Superintendent, Fleet Safety and Security (SFSS) :
 - Certification requirement exemptions
 - Vessel Crewing Profile regional exemptions and
 - Amendments to vessels' Crewing Profile Certificates are made in writing.

2.3 MARINE SUPERINTENDENT, AND/OR THE COMMANDING OFFICER

- a) The Marine Superintendent, and/or the Commanding Officer, shall notify the Regional Operations Centre (ROC) when the crewing profile for the vessel is not met.

2.4 COMMANDING OFFICER

- a) The Commanding Officer is responsible for sighting all original copies of Canadian Maritime Documents and reviewing all documentation purporting to indicate experience before permitting any person to be engaged in any position aboard their vessel.

2.5 SUPERINTENDENT, FLEET SAFETY AND SECURITY

- a) The SFSS shall report all requests for exemptions to the certification and competency requirements to the Safety Management System (SMS) Review.

2.6 DIRECTOR GENERAL, FLEET

- a) The Director General, Fleet has the authority, as exercised through the Professional Development Division of the Marine Personnel Branch, to grant or deny an exemption to the requirements to hold a Canadian Maritime Document as defined in the [Canada Shipping Act \(CSA2001\)](#) and shown in the approved vessel crewing profile. In the case of emergency, during silent hours, weekends or holidays, when Headquarters may not be accessible, the Regional Director, Fleet in the region may exercise this authority on the understanding that a report must be entered in the exemption database and is subject to oversight.

Note 1: The CCG is exempted from the application of certain parts of the [Marine Personnel Regulations](#). However, CCG vessels shall observe the requirements of the [Marine Personnel Regulations](#) as if they were applicable. All CCG vessels shall have an approved crewing profile. These crewing profiles shall show, at a minimum, the certification requirements prescribed by the Marine Personnel Regulations, or any such higher level of certification directed by the Director General, Fleet or the Regional Director, Fleet.

Note 2: An exemption must be requested in any case where the person being proposed to temporarily fill a position aboard a vessel does not meet the certification requirements shown in the vessels' crewing profile.

2.7 ALL SEAFARERS

- a) All seafarers required by the vessels' crewing profiles issued pursuant to this procedure, to hold a Canadian Maritime Document for their position aboard, shall have the Document and supporting documentation with them for inspection as and when required. Only original copies shall be presented as proof of certification.

3 INSTRUCTION

3.1 GENERAL

- a) All certified seagoing personnel shall provide a copy of their Canadian Maritime Document and supporting certificate(s) to the office of the Marine Superintendent. The Marine Superintendent shall maintain a register of the Documents held any endorsements, and validity periods. This register shall be reviewed to ensure that Documents have not expired and are valid for service.

- b) The vessel Crewing Profile shall normally be the minimum requirements for the vessel to sail and conduct CCG operations. The vessel Crewing Profile shall be posted aboard in a conspicuous location. Where it is impractical to post it onboard due to the small size of the vessel, it shall be filed with other controlled documents required to be carried onboard for the safe operation of the vessel. For those vessels that have a SAR station or a shore base associated with them, the original shall be posted ashore and a copy kept onboard with the other controlled documents. Copies of vessel crewing profiles shall be maintained in the office of the Marine Superintendent.

3.2 ASSIGNMENTS

- a) Prior to assigning a person to a seagoing position, the individual's qualifications shall be reviewed to ensure the candidate meets the requirements of the position as shown in the applicable vessel crewing profile.
- b) Pre-deployment Familiarization: the Marine Superintendent is required to arrange a period of time that allows key vessel management positions to be properly familiarized with a vessel, its programs, systems, equipment and Safety Management System. Pre-deployment Familiarization is outlined in 6.B.1 (3.3).

3.3 EXEMPTION PROCESS - CERTIFICATION AND CREWING REQUIREMENTS

- a) Appropriate Authorities
- For Canadian Maritime Document requirements shown in the approved vessel crewing profile, the exemption authority is the Director General, Fleet through the Professional Development Division of the Marine Personnel Branch or, in emergency situations, the Regional Director, Fleet for the region.
 - For all other elements of vessels crewing profiles i.e. program related training elements and Logistic Officer/storekeeper, the exemption authority is the Regional Director, Fleet.
- b) A vessel may be granted an exemption from the certification and crewing requirements designated for a CCG vessel in the following general circumstances:
- the requirement has been substantially complied with in the case of that vessel;
 - or compliance is unnecessary in the circumstances of the particular case; and,
 - that the action taken or provision made with respect to the subject matter of the requirement in the case of the vessel is as effective as actual compliance with the requirement.
- c) The complement of the vessel shall be such that not more than one person in each Department requiring a Canadian Maritime Document is filled by a person named in a certification exemption.
- the person named in the exemption must hold a certificate not more than one grade lower than the certificate required.
 - For Commanding Officers positions, the certificate of the person named in the exemption must be at the master/command level.

- On vessels making voyages to which the *Standards of Training and Certification for Watchkeepers Convention (STCW)* applies, the position of Commanding Officer or Chief Engineer can be filled through the exemption process, only under extraordinary situations.
- d) The Appropriate Authority for the exemption must be satisfied that there is no suitable and properly qualified individual available for the position before issuing an exemption, and the responsibility for providing this proof rests with the Marine Superintendent.
- e) The Appropriate Authority must be satisfied that the persons named in the exemption have the practical ability to perform the service required.
- f) An exemption shall be issued for the shortest time practicable, usually on a per voyage basis, and in no case for a period exceeding six months.
- g) The exemption approval must be provided in a form that can be confirmed and audited. A copy of the exemption must be sent to the vessel that is being exempted. The vessel shall not sail until the exemption approval has been received.
- h) Where exemptions have been generated for program training elements or Logistic Officer positions, copies shall be forwarded to the Manager of Seagoing Personnel.

4 DOCUMENTATION

- Vessel Specific Crewing Profiles
- Ship's Book
- Regional Training File
- CGFO 530 – Qualifications Required for CCG Seagoing Personnel

ANNEX A – VESSEL’S CREWING PROFILES

5 VESSEL’S CREWING PROFILES

- a) The Vessels’ Crewing Profile shall normally be the minimum requirements for the vessel to sail and conduct CCG operations.
- b) These vessel crewing profiles contain information from three sources:
 - [Canadian Coast Guard Ships’ Officers and Crew Training Standards \(DFO/5730\)](#)
This publication identifies and describes competencies from basic on-the-job training, to rescue specialist training, to competencies covered by vessels’ officers’ certificates of competency as well as CCG specific competencies such as the ability to carry out an aids to navigation program. Certificate requirements such as Bridge Watchman, Engine room Rating, Ship’s Cook, Marine Emergency Duties, and First Aid for ships crew are also specified in the training standard.
 - The minimum certification requirements for vessel’s complement shall be not less than prescribed by the [CSA 2001 - Marine Personnel Regulations](#).
 - The minimum certification requirements for Electrical Officers, Logistics Officers and Ship’s Cooks shall be not less than prescribed in Coast Guard Fleet Order 530.00.
 - In developing the profiles, the guidance provided by the International Maritime Organization’s Assembly Resolution #A.890 (21) 25NOV99 – Principles of Safe Manning shall be considered.

UNCONTROLLED COPY



Fleet Safety Manual

6.A.2 - MEDICAL FITNESS FOR SEAGOING PERSONNEL

1 PURPOSE

- a) To ensure that all seagoing employees in the Canadian Coast Guard (CCG) as public servants of Canada meet the health requirements for their position, as established in the [Treasury Board Occupational Health Evaluation Standard](#) and further specified in [Health Canada's Occupational Health Assessment Guide \(OHAG\)](#).

2 RESPONSIBILITIES

2.1 REGIONAL DIRECTOR, FLEET

- a) The Regional Director, Fleet is responsible for monitoring the engagement and assignment of persons in seagoing positions to ensure that this procedure is fully respected and applied.

2.2 MARINE SUPERINTENDENT

- a) The Marine Superintendent is responsible for ensuring that all personnel assigned to seagoing positions hold valid medical certificates. The Marine Superintendent is also responsible for facilitating medical examinations.

2.3 COMMANDING OFFICER

- a) The Commanding Officer is responsible for sighting all original copies of medical fitness certificates to ensure their validity and applicability to the duties that the named holder will be assigned aboard the vessel.

2.4 ALL SEAFARERS

- a) All seafarers shall have their medical fitness certificate with them for inspection as and when required. All seafarers are responsible for attending at medical appointments arranged by the Marine Superintendent as required to maintain certificate validity.

3 INSTRUCTION

3.1 MEDICAL FITNESS

- a) It is a Treasury Board policy that seagoing personnel are medically examined at regular intervals by a Health Canada physician to determine fitness for duties at sea. This examination also serves to medically validate a Transport Canada certificate of competency and complies with the requirements of the [Marine Personnel Regulations of the Canada Shipping Act \(2001\)](#).
- b) Usually medical examinations take place in the employee's headquarters area (homeport). All respective arrangements shall be made by employing departments and agencies through the regional office of the designated occupational health provider by Health Canada, Public Service Health Program (PSHP) using the prescribed forms and procedures.
- c) In addition to the periodic medical evaluations, An Occupational Health Medical Assessment or Fitness to Work evaluation shall be done prior to returning to work after any illness or injury requiring Medical Evacuation (MEDEVAC) or any prolonged absences for reason of illness or injury or when a medical examination is warranted by reason of employee work performance.
- d) Where a physician makes a determination of "temporarily fit" and does not specify a validity period for this finding, the maximum period of validity is understood to be no more than 90 days from the date of the examination or until subsequently advised that a conclusive finding has been reached, whichever comes first.
- e) For persons renewing their current medical certificate in advance of the expiry date, the current certificate becomes invalid upon the physician making a finding based on the most recent examination. The current certificate immediately expires on the issue of the new certificate or with a finding of "unable to assess" or "unfit".
- f) An effective scheduling system shall be established to ensure all seagoing personnel complete their medical evaluations in advance of requirements.

3.2 CHANGES TO MEDICAL CONDITION

- a) All seagoing personnel, when consulting a physician or optometrist, shall advise the physician or optometrist that they are employed in a seagoing position with the CCG and shall obtain a medical opinion as to whether the condition for which they are being diagnosed or treated could constitute a hazard to themselves or their fellow crew (Refer to Section 90 of [Canada Shipping Act 2001](#)).
- b) Upon being advised by a medical professional that the seafarer's condition may constitute a hazard, the seafarer must advise the Marine Superintendent that they are unfit for duty at sea.
- c) Seafarers who become ill while aboard or who find themselves suffering from symptoms which give rise to any question as to whether they can fully satisfy their assigned duties must immediately advise their supervisor or the Commanding Officer so that they can be relieved and medical attention can be sought (Refer to Section 113 (c) of [Canada Shipping Act 2001](#)).

- d) Seafarers who become unfit for seagoing duty during the period of validity of their medical certificate shall not be assigned to a seagoing position until reassessed by a medical practitioner and found to be "Fit" or "Fit with Limitations". Fitness shall be confirmed in writing by the assessing physician and such confirmations shall be sent to an Occupational Health Medical Officer, Public Service Health Program Canada for review.

3.3 MEDICAL EVACUATION (MEDEVAC)

- a) Where a seafarer requires a medical evacuation to attend to a personal medical emergency situation (whether pre-existing, resulting from illness or injury suffered aboard or suddenly arising while aboard), if this evacuation requires further medical attention or an overnight stay in hospital then that seafarer's medical fitness certificate shall be considered to be invalid. If during the initial visit the physician downgrades the seriousness of the injury, upon written notification (physicians note) the seafarer may be returned to the vessel retaining their full medical status.
- b) Following cases of medical evacuations, the seafarer shall have their case reviewed by a Health Canada, Public Service Health Program health professional before being permitted to return to duty.

3.4 MEDICATION

- a) Seafarers who are required to maintain a medicated state to be qualified as "fit" or "fit with limitations" are required to ensure that they are in possession of sufficient quantities of such medication so as to cover their period of time on board plus some additional quantity (25% more than forecast requirement is considered sufficient) to allow for the potential for delays due to weather, sea condition or emergency operations.
- b) As soon as it becomes apparent to a seafarer who is required to maintain a medicated state that they will consume all of their available medication before the vessel is due to reach port, they must advise the Commanding Officer immediately.
- c) If required medication is only to be taken upon the onset of certain symptoms, then this information should be shared with the vessel's medical officer (if carried) or the Rescue Specialist or a supervisor so that treatment will not be delayed in the event that the seafarer is incapacitated or injured. In providing this information the seafarer must advise where the medication is kept and the dosage to be administered.
- d) For personal privacy concerns, this information may be tendered in a sealed envelope that is to be opened only in the event of an emergency.

3.5 RECOMMENDED IMMUNISATION:

- a) Td vaccination (tetanus and diphtheria), unless contra-indicated.
- b) Hepatitis B for employees who are members of armed boarding parties or who have responsibilities for law enforcement activities. Employees potentially exposed to blood during search and rescue activities should be protected. Such employees should identify themselves or be identified by management.
- c) Employees potentially exposed to blood while performing their duties may wish to receive immunisation for Hepatitis B. Such employee should identify themselves to management.

- d) Employees potentially exposed to bodily fluids while performing their duties may wish to receive immunisation for Hepatitis A. Such employee should identify themselves to management

4 DOCUMENTATION

- *Canada Shipping Act (2001)*
- Treasury Board – (National Joint Council) Occupational Health Assessment Standard
- Health Canada - Occupational Health Assessment Guide (OHAG)
- CCG Seagoing Personnel Management Manual 3.E - Health Canada Category III Medicals for CCG Seagoing Personnel
- Annex D - Forms

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

6.B.1 - FAMILIARIZATION

1 PURPOSE

- a) To ensure that persons joining the vessel, new personnel, and personnel in new assignments are given proper familiarization with their duties and responsibilities as related to health, safety, security, and protection of the environment.

2 RESPONSIBILITIES

2.1 REGIONAL DIRECTORS AND SUPERINTENDENTS

- a) Regional Directors and Superintendents are responsible to ensure that all instructions that are essential in support of the Safety Management System (SMS) at their site are identified, documented, given and understood.

2.2 COMMANDING OFFICER

- a) The Commanding Officer is responsible to ensure that all essential instructions are identified, documented, given and understood prior to sailing.

3 INSTRUCTION

3.1 FREQUENCY

- a) Persons joining the vessel for the first time and persons who have not served aboard the vessel for a period greater than the previous six calendar months shall receive familiarization. In the case of seasonally operated vessels, persons who were not aboard the vessel at the end of the previous operational cycle shall be given a familiarization upon their rejoining.
- b) Personnel employed in shore management positions with the responsibility for the management of vessels or the assignment of crew shall be familiarized upon first assuming their duties.
- c) Persons acting in vessel or shore management positions shall be given a familiarization upon first assuming their duties and again where a period greater than six months has occurred between the same acting assignments.

- d) All personnel who have continually served in their position shall, on an annual basis review their familiarization and sign as having acknowledged the process. This serves to ensure that changes which have occurred in the past year within the SMS are reflected in the familiarization process.

3.2 SHIPBOARD FAMILIARIZATION

- a) Upon joining the vessel if at sea or prior to being assigned any duties when in port, the following familiarization shall take place so that, as a minimum, the crewmember can:
- understand both the Health, Safety, Security and the Environmental Policy and Drug, Alcohol, and Psychoactive Substance Policy.
 - understand safety and security information, symbols, signs and alarm signals;
 - understand and communicate with others onboard on basic safety matters;
 - know what to do in the event of man overboard, detection of fire or smoke, or abandon ship alarm;
 - identify muster and embarkation stations and emergency escape routes;
 - know the layout of the vessel;
 - locate and be able to don lifejackets and immersion suits- donning of immersion suits shall take place upon first joining, and annually thereafter;
 - know how to raise the fire alarm and know how to use a portable fire extinguishers;
 - take initial action on finding an accident or medical emergency;
 - close and open fire, weathertight and watertight doors as required;
 - understand the use of safety equipment; and
 - know their responsibilities related to the security of the vessel under the direction of Commanding Officer as the Ship Security Officer (SSO) or their delegate.
- b) In addition to the basic safety and security familiarization, all new personnel and personnel taking up new assignments shall, within the first week of joining the vessel, complete supervised on-the-job training in the following areas:
- The employee shall be aware of the SMS used in the Fleet and the obligations of an employee under the [Maritime Occupational Health and Safety Regulations](#), and the [Canada Labour Code Part II](#).
 - The employee shall be instructed in, and shall understand, the duties of their position.
 - The employee shall be instructed in, and understand, the operation and basic maintenance of equipment used in the performance of their duties.
 - The employee shall receive Workplace Hazardous Material Information System (WHMIS) familiarization appropriate to their duties.
 - The employee shall read and understand the Commanding Officers Standing Orders.
- c) Until such time that the immediate supervisor is satisfied with the level of familiarity attained, new personnel shall not perform any duty that is unsupervised.

- d) To ensure that familiarization is systematically completed, familiarization checklists and site specific work instructions shall be used.
- e) The completion of familiarization shall be recorded.

3.3 PRE-DEPLOYMENT FAMILIARIZATION

- a) The Marine Superintendent is responsible to arrange a period of time that allows key vessel management position to be properly familiarized with a vessel, its programs, systems, equipment and Safety Management System (SMS). This familiarization period must be realistic and practical so as to ensure that the individual can safely perform the tasks assigned to their position. Some familiarization may be done without being on board the vessel, for example, reviewing site specific SMS Procedures.
- b) The vessels' Crewing Profile specifies the pre deployment familiarization requirements. These apply in the case of an individual not having worked onboard the vessel in the previous twelve (12) months. The days required is based on the crewing system of the vessel.
- c) Pre-Deployment Familiarization refers to two principal SMS Checklists:
 - Basic Vessel Familiarization and:
 - A separate pre-deployment checklist for key vessel-management positions. Proper completion of these checklists will ensure that the new individual is properly familiarized and at least include communicating safety information and location, operation and condition of machinery and specialized equipment.
 - The key positions requiring additional site specific Familiarization shall be, as a minimum, Commanding Officer, Chief Engineer, Chief Officer, Senior Engineer (MAO-04 and above), OIC, Engineer, Boatswain, and Electrical Officer.

3.4 SHORE SITE FAMILIARIZATION

- a) At each shore site, instructions that are essential to ensuring the effectiveness of the operation of the SMS, shall be identified, documented, given, and understood by applicable personnel.
- b) To ensure that familiarization is systematically completed and can be verified, the office shall use specific familiarization checklists and site specific work instructions appropriate to that office and its relationship to the vessels that the office supports.
- c) This familiarization shall be recorded.

4 DOCUMENTATION

- Work Descriptions
- Familiarization Checklists



Fleet Safety Manual

6.C.1 - TRAINING FOR VESSEL AND SHORE MANAGEMENT POSITIONS

1 PURPOSE

- a) To ensure all personnel involved in the Safety Management System (SMS) are trained to perform their assigned duties safely.

2 RESPONSIBILITIES

2.1 DIRECTOR GENERAL, FLEET IN CONSULTATION WITH THE DIRECTOR GENERAL, INTEGRATED TECHNICAL SERVICES,

- a) The Director General, Fleet in consultation with the Director General, Integrated Technical Services, is responsible for the identification of the core competencies for seagoing positions.
- b) The Director General, Fleet and the Director General, Integrated Technical Services are responsible for ensuring that sufficient financial and human resources are available to provide required training.

2.2 ASSISTANT COMMISSIONER, CANADIAN COAST GUARD (CCG) FOR REGIONALLY-BASED SHORE EMPLOYEES, AND THE DIRECTOR GENERAL, FLEET AND DIRECTOR GENERAL, INTEGRATED TECHNICAL SERVICES FOR HEADQUARTERS' EMPLOYEES,

- a) The Assistant Commissioner, CCG for regionally-based shore employees, and the Director General, Fleet and Director General, Integrated Technical Services for Headquarters' employees, are responsible to ensure that shore-based vessel management positions with direct responsibility for issuing directions to vessels are filled by qualified persons. Normally possession of a marine certificate of competency issued by Transport Canada Marine Safety or the CCG would constitute appropriate qualification to fill these positions. However, and as appropriate, an acceptable combination of experience and/or education would also constitute appropriate qualification. For clarity, the shore-based vessel management positions are:

- Director General, Fleet
- Director, Operational Support
- Director, Fleet Safety and Security
- Director, Marine Personnel
- Manager, Professional Development
- Regional Director, Fleet

- Marine Superintendent
- Superintendent, Regional Operations Centre
- Superintendent, Fleet Safety and Security
- Superintendent, Marine Engineering
- Supervisor, Small Vessels

2.3 FLEET TRAINING COORDINATOR, (OR DESIGNATED INDIVIDUAL)

- a) The Fleet Training Coordinator, or an individual designated in writing by the Regional Director, Fleet, is responsible for maintaining the individual training records for vessel personnel of courses taken, scheduling of common training courses, and negotiating training delivery with training agents.
- b) The Fleet Training Coordinator or designated individual is responsible for the development of the training plan for persons assigned to the vessel based on information provided by the Commanding Officer.

3 INSTRUCTION

3.1 IDENTIFY TRAINING REQUIREMENTS

- a) A training plan shall be developed based upon regional training requirements to meet the competencies required aboard the vessels. This plan shall be reviewed and updated annually as a minimum.
- b) Unique training requirements for units or vessels due to the vessel's operations or the vessel's equipment shall be identified by each unit. In coordination with the regional training staff, a plan is to be developed and scheduled to satisfactorily address these specific needs.

3.2 MAINTAIN AUDITABLE RECORDS

- a) Training records shall be maintained by the Regional Training Coordinator (or designated officer) for each employee, detailing the employee's work and training history. These records must be clear, concise and readily available for scrutiny.

4 DOCUMENTATION

- Individual Training Records
- Training Plans
- Crewing Profiles
- Records of Annual and Biennial Reviews



Fleet Safety Manual

6.D.1 - SUPERNUMERARY PERSONNEL CARRIED ABOARD VESSELS

1 PURPOSE

- a) To ensure that all supernumerary personnel:
- understand and accept the risks inherent in taking passage aboard a Canadian Coast Guard (CCG) vessel.
 - are in a state of health that will not be compromised by exposure to variable marine conditions or pose a hazard to others aboard.
 - meet the security expectations of the Government of Canada in respect to their being granted access to a CCG vessel.

2 RESPONSIBILITIES

2.1 FLEET SHORE-MANAGEMENT TEAM

- a) The Fleet shore-management team (Regional Director, Fleet; Marine Superintendent; Superintendent, Regional Operations Centre (ROC); Superintendent, Operational Business) shall, when planning vessel deployments where there will be supernumerary personnel carried aboard, ensure that the contents of this procedure are communicated to the persons or agency responsible for these persons to allow sufficient time for the appropriate examinations and formalities to be completed.

2.2 FLEET SHORE MANAGEMENT TEAM AND THE COMMANDING OFFICER

- a) The Fleet shore management team and the Commanding Officer are jointly responsible to ensure that neither the planned number of supernumeraries plus crew nor the number of supernumeraries actually carried aboard the vessel plus the crew shall not exceed the number specified on the ship Safety Certificate issued by Transport Canada.
- b) If in any doubt, as to the number of supernumeraries and crew that can be safely carried, the local office of Transport Canada Marine Safety should be consulted.

2.3 SUPERINTENDENT OPERATIONAL BUSINESS OR DELEGATE

- a) The Superintendent Operational Business or delegate, at the earliest opportunity before supernumeraries are intended to join the vessel shall ensure that supernumeraries have received the appropriate security clearance through the Regional Security Officer (RSO) for the Department of Fisheries and Oceans (DFO).

2.4 THE REGIONAL SECURITY OFFICER (RSO)

- a) The RSO for DFO shall notify the Superintendent Operational Business or delegate, as early as possible prior to the anticipated joining date as to the validity of the supernumerary's security clearance. This information is to be communicated to the vessel concerned.

2.5 COMMANDING OFFICER

- a) The Commanding Officer is responsible to ensure that supernumerary personnel taking passage on board CCG vessels are cognizant of the potential risks related to service at sea.
- b) The Commanding Officer, taking into account the recommendations and/or advice of medical professionals, shall be the final arbiter of acceptance of any person aboard the vessel who has been deemed to be fit, subject to medical limitations, for the intended voyage. Before any person is denied boarding in accordance with the discretion granted the Commanding Officer in this paragraph, the Commanding Officer shall consult with the Regional Director, Fleet to thoroughly explore all reasonable avenues of accommodating the medical limitation(s).

2.6 SUPERNUMERARY PERSONNEL

- a) All Supernumerary Personnel shall read, understand and acknowledge by signature the [General Statement of Risk and complete a Statement of Medical Fitness \(Annex D – Forms\)](#). Supernumerary personnel who require unescorted access shall obtain a valid security clearance. Where any question in the *General Statement of Risk* is answered true, the supernumerary person is responsible for contacting their medical practitioner for further assessment. They shall not arrive at the vessel without an appropriate medical certificate or valid statement of medical fitness.

3 INSTRUCTION

3.1 GENERAL

- a) Supernumerary personnel shall sign on the Ship's Book when they join the vessel and be signed off upon their departure at the conclusion of their program. Supernumerary personnel who decline to sign the Ship's Book shall not be carried aboard.
- b) Prior to departure, a signed copy of the [General Statement of Risks and the signed Statement of Medical Fitness](#) shall be deposited with the Commanding Officer, or the Commanding Officer's designate. Persons who cannot produce a Seafarer's Medical Certificate or equivalent or refuse to provide completed documentation shall not be carried aboard. For verification of documents only original certificates shall be accepted as verification.
- c) Supernumerary personnel who frequently board CCG vessels shall, at a minimum, complete these forms annually or whenever they have not visited the same vessel for a period in excess of six calendar months.
- d) Supernumerary personnel who will be sailing aboard CCG vessels for less than 12 hours are not required to complete the [Statement of Medical Fitness](#).

- e) Prior to departure, supernumerary personnel shall provide their Next-of-Kin information, shall receive a safety and security briefing and are to be familiarized with their duties, responsibilities, and obligations.
- f) This procedure also applies in part to the carriage of passengers and official guests aboard CCG vessels. For more information, see *Canadian Coast Guard Fleet Order 454.00 – Passengers Aboard Ships*

3.2 STATEMENT OF MEDICAL FITNESS

- a) Supernumerary personnel who must respond TRUE to any of the questions numbered one (1) through six (6), when answering questions contained in the *Statement of Medical Fitness*, must consult a medical practitioner for a health assessment. The practitioner conducting the assessment must be made aware of the proposed duties of the supernumerary, the length of the voyage, and must be aware of the information contained in the [General Statement of Risks](#).
- b) Supernumerary personnel who hold a valid Medical Fitness Certificate for Seagoing Personnel issued under the [Canada Shipping Act 2001- Marine Personnel Regulations](#) do not need to complete the *Statement of Medical Fitness*. While aboard the vessel, such persons shall be bound by the medical limitations stated on the certificate.

Note 1: Pilots and aircraft maintenance engineers operating CCG helicopters from Coast Guard vessels who hold medically valid aviation licences are considered to possess an equivalent to a Seafarer's Medical Certificate.

Note 2: DFO Fishery Officers assigned to a CCG vessel that hold current Health Canada medical certificates for the Fishery Officer Occupational Standard are considered to possess an equivalent to a Seafarer's Medical Certificate.

Note 3: Federal Government Scientists assigned to a CCG vessel who hold a current Health Canada medical certificate for the Field Scientist Occupational Standard are considered to possess an equivalent to a Seafarer's Medical Certificate.

Note 4: Royal Canadian Mounted Police (RCMP) assigned to a CCG vessel must hold a current RCMP medical certificate for members in active status to be considered to possess an equivalent to a Seafarer's Medical Certificate.

Note 5: Non-Fleet Employees while onboard the a CCG vessel have a responsibility to report all hazardous occurrences, injuries, significant near misses, and unsatisfactory conditions to the Commanding Officer in addition to their supervisor for their information and follow-up.

3.3 SECURITY DOCUMENTATION

- a) Supernumeraries carried aboard a CCG vessel, who require unescorted access and who are not employees of the Government of Canada already in possession of a valid security clearance, shall obtain, at a minimum, a RELIABILITY STATUS or for a foreign national, a RELIABILITY FOR ACCESS. For more information refer to the *Departmental Security Standard – Personnel Security Screening*.

- b) For most Canadian citizens obtaining a determination of RELIABILITY STATUS is possible within 48 hours of providing proof of name and birth date. Some individuals may additionally require fingerprinting before a determination can be made and in these circumstances the determination process may take up to 3 months to complete.
- c) Foreign nationals wishing to gain access to CCG vessels shall be directed to the *Departmental Security Guideline – Foreign Visitors*. Foreign nationals are advised that obtaining a determination may take up to one year from the date of application depending upon their citizenship and personal circumstances.
- d) Any documentation provided by the supernumerary in conjunction with the application of this procedure, such as completed copies of the *General Statement of Risk*, completed copies of the *Statement of Medical Fitness*, medical practitioner's statements, or lists of medication, shall be handled as PROTECTED information. Documents shall be retained aboard for a period of at least six (6) months following the voyage, after which the documents shall be destroyed in a manner appropriate for PROTECTED material, or be transferred ashore for destruction.

Note 1: For reasons of privacy, supernumerary personnel may choose to provide information regarding allergies and prescription medication in a sealed envelope on the provision that the envelope is not to be opened except in the event of their being unconscious and unresponsive. Upon completion of the voyage, the envelope, if unopened, can be returned to the supernumerary for destruction. If circumstances were such that the envelope had to be opened, the contents shall be retained and handled as PROTECTED information.

3.4 MINORS

- a) The agency or organization responsible for placing a minor aboard a CCG vessel shall provide supervision.

4 DOCUMENTATION

- CGFO 454.00 – Passengers Aboard Ships
- Ship's book
- General Statement of Risk
- Statement of Medical Fitness
- Security Clearance
- Familiarizations



Fleet Safety Manual

7.0 - DEVELOPMENT OF PLANS FOR SHIPBOARD OPERATIONS

1 ISM CODE REQUIREMENTS

- a) The Canadian Coast Guard (CCG) shall establish and clearly define; procedures, plans and instructions including checklists, as appropriate, for key shipboard operations concerning the health and safety of personnel, the safety of the vessel and the protection of the environment.
- b) The responsibilities for these procedures, plans and instructions shall be clearly defined and assigned to qualified personnel.

2 PLANS

- a) Plans for shipboard operations have been sub-divided into the following sections for ease of reference:
 - Administrative and Guidance Procedures
 - Safety Procedures
 - Fleet Operational Procedures
 - Client Based Operational Procedures
 - Environmental Procedures



Fleet Safety Manual

7.A.1 - ASSESSING RISK

1 PURPOSE

- a) To provide personnel at all levels with a risk assessment and decision making tool for both routine and non-routine situations. This tool is to be used as an additional step when performing tasks whether guidelines, procedures or work instructions exist or not.
- b) Operational Risk Assessment is a continuous, systematic process of identifying and controlling risks in all activities by applying appropriate Safety Management System (SMS) policies and procedures. This process includes detecting hazards, assessing risks, and implementing and monitoring risk controls to support effective, risk-based decision-making.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer has overriding authority to accept or deny mission tasking, taking into account crew and vessel capabilities.
- b) The Commanding Officer is responsible to ensure that all crew are aware of operational risk and hazard prevention management, to ensure that the health and safety of every person working aboard the vessel, equipment and the environment are protected and that all work is performed in accordance with these requirements.
- c) The Commanding Officer or their delegate: shall stop any unsafe work performed by any individual including a Contractor or their representative; when the activity puts any person, asset or the environment at risk.

2.2 DEPARTMENT HEADS AND OR THE SITE SUPERVISOR RESPONSIBLE

- a) The Department Heads and or the Site Supervisor Responsible shall ensure that proper risk assessments and safety briefings are completed before starting any shipboard or contracted work.

2.3 ALL TEAM MEMBERS

- a) All team members have the responsibility to continually reassess the situation while the work is being completed. To immediately communicate to their supervisor, any risks or hazards to their own safety, the safety of the team or to the safety of the vessel and the environment as they arise.

3 INSTRUCTION

3.1 GENERAL

- a) Prior to performing any task, an assessment of the risk shall be performed by all persons involved. An assessment of the risk shall include identifying the risk, identifying the Personal Protection Equipment (PPE) if necessary, identifying individual responsibilities, identifying measures to mitigate all risk identified and those foreseen during the operation or task.
- b) A Safety Briefing shall be conducted with all persons associated with the task to ensure that all persons are aware of the risks associated with the task, their responsibilities, the necessary PPE, the measures necessary to mitigate the risks and to review any procedures.
- c) Where necessary, for non-routine work or for routine work in hazardous areas, written risk assessments shall be completed to allow for baseline and for future risk assessments for the same task.
- d) Work places contain a wide range of risks and hazards; some known, others less obvious. We have learned to control most of them, sometimes instinctively, sometimes intentionally. Given the ever-increasing complexity of work places, we can no longer rely on instinct alone. The negative impacts are so costly in human and financial terms that we must actively endeavour to control them.
- e) Risk and Hazard assessments are an essential part of an efficient SMS; it requires clear identification of the work to be performed, the risks and hazards present at the workplace and the control measures to mitigate them. Risk and hazard assessments have to be conducted to set governing parameters for a new shipboard procedure or to provide guidance for a one time activity.
- f) The following procedures are used to mitigate risk in the workplace;
 - Identify Mission Objectives– this includes identifying the skill sets required of the individuals to conduct the mission as well as all activities required to see the mission through to its completion
 - Identify Hazards – Identify hazards for all of the activities required to complete the mission. This includes considering all existing procedures already in place to mitigate risk during a specific mission (i.e. Personal Protective Equipment (PPE)).
 - Establish Control Measures- for each identified hazard, including a clear plan of the mission, communication protocol, adequate briefing of team members, list PPE to be worn and contingency measures.
 - Evaluate Risk vs. benefit - Is it safe, efficient or necessary to perform the activity either as planned or at all? Is the risk worth the benefit and does it apply all principles for risk management. The International Maritime Organization (IMO) defines risk as:
 - The combination of the frequency and the severity of the consequence.
 - In simple terms a risk is a combination of factors, how often do you do the job, its complexity and the consequence if something goes wrong.
 - The combination of likelihood and consequence is normally illustrated by the IMO RISK ESTIMATOR as follows: determine the level of consequence in relation with the likelihood to obtain the level of risk.

- Execute Decision – Make a decision at the appropriate level depending on the complexity of the mission. For example, when determining whether or not an FRC is to be launched, the decision making should be at the level of the Commanding officer and confirmed by the FRC Coxswain.
 - Monitor Situation- Situations can change due to weather and other environmental factors as well as a change in the capability of the personnel executing the mission. Decision-makers must have a contingency plan in place to execute should the situation change and/or risk is increased.
- g) In order to address identified risks and assess the hazards, department heads or the contractors shall implement preventive measures to address them. The following order of priority shall be used;
- Identify the risk, what could happen
 - The elimination of the hazard; example: remove the hazard from the workplace
 - The reduction of the hazard, including isolating it; example: the use of guards, containment measures.
 - The provision of personal protective equipment, example: clothing, devices or materials; and
 - Administrative procedures; example: site specific work instructions.
- h) When establishing a record of known risks and hazard assessments; the following information shall be captured:
- the nature of the risk/hazard;
 - the employees' level of exposure to the risk/hazard;
 - the frequency and duration of employees' exposure to the risk/hazard;
 - the preventive measures in place to address the risk/hazard;
 - any employee reports;
 - any other relevant information.

3.2 SAFETY SELF-CHECK

- a) Any operational or maintenance work performed in the workplace either routine or non-routine in nature will have inherent hazards. It is crucial that before any work is started that employees; as a group or individually, take a few minutes to safely review the work to be performed. This review covers the various key steps of a Safety Self-Check.
- b) This Safety Self-Check at a minimum shall cover these key points:
- Identify the Hazards
 - Assess the risks associated with each hazard
 - Plan a safe way to carry out the work.

- c) The Safety Self-Check is to be applied equally for site operations or maintenance routines. The hazards and their associated risks and exposures are to be assessed, a safe work plan to carry out the task is to be considered, and identifying the PPE needed as necessary and identify responsibilities. It is not intended to have these Safety Self-Checks logged or recorded, the intent is to promote safety awareness so that employees are aware of the hazards, and have considered the risks and safeguards. If questioned, an employee working on the site shall be aware of this safety requirement.
- d) The Pre-Job Safety Assessment (PJSA) is a pre-work checklist developed to ensure that hazards are identified, assessed and controlled in a systematic manner, thus creating a safe and healthy worksite and thereby ensuring due diligence and compliance with the requirements stated in the Guide on the Safety Responsibilities of DFO in Relation to Contractual Agreements, Partnering & Volunteers.

4 DOCUMENTATION

- Risk Assessments
- Safety Briefings
- Site Specific Work Instructions
- Personnel training records



Fleet Safety Manual

7.A.2 - CREW CHANGES / CHANGE OF COMMAND

1 PURPOSE

- a) To ensure that changes of personnel aboard Canadian Coast Guard (CCG) vessels are conducted in a coordinated manner so that information relevant to the operation, capabilities, and known deficiencies of the vessel are accurately reported.

2 RESPONSIBILITIES

2.1 REGIONAL DIRECTOR, FLEET OR DELEGATE

- a) The Regional Director, Fleet or delegate, is responsible to ensure that crew changes are conducted in an effective manner. Sufficient time shall be provided for completing the changeover, taking into consideration fatigue of individuals on extended travel, who are expected to take over a watch upon joining the vessel.

2.2 MARINE SUPERINTENDENT OR DELEGATE

- a) The Marine Superintendent or delegate shall ensure that incoming and outgoing crews are made aware of transportation arrangements for crew changes as soon as they have been finalized. A copy of the arrangements shall be maintained on file until the next crew change.

3 INSTRUCTION

3.1 GENERAL

- a) The Commanding Officer is to receive a crew change message from the Marine Superintendent indicating the personnel that will be joining the vessel in sufficient time for review as the joining crew composition may affect the time required for the changeover (i.e. extended travel prior to joining, familiarizations, depth of notes etc).
- b) Vessels shall provide updated People on Board (POB) and Next of Kin (NOK) lists to the Regional Operations Center (ROC) as soon as possible but prior to departure. In the event of a personnel change while the vessel is under operations, the updated POB and NOK lists shall be provided to the ROC by the most appropriate means available at the time. In any case, the updated People on Board (POB) and Next of Kin (NOK) lists information shall be sent to the ROC at the earliest opportunity.

- c) All persons joining the vessel should provide information related to a known medical condition, prescription medication, or known allergies to aid emergency medical attention providers. If this information is considered too private to discuss, it can be provided in a sealed envelope to be opened only in the event of an emergency. This information shall not be transmitted in the crew list sent ashore.

3.2 CHANGEOVER NOTES

- a) The Commanding Officer and Department Heads shall produce changeover notes. Department Heads may require additional handover notes be created by subordinate personnel however these notes are left to the discretion of the Department Head.
- b) Changeover notes shall be produced for the relief person and signed by both parties. Changeover notes shall be retained onboard for a minimum of one year for easy reference when required.

3.3 CHANGE OF COMMAND DOCUMENT

- a) The Change of Command Document provides for the formal change of command for a CCG vessel. This document is to be completed during the crew change process and after a change of command has taken place, this and supporting information shall be forwarded to the Regional Director, Fleet or their delegate.
- b) For consistency a National Change of Command form has been created for use by all regions. (Annex D – Forms)

4 DOCUMENTATION

- Changeover Notes
- Change of Command Document (Annex D – Forms)
- Log Book Entries
- Ship's Book
- Crew List



Fleet Safety Manual

7.A.3 - MANAGEMENT OF WATCHES AND HOURS OF REST

1 PURPOSE

- a) To ensure that watch systems aboard Canadian Coast Guard (CCG) vessels are arranged so that the efficiency of all Watchkeeping personnel is not impaired by fatigue and that duties are organized that the first watch at the commencement of a voyage and subsequent relieving watches are sufficiently rested and otherwise fit for duty.

2 RESPONSIBILITIES

2.1 REGIONAL DIRECTOR, FLEET AND COMMANDING OFFICER

- a) The Regional Director, Fleet and Commanding Officer have a joint responsibility whenever possible; to minimize extended travel fatigue for crew members expected to assume a watch upon joining the vessel.

2.2 COMMANDING OFFICER

- a) The Commanding Officer is responsible to ensure that an appropriate watch is maintained at all times. Watches shall be structured in accordance with the requirements laid out in 3.1.
- b) The Commanding Officer is responsible to ensure that watch schedules are posted for both Bridge and Engineeroom in areas where they are easily accessible to all personnel. The posted watch schedule shall be used to track hours of work and manage hours of rest for potential fatigue factors that may impact the operational capacity of the crew or vessel.

3 INSTRUCTION

3.1 GENERAL

- a) All Watches aboard CCG vessels shall be arranged so that they comply with the requirements of: *Section A-VIII/1 and parts 2, 3 and 3-1 of Section A-VIII/2 of Chapter VIII of the Seafarers' Training, Certification, and Watchkeeping (STCW) Code; Part 2 Crewing (213, 216) and Part 3 of the [Marine Personnel Regulations - Canada Shipping Act 2001](#); and Division 3 - 319, 320, 321 of the Maritime Labour Standards;*

Fatigue Management – A Guide for Canadian Coast Guard Managers, Officers and Crew, may be considered while organizing watch schedules. All crewmembers shall be provided:

- at least 6 consecutive hours of rest in every 24-hour period; and
 - at least 16 hours of rest in every 48-hour period,
 - and not more than 18-hours but not less than 6-hours elapses between end of a rest period and the beginning of the next rest period.
- b) Watches aboard CCG vessels on Near Coastal Voyages shall be arranged so that all Watchkeepers shall:
- not work more than 14 hours in any 24-hour period or more than 72 hours in any 7-day period; or
 - have at least 10 hours of rest in any 24-hour period and 77 hours of rest in every 7-day period; or
 - the hours of rest are divided into no more than two periods, one of which is at least 6 hours in length; and
 - the interval between two consecutive rest periods does not exceed 14 hours.
- c) The requirements of the Code need not be maintained in the case of emergency situations where the safety of life is impacted or for the conduct of emergency drills.

4 DOCUMENTATION

- Ship Watch Schedule
- *Fatigue Management – A Guide for Canadian Coast Guard Managers, Officers and Crew*



Fleet Safety Manual

7.A.4 - SAFETY OF NAVIGATION

1 PURPOSE

- a) To ensure that access to the navigation bridge is controlled and that watches are arranged so the environment in the bridge is conducive to the safe navigation aboard Canadian Coast Guard (CCG) vessels.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer shall ensure that this procedure is implemented aboard the vessel and that the applicable site-specific work instructions, as outlined in Section 4 of this procedure, are provided and followed.
- b) The Commanding Officer shall ensure that the Commanding Officer's Standing Orders contain specific instructions related to the access to the Bridge and that these instructions are enforced.
- c) The Commanding Officer shall ensure that watchkeeping arrangements are adequate for maintaining a safe navigational watch with due regard to the prevailing conditions and the operations being performed.
- d) Under the Commanding Officer's general direction and principals of Bridge Resource Management (BRM), the Officers-of-the-Watch (OOW) are responsible for the safe navigation of the vessel during their periods of duty. All members of the Bridge Watch have a shared responsibility for the safety of the crew, supernumeraries, passengers, the vessel and for the protection of the environment.
- e) On smaller vessels where an OOW is not carried, the Commanding Officer or Coxswain is the responsible person for safe navigation, safety of the crew, supernumeraries, passengers and the vessel.

3 INSTRUCTION

3.1 BRIDGE ORGANIZATION

- a) The *International Regulations for Preventing Collisions at Sea, with Canadian Modifications*, are to be strictly observed by all navigating officers and a copy of the latest edition is to be kept on the bridge and be readily available.

- b) Watches shall be conducted in accordance with the general procedures and practices provided in 7.A.3 – Management of Watches and Hours of Rest, and the specific practices and procedures detailed in the Commanding Officer’s Standing Orders.
- c) The composition of the Bridge watch shall be in accordance with the established and approved Crewing Profiles which have been created inline with the requirements set out in the [Marine Personnel Regulations \(CSA-2001.\)](#)
- d) The change of watch shall be logged. The times when any officer takes control or relinquishes control of the navigation of the vessel shall be logged.
- e) Visitors to the Bridge may be required to vacate the Bridge at any time upon the order of the person having responsibility for the conduct of navigation of the vessel.
- f) Entrances to the Bridge shall be placarded with signs indicating that entry is restricted.

3.2 NIGHT ORDERS

- a) The Commanding Officer shall maintain a Night Order Book to supplement the Standing Orders that are in effect. The Orders for each night if necessary or appropriate; shall include items such as courses to be steered, speeds to be used, additional precautions to be taken, and any other pertinent navigational or operational information. These night orders shall be recorded in date sequence over the Commanding Officer’s signature.
- b) Watch-keepers shall ensure at the start of their watch, that Night Orders are read, understood and followed. If unable to comply or the Night Orders are not understood, the Commanding Officer shall be contacted immediately.

3.3 CONSUMABLE FUEL

- a) Vessels less than 125 GRT shall at all times carry enough useable fuel for the readiness posture established for the vessel. Where vessels are anticipated to surpass their capable range, additional bunkering arrangements shall be considered.

4 DOCUMENTATION

- *International Regulations for Preventing Collisions At Sea* (with Canadian Modifications)
- *Chapter VIII of the Seafarers’ Training, Certification, and Watchkeeping (STCW) Code*
- Recommended - Code of Nautical Procedures and Practices (TP1018)
- Commanding Officer’s Standing Orders
- Bridge Resource Management
- Restricted Entry Signage

- Site-specific Work Instructions, including but not limited to the following:
 - Navigation in Restricted Visibility
 - Navigation in Ice (where ice may be present or may develop)
 - Navigation in Confined Waters
 - Passage Planning
 - Lookouts
 - Anchoring
- Log Book Entries

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

7.A.5 - PRE-DEPARTURE AND PRE-ARRIVAL

1 PURPOSE

- a) To ensure that the operational status of systems critical to safe arrival or departure are known prior to their intended use.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer shall ensure vessel departure/arrival procedures are carried out by Department Heads prior to each departure/arrival.
- b) On vessels with no department heads the Commanding Officer may assign these duties to a responsible crew member

3 INSTRUCTION

3.1 DEPARTURE

- a) As early as possible, the crew is to be notified of the sailing time and operational status of the vessel.
- b) Prior to sailing, checks are carried out throughout the vessel, mainly to ensure seaworthiness. During these checks, the condition of the vessel, propulsion system and steering gear are inspected. The results of this inspection are to be logged in the relevant logbook (Deck and Engine room).
- c) Apart from the above inspection, the Department Heads are also responsible for the good condition and operation of all instruments, machinery and equipment under their supervision as well as for the presence onboard, and the ability, of their personnel to undertake their duties.
- d) If the seaworthiness or the operations of the vessel are affected, the heads of departments shall report such conditions to the Commanding Officer immediately.
- e) Attention shall be paid to safety matters, as well as to all cargo, stores, fittings and equipment that must be lashed or secured.
- f) Department Heads shall ensure that all members of their department are aboard and that any discrepancies are immediately reported to the Commanding Officer.

- g) All tests and checks shall be completed and log entries made prior to departure. As some vessels are maintaining a 30 minute to sail standby status, some equipment may be required to be kept in a constant state of readiness.
- h) In liaison with the Chief Engineer, the Commanding Officer shall ensure that there is sufficient fuel and lubricating oil aboard to safely carry out the operating requirements of the vessel for the intended tasking.

3.2 ARRIVAL

- a) Examples of elements to be considered when developing the Ship's Specific Work Instructions:
 - Available port information, sailing directions and other navigational information, including restriction on draft, speed, ballasting, entry time, etc. are studied
 - Engineroom notified
 - Crew at stations and relevant instructions given
 - Mooring machinery tested, mooring lines, etc. ready
 - Internal communication equipment, signal equipment and deck lighting tested

3.3 ENTERING AND DEPARTING LOCKS

- a) Vessels that normally transit locks more than twice annually shall prepare site-specific checklists to guide this transition. Other vessels shall prepare a transit plan only for those specific occasions when a lock will be transited.
- b) Prior to the transit of a lock system, the appropriate *Canal Regulations and Sailing Directions* and latest *Notice to Shipping (NOTSHIP)* shall be consulted and shall be available on the Bridge.

4 DOCUMENTATION

- Site-Specific Checklists
- Log Book Entries
- Crew Lists
- Defect Lists



Fleet Safety Manual

7.A.6 - VESSEL'S MANOEUVRING DATA

1 PURPOSE

- a) To ensure that correct manoeuvring data is available for the use of the Officer-of-the-Watch and Pilot, where applicable, to make safe decisions about the navigation of the vessel.

2 RESPONSIBILITIES

2.1 SUPERINTENDENT, MARINE ENGINEERING

- a) The Superintendent, Marine Engineering shall ensure that whenever major modifications are to be made to a vessel that the contract or statement of work includes the requirement to test the manoeuvring characteristics prior to the vessel being returned to service.

2.2 COMMANDING OFFICER

- a) The Commanding Officer shall ensure that information received following major modification, and observations on manoeuvring characteristics made during the normal operation of the vessel, are reflected in the vessel's manoeuvring data.
- b) The responsible person for the conduct of navigation is to ensure that they are familiar with location and content of the manoeuvring characteristics for the vessel.

3 INSTRUCTION

- a) Manoeuvring characteristics will be affected by differing conditions of current, draft, draft in relation to depth of water, trim and, wind. Therefore, the best interpretation of this information will be as a result of experimentation in various conditions. Major modifications, which may be made to a vessel, may also cause changes to manoeuvring characteristics and vessel's officers are advised to conduct trials following any such changes and record results obtained.
- b) Manoeuvring data shall be posted in a convenient location on the Bridge or in the case of smaller vessels with limited space, shall be in a location readily accessible to the navigator. This information shall be used in planning vessel manoeuvres, especially in restricted waters or areas of high traffic density.

- c) Vessel manoeuvring characteristics and manoeuvres which do not correspond to those described on the manoeuvring data shall be reported to the Commanding Officer. The onboard data shall be annotated accordingly.

4 DOCUMENTATION

- Site-specific manoeuvring data (Wheelhouse Poster)

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

7.A.7 - MAINTENANCE OF WATERTIGHT INTEGRITY

1 PURPOSE

- a) To ensure that the safety of the vessel and the crew are enhanced by maintaining the vessel's watertight integrity at all times.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer is responsible to ensure the vessel's watertight integrity is maintained.
- b) The Commanding Officer shall ensure all crew members are aware of the importance of the watertight integrity of the vessel and shall ensure that this procedure is followed.

3 INSTRUCTION

3.1 WATERTIGHT DOORS:

- a) Watertight doors that have been identified by the Marine Safety and Inspection Directorate of Transport Canada as being required to be closed are to be placarded, or otherwise permanently marked, and shall be closed when underway. The doors are to be opened only for the minimum amount of time necessary to permit passage through the door.
- b) Where fitted, the watertight doors and their indicator systems are to be tested at intervals of not more than one month to ensure that indications are correct and indicator lamps are working. The test shall be logged.
- c) Regular inspection and maintenance of rubber seals and dogging arrangements shall be conducted on weather-tight doors, cargo hatch covers, escape hatch covers, compartment access covers, viewing hatch covers, and other related equipment.

3.2 SOUNDING:

- a) Tank and void space soundings shall be taken as required and recorded in the sounding book. Any discrepancies shall be brought to the immediate attention of the department head.

3.3 DRAUGHTS:

- a) Draught readings shall be entered in the Deck logbook at a minimum:
- Prior to sailing;
 - After loading or unloading cargo or bunkering; or
 - Every morning when along side.

3.4 DECK SCUPPERS:

- a) Deck scuppers shall be left open at all times, except during bunkering or as otherwise required by the Commanding Officer, and shall be labelled accordingly.
- b) Where scuppers valves and extended spindles are fitted; all members with the responsibility for their operation, shall be familiar with their location and operation.

4 DOCUMENTATION

- Log Book Entries
- Sounding Book Records
- Watertight Door Markings
- Deck Scupper Valve Markings
- Familiarization and Training Records

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

7.A.8 - STABILITY

1 PURPOSE

- a) To ensure that complete and up to date stability data is maintained aboard Canadian Coast Guard (CCG) vessels and at shore support locations.
- b) To ensure that the vessel's operational stability condition can be accurately assessed and operated within acceptable limits of stability as stated in the Ships Stability Book.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer is responsible for ensuring that the Ship's Stability Book is updated to reflect any changes to the vessel's structure or equipment that may affect the vessels' stability.
- b) The Commanding Officer has overall responsibility for vessel's stability, including but not limited to, the proper distribution of fuel, water, stores and cargo.

2.2 CHIEF ENGINEER AND CHIEF OFFICER

- a) The Chief Engineer and Chief Officer are responsible to ensure the Commanding Officer is informed of any matter which in their opinion may affect the stability of the vessel.

2.3 CHIEF OFFICER

- a) The Chief Officer shall be responsible for assessing and producing a detailed stability condition for the Commanding Officer as required.

2.4 OFFICER-OF-THE-WATCH

- a) The Officer-of-the-Watch is responsible to ensure that during their watch, any change to stability, or any circumstance which could result in a change to the stability is brought to the attention of the Commanding Officer. (i.e. ice accretion)

2.5 SUPERINTENDENT, MARINE ENGINEERING

- a) The Superintendent, Marine Engineering is responsible to ensure that updated stability data is provided to the vessel when any changes to the vessel's structure or equipment occur which affect the vessels stability.

2.6 DIRECTOR GENERAL, INTEGRATED TECHNICAL SERVICES

- a) The Director General, Integrated Technical Services is responsible to ensure that all changes to the configuration of the vessel from the as-fitted drawings and plans are coordinated and will result in any necessary calculations and tests to determine the effect on the vessel's stability. The results of these changes and any subsequent calculations are to be provided to the Superintendent, Marine Engineering in the applicable home region of the vessel.

3 INSTRUCTION

3.1 MAINTAINING STABILITY DATA

- a) When work is to be carried out which, in the opinion of the Superintendent, Marine Engineering or the Configuration Change Request (CCR) Coordinator at the National level, may affect a vessel's stability, the professional opinion of a Naval Architect will be sought to determine the theoretical effect on stability.
- b) When deemed necessary, and when required by Regulations, inclining experiments shall be conducted and the results of these experiments shall be maintained aboard in the Ship's Stability Data Book.
- c) The temporary installation of fixed equipment should also be assessed when it is of significance. The cumulative affect of many small changes should not be discounted as the addition of many small items over time can result in a significant addition to weight.
- d) Changes to a vessel are to be carried out following the process outlined in the Configuration Change Management Procedures, to ensure that the effect on stability is adequately assessed.
- e) Each vessel shall make readily available, the official Stability Data Book for the vessel. This book shall contain the necessary information required by the [CSA 2001 – Hull Construction Regulations](#).

3.2 MAINTENANCE OF STABILITY

- a) The Commanding Officer shall ensure that prior to departure and while at sea consideration shall be given to the load condition of the vessel and the operational program to be performed to determine that the stability of the vessel is adequate for the vessel's operation and the expected weather.

3.3 47 FOOT "CAPE" CLASS SAR LIFEBOATS

- a) Although this lifeboat is self-righting and safe under the worst sea conditions, it does not have a great reserve of stability for icing conditions. Equipment added to this lifeboat and its subsequent distribution and stowage must be strictly controlled.
- b) A specific spreadsheet has been developed for each lifeboat to track the location of all weights aboard and to reflect the effect of these weights on the stability of the vessel. A copy of the spreadsheet, with an appropriate media copy for computer manipulation, must be maintained in conjunction with the vessel's stability book.

- c) This spreadsheet is to be considered as a CONTROLLED document and there must be a record maintained of all changes made to the document and a clear identification of the latest version by reference to date.

- d) Information from this spreadsheet shall be used with generic reference tables of forecast ice accretion and the class-specific ice build-up reference tables to forecast the actual and potential cumulative effect on vessel stability.

4 DOCUMENTATION

- Ship's Stability Data Book
- Record of Changes to Ship's Configuration
- Architect's Calculations of Stability
- Results of Inclining Experiments
- 47 Foot MLB Equipment Placement Spreadsheet
- Accretion Forecast Tables for Icing Conditions

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

7.A.9 - ENGINEER ROOM WATCHKEEPING

1 PURPOSE

- a) To ensure that engineering watches and watch handovers are conducted in accordance with the general procedures and practices provided in *Sections A-VIII/2 and B-VIII/2 of the [Seafarers' Training, Certification and Watchkeeping \(STCW\) Code](#)*, and the specific practices and procedures detailed in the Commanding Officer and Chief Engineer's Standing Orders.
- b) To ensure that engineering watches and watch handovers are performed in a consistent, safe manner and that the changes of each watch are logged.
- c) To ensure that main propulsion machinery and auxiliary machinery is operated correctly and safely.

2 RESPONSIBILITIES

2.1 CHIEF ENGINEER

- a) The Chief Engineer shall issue written instructions for the direction of the engineer room staff.

2.2 ENGINEER OF THE WATCH

- a) The Engineer of the Watch is to ensure all pertinent information regarding the operation of equipment under their care has been collected and recorded where necessary and is available and passed to the Relieving Engineer.

3 INSTRUCTION

3.1 CHIEF ENGINEER'S STANDING ORDERS

- a) Chief Engineers shall issue appropriate written instructions for guidance in the proper completion of routine engineering tasks aboard the vessel.

3.2 TAKING OVER THE WATCH

- a) Before taking over the watch, relieving personnel shall ensure that:
 - a pre-watch inspection round is completed and logged.

3.3 CONDUCTING THE WATCH

- a) Site specific work instructions shall include all watch-keeping duties and engine room systems.

3.4 HANDING OVER THE WATCH

- a) Before handing over the watch, the Engineer of the Watch shall ensure that a final round is carried out to check the operating condition of the machinery

4 DOCUMENTATION

- Chief Engineer's Standing Orders
- Log Book Entries
- Site Specific Work Instructions



Fleet Safety Manual

7.A.10 - HANDLING AND CONTAINING ASBESTOS MATERIALS

1 PURPOSE

- a) To ensure that where asbestos has been identified onboard a Canadian Coast Guard (CCG) vessel that it is monitored to prevent exposure of persons to asbestos fibres.

2 RESPONSIBILITIES

2.1 CHIEF ENGINEER

- a) The Chief Engineer shall ensure that all asbestos onboard has been identified and shall maintain records of all areas or equipment which may contain asbestos material.
- b) The Chief Engineer shall confirm the state of all asbestos containing material onboard the vessel. This shall be done by an Annual Assessment conducted by a qualified surveyor.

2.2 SUPERINTENDENT, MARINE ENGINEERING

- a) The Superintendent, Marine Engineering is responsible for the follow-up to the baseline survey completed on all CCG vessels within their region in order to verify that where friable asbestos was found that it is still maintained in an encapsulated state or controlled and monitored onboard. Consideration shall also be given to have all friable asbestos removed during vessel modernization processes.

3 INSTRUCTION

3.1 GENERAL

- a) Vessels which have confirmed the presence of friable asbestos onboard shall have an "Asbestos Management Plan" for managing the friable asbestos-containing materials.
- b) All vessels identified as having friable asbestos shall have select crew members trained in asbestos awareness and carry an "Asbestos Abatement Kit" onboard.
- c) Handling friable asbestos-containing materials shall be performed by personnel trained and certified in the removal or treatment of friable asbestos.
- d) A vessel that has asbestos material onboard shall designate an Asbestos Coordinator to coordinate all activities which may expose personnel to asbestos containing materials.

- e) Records of friable and non-friable asbestos related activities shall be included in the Chief Engineer's log book.
- f) Only a qualified surveyor shall modify the Asbestos Management Plan (AMP). A record of the Annual Assessment and findings shall be kept with the AMP.
- g) At any time when the state of asbestos containing materials has been found to have changed, the Chief Engineer shall notify the Superintendent, Fleet Safety and Security and the Superintendent, Marine Engineering, who shall arrange for a qualified surveyor to visit the vessel. The AMP shall be amended as necessary indicating what was changed, state of the remaining asbestos and any mitigating measures taken or necessary to protect employees from exposure to fibres.

4 DOCUMENTATION

- Site-specific Asbestos Management Plan
- Annual Assessment
- Log Book Entries
- Training Records

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

7.A.11 - HOTEL SERVICES

1 PURPOSE

- a) Promote sanitary practices in hotel service operations to avoid risk to the vessels'/stations' complement from food-borne illness, injury or disease.

2 RESPONSIBILITIES

2.1 REGIONAL DIRECTOR, FLEET

- a) The Regional Director, Fleet is responsible for ensuring that all vessels/stations with living accommodations are inspected with regard to health and sanitation by a certified Public Health Inspector.

2.2 NATIONAL COORDINATION CENTRE (NCC)

- a) The National Coordination Center (NCC) is responsible for reviewing Canadian Food Inspections Agency (CFIA) Health Hazards Alerts and forwarding the Alerts, if applicable, to the Regional Operations Centres (ROC).

2.3 REGIONAL OPERATIONS CENTER

- a) The ROC is responsible for reviewing CFIA Health Hazard Alerts received and forwarding the Alerts, if applicable, to all operational vessels in their region.

2.4 COMMANDING OFFICER

- a) The Commanding Officer shall advise the ROC of actions being taken when it has been confirmed that a vessel has products onboard which are indicated in a CFIA Health Hazard Alert.
- b) The Commanding Officer shall inspect and document any accommodation used by officers and crew at intervals not exceeding (7) seven days, in accordance with [Coast Guard Fleet Order 452.00 Officer and Crew Accommodation – CCG Vessels.](#)

2.5 ALL PERSONNEL

- a) All personnel performing hotel service duties must observe good personal hygiene as well as sanitary working practices in order to avoid the risk of contamination.

3 INSTRUCTION

3.1 VESSEL INSPECTIONS

- a) When managing Hotel Services, the requirements within the [Canadian Coast Guard Fleet Order 450.00, Hotel Services, Canadian Coast Guard Logistics Standards \(DFO 5758\), Food Safety Code of Practice for Canada's Food Service Industry](#) and annual Sanitary Inspections shall be applied.
- b) A record of each weekly inspection must be kept for a period of three years after the day on which the inspection is made. These inspections shall be recorded in the deck log.
- c) All vessels/stations with living accommodations must be inspected with regard to health and sanitation by a certified Public Health Inspector at least once in every twelve (12) month period or in the case of vessels engaged in northern operations, twice per year, once prior to departure north and once following their return but prior to the next subsequent voyage.
 - The reports issued following these sanitary inspections shall serve as a sanitary certificate and are to be retained on board for the period between inspections.

3.2 HEALTH HAZARD ALERTS

- a) When Health Hazard Alerts are received onboard the vessel; the person in charge of the galley shall verify if the Alert applies to the vessel and where required remove and properly dispose of the food.

3.3 FOOD SAFETY

- a) Food service operations shall always be performed in accordance with the standard set in the *Food Safety Code of Practice for Canada's Foodservice Industry and Canadian Coast Guard Logistics Standards (DFO 5758)*. An updated copy of these publications shall be maintained aboard each vessel/station. Personnel performing Hotel Services shall have read understood and apply the information contained within these publications.
- b) All personnel performing hotel services duties are required to have the food safety and sanitation training that meets or exceeds the recommendations in the National Guidelines for Food Safety Training Programs in the Food Retail and Food Services Sectors produced by the Federal/Provincial Committee on Food Safety Policy and published by Health Canada.
- c) Supervisors shall ensure that the work site has sufficient training materials that meet or exceed the recommendations in the national guidelines. Training materials may include work site instruction, posters, videos, case studies and updates to food safety procedures produced by authoritative persons or institutions whose work is based on sound scientific evidence. This would include any materials produced by the provinces and territories.
- d) Supervisors shall ensure that new employees, who have not had previous food safety training, receive interim familiarization and instruction in the safe handling of food based on the tasks assigned to them using the training materials. New employees shall not work unsupervised with food until they have received the interim familiarization.

- e) All personnel performing hotel services duties shall review and update their knowledge on food safety on a yearly basis.
- f) Each vessel/station must prepare standing orders and work instructions to ensure that messing areas, food preparation areas, food storage areas and the equipment used to prepare food, are used according to the manufacturer's recommendations and maintained so as to ensure sanitation and avoid cross contamination and bacterial growth. These documents must be easily accessible by hotel services personnel.
- g) Food premises, which have become infested or where extermination activities have taken place must be reported through the use of an Incident Investigation Report as an unsatisfactory condition.
- h) Where the employer provides employees with a food preparation area including a fridge and a heating appliance, the requirements within the *Food Safety Code of Practice for Canada's Foodservice Industry* shall apply to avoid risk to the vessel's/station's complement from food-borne illness, injury or disease.
- i) Temperatures in non-commercial refrigerators shall be recorded once per day. Hotel services employees shall report any irregular variance in temperature while performing their daily routines.
- j) Each vessel shall establish a list of environmentally friendly cleaning products, detergents, soaps and chemicals to be used onboard.

4 DOCUMENTATION

- Food Safety Code of Practice for Canada's Foodservice Industry
- Canadian Coast Guard Fleet Logistics Standards
- CGFO 450 – Hotel services
- Training tools and videos that meet Canadian standards and are recognized by provincial authorities
- Standing orders
- Site Specific Work instruction
- Deck Log Entries
- Refrigerators and freezers temperatures log



Fleet Safety Manual

7.A.12 - POTABLE WATER QUALITY

1 PURPOSE

- a) To ensure that potable water supplied at CCG Facilities and aboard Canadian Coast Guard (CCG) vessels for drinking or food preparation meets the [Guidelines for Canadian Drinking Water Quality](#)
- b) This procedure applies to the drinking water produced, purchased in bulk, stored and distributed at CCG facilities and aboard CCG vessels.

2 RESPONSIBILITIES

2.1 REGIONAL DIRECTOR, FLEET OR DELEGATE

- a) The Regional Director, Fleet or Delegate shall ensure that information pertaining to the quality of water at specific locations where the vessel intends to load potable water is available.

2.2 COMMANDING OFFICER

- a) The Commanding Officer shall ensure that potable water taken aboard the vessel, or manufactured aboard is tested on a regular basis to ensure that water quality meets the standards prescribed in the Guidelines for [Canadian Drinking Water Quality](#).
- b) The Commanding Officer shall ensure that all documents concerning potable water quality are adequately completed, checked, and maintained aboard.
- c) The Commanding Officer shall ensure that water obtained for the vessel from hydrants or fill stations is water that is provided by a recognized drinking water system.

2.3 CHIEF ENGINEER

- a) The Chief Engineer is to ensure that fitted water production and purification equipment is maintained to the manufacturer's standard and that potable water tanks are inspected.
- b) The Chief Engineer, or their delegate, is to ensure that all maintenance performed on the potable water system is logged and that only approved parts and "potable water" coatings are properly applied and used.

2.4 REGIONAL OPERATIONS CENTRE (ROC)

- a) The ROC is the emergency contact point for laboratories reporting contamination in vessel/station test water samples. The ROC shall immediately notify the vessel/station of any report of contamination so that they can take the appropriate measures to discontinue use and to flush tanks.

3 INSTRUCTION

3.1 GENERAL

- a) All faucets accessible to the vessel/station complement that are not connected to a supply of potable water are to be clearly marked to indicate that the water provided from that faucet is not suitable for drinking or food preparation.
- b) To ensure potable water safety in empty cabins or seldom-used spaces, Site Specific Work Instructions or MAINTelligence tasks shall:
 - Ensure that on a weekly basis these areas are visited and potable water fixtures are flushed. Appropriate signage is placed above the potable water source and reference is made in the site specific orientation instructions to the effect that the taps shall be flushed by new occupant of the cabin before initial use.

3.2 SHORE SUPPLY

- a) Dock hydrants or fill stations are to be flushed for at least five minutes at full volume before being connected to the vessel's fill hose to ensure that standing water in the system has been cleared from the pipe.
- b) Water that is obtained from dock hydrants or fill stations shall be carried from the hydrant to the vessel in hoses that have been specifically marked for the carriage of potable water and are used exclusively for that purpose. When not in use these hoses are to be drained, kept capped, and are to be stored in a clean secured locker used only for potable water equipment. Potable water fill stations and all exterior potable water sounding pipes shall be fitted with a locking mechanism that shall be in use at all times and checked regularly for any breach to security.
- c) If it, at any time, becomes necessary to temporarily supplement the vessel's potable water supply hose with additional lengths, or to connect to a tank operator's hose, the additional hoses shall be dosed with unscented bleach (1 cup per hose filled with water and let sit for 30 minutes) and then flushed with the equivalent of five volumes of water or for two minutes.

3.3 WATER PRODUCED ABOARD

- a) Variances
 - There may be occasions where, due to the nature of the operations being conducted or the physical capacities of the vessel, parts of this procedure cannot be followed exactly. In such situations, the Commanding Officer shall ensure, by taking all prudent measures, that the potable water provided is safe for consumption.

- When the vessel is in a contracted refit where the contractor is to supply potable water to the crew, the Commanding Officer shall ensure that the contractor supplies the necessary certificates.
- b) Potable water production equipment shall be operated and maintained in accordance with the manufacturer's instructions and the Site Specific Work Instructions.

3.4 ENGINEER OFFICER-OF-THE-WATCH

- a) The Engineer Officer-of-the-Watch shall manufacture water only when advised by the Bridge Officer-of-the-Watch (OOW) that the geographic and operational limitations are favourable. The Engineer Officer-of-the-Watch shall stop manufacturing water immediately upon being advised by the Bridge OOW that conditions are no longer favourable.
- b) When vessels manufacture water aboard, the following conditions shall be considered:
 - The vessel shall be either underway or at anchor.
 - The vessel shall assess the possibility of contamination from shore sources in area.
 - The vessel shall monitor overboard discharges to avoid contamination in the area
 - The vessel shall be a minimum of one (1) nautical mile from shore or ensure that there is no contamination in the area.
 - The vessel shall not be in an area where there is a red tide or algae bloom warning.
- c) Where raw water for producing potable water is being drawn from a shared seabay that is also used for sea water cooling, the sea water cooling system must not be in recirculation mode.
- d) Regionally specified local prohibitions must be observed.
- e) When water production equipment is observed to be malfunctioning (operating outside manufacturer's specifications) the equipment is to be tagged and locked-out from the potable water system until the malfunction has been corrected and the equipment functions acceptably.

3.5 DISINFECTION

- a) All potable water, whether bulk purchased or produced aboard, shall be tested to ensure that an appropriate amount of free chlorine exists or that it passes through a functioning irradiation device prior to being used.

Note 1: Chlorination standard is 0.2 to 0.5mg/L. To attain a free chlorine level of 0.5 mg/L add unscented bleach (~5% sodium hypochlorite) at a rate of 1L/100m³.

Note 2: Irradiation standard is 254 nm at a minimum ultraviolet dosage of 16,000 μ W.s/cm².

- b) After entry into a potable water tank for any purpose, the tank must be cleaned and superchlorinated with bleach to a level of 50 mg/L of free chlorine. All taps from this tank shall be turned on to supply superchlorinated water to all pipes. It may be necessary to bypass charcoal filtration to ensure chlorinated water is in all parts of the system. The superchlorinated water must be allowed to sit in the tanks for a minimum of 4 hours before being flushed.

Note 1: Superchlorination is achieved by adding unscented bleach [@ ~5% sodium hypochlorite] at a volume of 1L/m³ of water in the tank.

- c) Discharges of wastewater containing free chlorine are restricted by the Canadian Environmental Quality Guidelines. Superchlorinated water shall be de-chlorinated to a free chlorine level below levels of detection (<0.1mg/L) for discharge in saltwater, commercial harbours provided that the discharge takes place a least 100 meters from any seawater intake or aquaculture holding area. Chlorinated wastewater shall not be discharged to a freshwater body or in any sensitive area.
- d) If superchlorinated water cannot be treated for overboard discharge as outlined in this procedure, then the water must be removed by tanker truck for disposal in accordance with provincial or territorial regulations.
- e) Water can be dechlorinated by the introduction of hydrogen peroxide (H₂O₂).
- 71 grams of free chlorine are removed by 34 grams of hydrogen peroxide.
 - 1m³ of water at 50mg/L free chlorine contains 50 grams of free chlorine
 - 1L of 35% strength hydrogen peroxide contains 350 grams of H₂O₂
 - To ensure complete free chlorine removal, 33% overdosing with hydrogen peroxide is the Fleet standard.
 - Use the following formula to determine the dosing level
 $Y \times 0.478 \times 2.857 \times 1.33 = \text{ml of H}_2\text{O}_2 \text{ solution}$
Y = amount of free chlorine (in grams) to be removed
 - To treat 1m³ of water containing 50mg/L of free chlorine requires approximately 91mL of 35% hydrogen peroxide
 $50 \times .478 \times 2.857 \times 1.33 = 90.81 \text{ ml H}_2\text{O}_2$
- f) The procedure to be followed for dechlorination is as follows:
- Using the formula given above, add the calculated amount of hydrogen peroxide required to a mixing tank (a ballast tank is suggested but the potable water tank can be used).
 - Using a hose and a quick connect backflow prevented fitting on the potable water tank drain, dump the potable water tank through the valve manifold to the mixing tank. (Permanent connections between the potable water tank and any other tank without anti siphoning device or backflow preventers are not permitted.)
 - Test water in the mixing tank for free chlorine level – must be less than detectable level
 - If any free chlorine is detected add an additional amount of hydrogen peroxide (50% of the original amount used) through the appropriate tank vent(s) and retest

- If the free chlorine level in the mixing tank is less than 0.1mg/L, discharge water in accordance with 3.5 (d) above.
 - If the free chlorine level in the mixing tank is above 0.1mg/L; advise the Chief Engineer and lockout the tank from potential for overboard discharge. Unless in an emergency affecting the safety of the vessel, the water in the mixing tank will now have to be discharged to a tanker truck ashore for disposal.
- g) Record volume of water discharged, location, and results of tests (specify type of kit) showing free chlorine levels less than detection (<0.1mg/L) for a minimum of three samples; beginning, middle, and end of discharge.
- h) Ballast tank may be considered for dechlorination of superchlorinated water.

3.6 POTABLE WATER TESTING

- a) Regardless of the source of supply, vessels/station using chlorine as a disinfection agent shall conduct weekly checks of free chlorine level of on board potable water to ensure that free chlorine in drinking water is generally maintained between 0.2 and 0.5 mg/L, but never exceeds 5 mg/L. Tests shall be conducted at the tank and on at least two other downstream outlets: one selected at random; and one on the longest run of pipe.
- b) If the vessel/station uses ultraviolet irradiation for disinfection, the level of irradiance shall be checked daily to ensure that it is within the manufacturer's specification for adequate drinking water disinfection, and the result shall be logged. If chlorine is not introduced to establish a residual chlorine level for maintaining disinfection in the distribution system, then weekly checks shall be made for Escherichia coli (E. Coli) and total Coliform bacteria. Tests shall be conducted on at least two downstream outlets: one selected at random; and one on the longest run of pipe.
- c) Free chlorine test kits shall have sufficient accuracy to determine 0.1 mg/L of free chlorine.
- d) When free chlorine levels are observed to be below 0.2 mg/L, tanks shall be re-chlorinated with a secondary chlorine source (i.e. bleach) to be brought back to approximately 0.5 mg/L by dosing the tank as outlined in Section 3.5 (a) above. If doubts as to the acceptability of the water as being safe for drinking exist, the tank shall be dumped, flushed with fresh water, shocked at a level of up to 50 mg/L free chlorine as outlined in Section 3.5 (b) above, and then recharged.
- e) CCG vessels shall have potable water tested at least every three months, when in service, by an independent laboratory that has been accredited for the purpose of testing water quality. Tests shall be conducted on at least two downstream outlets: one selected at random; and one on the longest run of pipe.
- f) Three of the quarterly tests, identified in Section 3.6 (e) above, will test in five (5) parameters.
- E. Coli must be 0 detectable per 100ml
 - Total Coliform must be 0 detectable per 100ml
 - Total Dissolved Solids must be less than 500 mg/L

- pH must be between 6.5 and 8.5 pH units
 - Iron shall be below 0.3 mg/L
- g) One of the quarterly tests, conducted at least once annually, shall test for contamination in twenty-eight (28) parameters. Acceptable maximum values from the [Guidelines for Canadian Drinking Water Quality](#) are shown to the right of each test parameter.

Health-based Objectives

| | | | |
|------------------|-------------|-------------------|------------|
| • E. Coli | 0 per 100ml | • Nitrate/Nitrite | 45 mg/L |
| • Total Coliform | 0 per 100ml | • Mercury | 0.001 mg/L |
| • Turbidity | 1 NTU | • Selenium | 0.01 mg/L |
| • Antimony | 0.006 mg/L | • Uranium | 0.02 mg/L |
| • Barium | 1.0 mg/L | • Benzene | 0.005 mg/L |
| • Boron | 5.0 mg/L | • Xylenes | 0.3 mg/L |
| • Cadmium | 0.005 mg/L | • Fluoride | 1.5 mg/L |
| • Chromium | 0.05 mg/L | • Lead | 0.01 mg/L |
| • Ethylbenzene | 0.09mg/L | | |

Aesthetic Objectives

| | | | |
|--------------------------|--------------------|-------------|-----------|
| • Copper | 1.0 mg/L | • Sodium | 200 mg/L |
| • Iron | 0.3 mg/L | • Zinc | 5 mg/L |
| • Manganese | 0.05 mg/L | • Toluene | 0.024mg/L |
| • pH | 6.5 – 8.5 pH Units | • Sulphates | 500 mg/L |
| • Colour | 15 TCU | • Chloride | 250 mg/L |
| • Total Dissolved Solids | 500 mg/L | | |

Note 1: Aesthetic quality guidelines address parameters which may affect consumer acceptance of drinking water, such as taste, odour and colour.

- h) When forwarding water test samples to laboratories for analysis, vessel/station shall ensure that the ROC is shown as the immediate contact point for the vessel/station in the event that samples indicated that contamination is present.
- i) Stations with potable water supplied by a municipality shall complete the annual test per the Public Works and Government Services Canada (PWGSC) testing standards or any regional variance in place. No other tests are required for stations with municipal water supply.
- j) Stations with potable water that is supplied by a source other than a municipality; shall have their potable water tested at least every three months by an independent laboratory that has been accredited for the purpose of testing water quality. Annually, one of these tests shall be to the twenty-eight parameters identified in 3.6 (g) above. Subsequent tests shall be to the five parameters identified in 3.6 (f) above. Tests shall be conducted on at least two downstream outlets: one selected at random; and one on the longest run of pipe.

3.7 CONNECTIONS TO THE POTABLE WATER SYSTEM

- a) When potable water is delivered under pressure to a non-potable system, the potable water system shall be protected against backflow by either backflow preventers, air gaps or anti siphoning device. Backflow preventers shall be located so that they can be serviced and maintained.
- b) The maintenance and testing of these devices shall be done as per manufacturer recommendations and shall be included in the vessel/station preventive maintenance system.
- c) Backflow preventers shall be fitted on potable water connections to:
 - Ice Machines
 - Coffee Machines
 - Chilled water fountains
 - Steam tables
 - Dishwashers
 - Garbage grinders
 - Self-cleaning range hoods
 - Laundry equipment
 - Sick Bays and their associated equipment
 - Boiler feed water tanks
 - Fire systems
 - Toilets
 - Ballast systems
 - Bilge or other waste water connections
 - International shore connection

3.8 POTABLE WATER TANK INSPECTIONS

- a) At the time of the potable water tank inspection, a verification shall be made of the physical piping (bulkhead, vent, load lines, hoses, etc.) to ensure that no repairs or alterations have been made to the system that are not in conformance with acceptable practices for the storage and distribution of drinking water.

3.9 RECORD RETENTION

- a) Potable water testing records shall be maintained for a period of five years from date of last entry.

3.10 TRAINING MEDIA

- a) Vessel and station personnel who are responsible for water quality, filling of any holding tanks, bottled water exchange and/or the maintenance of any portion of the potable water system from source to final distribution point, as applicable to their site, shall view the applicable training media and read the supplied documentation. This requirement shall be added to the familiarization routines of the identified positions aboard each vessel or site.
- Procedures For Conducting Water Sampling in Federal Facilities
 - Ultraviolet and Reverse Osmosis for Micro-Systems
 - Drinking Water Storage Tanks
 - Bottled Water Selection & Application in Federal Facilities
 - Water Wells for Micro-Systems
 - Water Filtration & Ion Exchange for Micro-systems
 - Disinfection for Micro-Systems
 - Advice for the Operation of Potable Water Field Test Equipment
 - Potable Water Test Kits
- b) Health Canada Drinking Water Awareness Program (6 modules available online)
- All Directors, Directors General, the Assistant Commissioner, the Deputy Commissioner Operation and the Commissioner shall view modules 1 and 2
 - All Managers and Supervisors shall view modules 1 to 3
 - All Fleet Safety and Security personnel shall view modules 1 to 6
 - All users of water onboard CCG vessels may view modules 1 to 6 to familiarize themselves with the process of providing potable water.

4 DOCUMENTATION

- Deck Log Records of Water Taken Aboard
- Engineroom Log of Water Produced Aboard
- Laboratory Test Certificates
- Records of On Board Testing
 - (Disinfection Tests – free chlorine or ultraviolet levels)
 - (Dechlorinated water discharge tests)
- Records of any repairs, modifications, or maintenance
- Records of annual audits conducted on the drinking water system and control documentation that confirm compliance with this procedure
- Health Canada Drinking Water Awareness Program

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

7.B.1 - DIVING OPERATIONS

1 PURPOSE

1.1 GENERAL

- a) To ensure safe working conditions are provided for all diving operations deployed from or in support of Canadian Coast Guard (CCG) vessels.

Diving: Includes any underwater activity that employs scuba or surface supply air.

2 RESPONSIBILITIES

2.1 REGIONAL DIRECTOR, FLEET OR REGIONAL DIRECTOR, INTEGRATED TECHNICAL SERVICES

- a) The Regional Director, Fleet or Regional Director, Integrated Technical Services (as applicable) shall ensure that this procedure is observed for all diving operations conducted from or in support of CCG vessels or units.

2.2 COMMANDING OFFICER

- a) The Commanding Officer shall in all cases provide assistance to Diving Supervisors and divers with respect to provision of safe working conditions, planning of diving operations, and emergency and contingency planning.

2.3 ANY CCG OFFICIAL WHO ENGAGES A COMMERCIAL DIVING SERVICE

- a) Any CCG official who engages a commercial diving service shall ensure that the requirements of this procedure, and any other procedures issued by the regulatory authority responsible for the enforcement of regulations for the safety and protection of divers, are incorporated within the body of the contract.

2.4 NATIONAL DIVING SAFETY COORDINATOR, OR THE REGIONAL DIVING SAFETY COORDINATORS

- a) The National Diving Safety Coordinator, or the Regional Diving Safety Coordinators, shall review and approve all scientific diving plans prior to the conduct of any dives to ensure that the regulations appropriate to the dive are identified and shall be observed by the party conducting the dive. This review and approval shall be communicated to the Commanding Officer in writing, or by facsimile message, prior to the commencement of operations.

3 INSTRUCTION

3.1 GENERAL

- a) When contracting diving services, a statement must be included in the body of the contract to direct compliance with this procedure. An UNCONTROLLED copy of this procedure should be attached to the contract and supplied to the contractor.

3.2 BASIC REQUIREMENTS

- a) The diver shall operate within the existing Provincial, Territorial, or Federal Diving Regulations as are appropriate to the location and mode of dive planned (in any doubt about which regulations may apply – contact the Regional Diving Safety Coordinator for DFO).
- b) Prior to being contracted a commercial diving company shall provide proof of appropriate liability insurance.
- c) A commercial diving company shall provide notice of the diving operation to the Provincial Regulatory Authority (as appropriate) and a copy of this notification shall be produced before the dive commences.
- d) Divers operating under a scientific program, either sponsored, assisted, or operated by the Department, shall have clearance for conducting diving operations that has been endorsed by either the National or Regional Diving Safety Coordinator or a Diving Officer authorized in the region to approve diving operations.
- e) The Commanding Officer shall ask, and receive assurances from, the Diving Supervisor that the diving operation shall be conducted in accordance with regulatory requirements including verification of diver logbooks, proper equipment and fitness to dive.
- f) Vessels shall develop a site-specific checklist to ensure that procedures are followed in the conduct of diving operations.

Note 1: There may be confusion regarding regulatory authority for diving operations. Diving operations performed by federal government employees are required to meet the standard provided in [Part XVIII of the Canada Occupational Safety and Health Regulations of the Canada Labour Code](#). Contractors supplying diving services meet provincial regulations. However, not all provinces and territories have specific regulations for diving. Where provincial or territorial legislation is silent, the Canada Labour Code standard shall be observed. The Regional Diving Safety Coordinator can assist in determining what regulations may apply in a given situation.

3.3 PLANNING OF DIVING OPERATIONS

- a) A detailed plan of diving operations including the contingency plan shall be presented by the contractor/diver and be discussed between the Diving Supervisor and the Commanding Officer (or the Designated Officer), and agreed upon by all parties prior to the commencement of diving operations. The plan shall include:
 - A description of the underwater work that will be done.
 - The location of the work.

- The number and time of the dive or dives.
 - The number of divers that will be in the water at any one time.
 - The number of dive attendants that will be on duty while divers are down.
 - The signal system that will be used to communicate with divers.
 - A list of requirements to be met by the vessel (shutdowns, lockouts, lookouts, boats, energy sources, tools, lines, etc.) *Refer to Procedure 7.B.5 – Lockouts and Tagouts*
 - A set of contingency plans to deal with foreseeable emergencies.
 - This plan shall include the location and phone number of the nearest hyperbaric chamber.
- b) A copy of this plan shall be maintained on the Bridge.
- c) The Commanding Officer (or the Designated Officer, having knowledge of the diving operations plan), shall remain at the worksite to assist the Diving Supervisor as required during the diving operation.

3.4 CONDUCT OF DIVING OPERATIONS

- a) In accordance with *Collision Regulations of the CSA 2001*, applicable signals and shapes shall be displayed during diving operations. Where required, appropriate warning devices such as buoys, flags, lights, etc. shall be displayed to define the restricted access limits of the diving operations. Where appropriate a Notice to Shipping will be issued.
- b) The Commanding Officer, in consultation with the Chief Engineer and with the approval of the Diving Supervisor, shall ensure that the propulsion machinery, sea-suction and underwater discharge mechanisms, cathodic protection system or any other mechanisms that could pose a threat to the safety of the divers are secured in such a manner as to render the work site safe for diving operations.
- c) A general announcement is to be made informing all personnel that diving operations are taking place, and a notice to this effect posted in a suitable location in the engine room. The appropriate machinery lockout procedures must be taken and logged.
- d) Where members of the vessel's complement have been assigned to support diving operations, the Commanding Officer (or the Designated Officer) shall, in conjunction with the Diving Supervisor, ensure that the members of the complement have been adequately briefed on the operations to be conducted and their respective responsibilities.
- e) A Diving Operations Checklist (a sample is attached) shall be completed prior to the commencement of the actual dive and the return of divers and completion of diving operations shall be logged immediately upon completion.

3.5 SEARCH AND RESCUE TASKING

- a) The CCG Station at Sea Island, British Columbia is the only unit trained and equipped to conduct dive operations in response to a search and rescue tasking from Joint Rescue Coordination Centre (JRCC) Victoria. JRCC Victoria and Station procedures are to be followed in these instances.
- b) When divers are to be deployed, the Craft Captain must, if previously designated, turn over all responsibilities as On Scene Coordinator to another vessel until such time as the dive operations are completed.

4 DOCUMENTATION

- Vessel-specific checklist
- Diving Plan
- Log Book Entries
- Departmental Diving Safety Procedures
- For SAR Dives
 - CCG Station Sea Island Diving Procedures
 - CCG Diver Training Program
 - CCG Diver Training Records

UNCONTROLLED COPY WHEN PRINTED

DIVING OPERATIONS CHECKLIST

CCGS _____

Date of Operation: _____

- Designated Officer selected - Name _____
Signature _____

- Diving Supervisor – Name _____
Signature _____

- Divers certification and logbook reviewed
- CO/Designated Officer aboard
- Collision Regs - Warning devices deployed (shapes, buoys, flags, lights)
- MCTS advised (Traffic Control / Sécurité Call)
- Engineroom notified - diving notices posted in E/R
- Engineroom systems secured & logged in E/R log – Lockouts and Tagouts
- Diving plan and contingency plans reviewed
- General announcement made
- Commencement of diving operations logged
- Completion of diving operations logged



Fleet Safety Manual

7.B.2 - FALL PROTECTION

1 PURPOSE

- a) To ensure that work being performed aloft or over the vessel's side is performed safely in accordance with the [Maritime Occupational Health and Safety \(MOHS\) Regulations](#) and the *Canadian Coast Guard Fall Protection Program*.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer shall ensure that fall protection safety measures including an inspection program are in place and followed.

2.2 MARINE SUPERINTENDENT

- a) The Marine Superintendent shall ensure that fall protection courses are provided so that Supervisors and others are sufficiently familiar with the principles of fall protection.

2.3 SUPERVISORS

- a) Supervisors are responsible to ensure that proper safety equipment is provided and used correctly and that training has been provided to employees required to:
- Install or remove fall protection system
 - Climb to heights which exceed 2.4 m
 - Formulate climb plans.

2.4 ALL PERSONNEL

- a) All personnel working aloft shall be suitably trained in fall protection and the use of fall protection equipment and shall follow safety measures and work aloft checklists that have been put in place.

3 INSTRUCTION

3.1 CLIMB PLANS

- a) A climb plan shall be formulated before beginning any climb or work where heights will exceed 2.4m
- b) Climb plans shall, as a minimum, be in compliance with requirements set out in the MOHS regulations (anchor strength, maximum free fall distance, maximum free fall force etc.). These plans shall also contain a RESCUE PLAN that is agreed upon and ensure that any required rescue equipment is readily available for the planned climb.
- c) Prior to ascent the climber shall verify condition of both the structure and the equipment to be used for the climb and shall perform inspections on fall protection anchors, fall protection systems, equipment lock-outs, and verify rescue plans are in place.

3.2 INSPECTIONS AND RECORDS

- a) The service life for all for all arrest equipment shall be based upon recommendations or requirements established by the manufacturer of the equipment.
- b) Before use, inspections shall be carried out on newly purchased equipment.
- c) When fall arrest equipment is being used onboard, fall-protection systems that will be used must be inspected prior to use to ensure that the equipment conforms to safety standards contained in the [MOHS Regulations Part 10 \(144\)](#). These standards are to be readily available.
- d) Records shall be maintained on the acquisition, maintenance and tests of all fall protection equipment in accordance with the requirements of the [MOHS Regulations, Part 1 \(4\)](#).
- e) Subsequent to its periodic inspection, equipment may be tagged with information identifying the equipment and providing a “do not use after” date.
- f) These tags should also correspond to a record, or history, for that item of equipment. This record should also include date of purchase, name of manufacturer, details of arresting service and results of subsequent inspection, inspection criteria.

3.3 POST ARREST INSPECTIONS

- a) Inspections shall be performed on any piece of equipment that was subject to an arresting force. The equipment shall be removed from service until it has been examined by a qualified person to ensure that the system has not been weakened and is still effective.
- b) Results of these inspections shall form part of the equipment record.

4 DOCUMENTATION

- Canadian Coast Guard Fall Protection Program
 - Part I – Policy and Plan
 - Part II – Land based Fall Protection for Structures and Towers
 - Part III – Ship based Fall Protection
- Work Aloft Checklists
- Rescue Plans
- Log Book Entries
- Records of Inspection for fall arrest equipment

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

7.B.3 - ENTRY INTO CONFINED SPACES

1 PURPOSE

- a) To ensure that any entry into confined spaces is undertaken only under controlled and safe circumstances.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICERS IN CONSULTATION WITH CHIEF ENGINEERS

- a) Commanding Officers, in consultation with Chief Engineers, shall identify those spaces which may pose risks as confined spaces. A list of all identified spaces and the associated risk assessments are to be kept onboard.

2.2 ENTRY SUPERVISORS

- a) Entry Supervisors are in charge of approving and cancelling Confined Space Entry Permits and shall ensure that they have been signed. They shall ensure that all tests have been completed; team members and equipment are in place and are responsible to ensure that an adequate rescue plan is in place. They shall ensure that procedures are followed; all workers involved in Confined Space Entry operations are familiar with this procedure and have received Confined Space Entry Training.

3 INSTRUCTION

3.1 GENERAL

- a) It is mandatory that the Confined Space Entry Permit and checklist, located in Annex D – Forms of the Fleet Safety Manual (FSM), are completed. The Confined Space Entry Permit is issued by the Entry Supervisor.
- b) The [*Maritime Occupational Safety and Health \(MOHS\) Regulations*](#) require that these permits be retained aboard for at least two years following the date that they were signed. In the event that conditions changed inside the space or conditions could not be complied with the Permit shall be kept for 10 years.

3.2 ENTRY SUPERVISOR

- a) The Entry Supervisor shall determine it is safe to enter a confined space by ensuring:
- that potential hazards have been identified in the pre-entry risk assessment; paying particular attention to possible flooding of the confined space and adjacent spaces, due to open access points, piping, and such. As far as possible, these hazards have been isolated, mitigated or made safe;
 - that the space has been thoroughly ventilated by natural or mechanical means to remove any toxic or flammable gases, and to ensure an adequate level of oxygen throughout the space;
 - that the atmosphere of the space has been tested as appropriate with properly calibrated instruments to ascertain acceptable levels of oxygen and acceptable levels of flammable or toxic vapours;
 - that the space has been secured for entry and is properly illuminated;
 - that a suitable system of communication between all parties for use during entry has been agreed and tested;
 - that an attendant has been instructed to remain at the entrance and to monitor the space while it is occupied;
 - that no entry shall take place unless a trained and equipped rescue team is on site, that a rescue plan has been agreed upon and rescue team responsibilities have been assigned.
 - that personnel have proper Personnel Protective Equipment (PPE) and are equipped for the entry and subsequent tasks; and
 - that a permit has been issued and duly signed authorizing entry.
- b) Only qualified trained personnel shall be assigned the duties of entering, functioning as attendants, or functioning as members of rescue teams. All personnel involved shall be familiarized and receive a basic safety briefing prior to engaging in any work.
- c) All equipment used in conjunction with entry shall be in good working condition and shall be inspected prior to use.
- d) When mechanical ventilation of the space is required to ensure readings are maintained within the limits set in section 3.3 (b), the ventilation shall continue for the entire period that the space is occupied and during temporary breaks. In the event of a failure of the ventilation system, any persons in the enclosed space shall leave the space immediately.

3.3 TESTING THE ATMOSPHERE

- a) Appropriate testing of the atmosphere of a space shall be carried out with properly calibrated equipment by persons trained in the use of the equipment. The manufacturer's instructions shall be strictly followed.

- b) Prior to entering a space, steady readings of the following must be obtained using a multi-gas meter, calibrated to factory specifications and bump tested before use:
 - not less than 19.5% and not more than 23% oxygen by volume as measured by oxygen content meter
 - not more than 10 % of lower flammable limit (LEL)
- c) Testing shall be carried out before a person initially enters the space and after the space has been left unattended. Continuous monitoring shall be carried out while persons are in the space, until all work is completed.
- d) Persons shall leave the space immediately if a deterioration of conditions is suspected or indicated by a change in the atmospheric readings or if mechanical ventilation fails or stops (when used).

3.4 PRECAUTIONS REQUIRED WHERE ATMOSPHERE IS KNOWN OR SUSPECTED TO BE UNSAFE

- a) If the atmosphere in a confined space is suspected or known to be unsafe, the space shall only be entered when no practical alternative exists. Entry under these conditions shall only be made for further testing, essential operation, safety of life, or safety of the vessel. The number of persons permitted to enter the space shall be the minimum required.
- b) Suitable breathing apparatus (a supply of clean air independent of the atmosphere within the space) shall always be worn and only persons who have been trained in the use of such apparatus shall be allowed to enter the space. All personnel entering the space have been provided with rescue harnesses and lifelines. Appropriate PPE shall be worn wherever there is a risk of toxic substances or chemicals coming into contact with the skin or eyes of those entering the enclosed space.

3.5 EMERGENCY

- a) In the event of an emergency, under no circumstances shall the attending crewmember enter the space. The attendant is to summon the rescue team and the rescue team shall evaluate the situation to ensure the safety of those entering the space to undertake rescue operations.

4 DOCUMENTATION

- Confined Space Entry Permits (Annex D – Forms)
- Log Book Entries
- Training Records
- Calibration Records



Fleet Safety Manual

7.B.4 - HOTWORK

1 PURPOSE

- a) To reduce the possibility of injury or accident by ensuring that hotwork aboard the vessel is carried out in a controlled and safe manner.

1.1 HOTWORK

- a) Hotwork is defined as work that creates a source of ignition or a temperature sufficiently high to ignite a flammable gas mixture or to cause combustion of the item(s) involved in the process. This includes any work requiring the use of welding, burning or soldering equipment, drilling, grinding, chipping or any other work where flame is used or sparks are produced. Normal maintenance work aboard the vessel that uses drilling or grinding, and where there is a possibility of sparking or heating, but there is no flammable gas mixture present nor is there a likely danger of combustion from heating, does not require the completion of a hotwork permit.

2 RESPONSIBILITIES

2.1 CHIEF ENGINEER

- a) The Chief Engineer is responsible to ensure that this procedure is followed when hotwork is carried out onboard. The Chief Engineer, or their designate shall issue all Hotwork Authorization Permits
- b) Under circumstances where the vessel is in a non-operational period (refit, maintenance lay-up, etc.) and the Chief Engineer will not be available for a prolonged period of time, the onboard engineer-in-charge may issue Hotwork Authorization Permits to complete maintenance work.
- c) The Chief Engineer is responsible to identify any Hotwork Zone designated as authorized for hotwork and to ensure that it is properly equipped to safely carry out hotwork.

2.2 IMMEDIATE SUPERVISOR

- a) The Immediate Supervisor of the personnel onboard is responsible to ensure that when performing hotwork, personnel are fully conversant with this procedure.

2.3 PERSONNEL PERFORMING HOTWORK

- a) Personnel performing hotwork are to do so in accordance with this procedure and in accordance with the terms and conditions of the Hotwork Permit.

3 INSTRUCTION

3.1 GENERAL

- a) No hotwork shall be carried out aboard any Canadian Coast Guard (CCG) vessel where there is a possibility of ignition of a flammable gas mixture or there is a possibility of combustion caused by heating, unless there is in place a Valid Hotwork Authorization Permit or the work is being performed in an approved hotwork zone.
- b) A fitted hotwork zone area refers to an area designated and equipped as an authorised hotwork zone in which hotwork may be performed. In the majority of cases this shall be the engineer's workshop.
- c) No hotwork shall be carried out on any pipe, tank or in any area where there is a potential for the presence of an inflammable gas, vapour or dust, unless the area has been freed of gas, tested by a qualified person, and found to be safe.
- d) Welding on the sides of fuel tanks or lube oil tanks is strictly forbidden unless the tanks are gas free or inert.
- e) No hotwork of any sort is to take place while the vessel is involved in bunkering operations.
- f) All welding performed aboard CCG vessels that involves the hull, through hull fittings, lifting gear, secure points, anchor points shall be conducted by a qualified person and certified to the satisfaction of the Transport Canada Marine Safety Board (TCMSB) before the device or appliance is put into service. Emergency repairs shall be subjected to minimum loading until the repair has been tested and is certified as sound.
- g) Some ports have developed their own regulations regarding the conduct of hotwork. A check shall be made with the port authority by the officer-in-charge prior to approving any in-port hot work.

3.2 PRIOR TO PERFORMING HOTWORK

- a) At anytime that hotwork is being performed outside the designated Hotwork Zone, a Hotwork Authorization Permit is to be completed and signed by the Chief Engineer or their designate, prior to hotwork being conducted.
- b) These permits are to be kept on file for a period of one year.
- c) When a permit has been issued the Engineer on Watch and Officer on Watch are to be advised prior to commencement of hotwork.

3.3 PERSONNEL SAFETY

- a) The person(s) who are to perform the hotwork must satisfy the Chief Engineer that they are competent in the use of the equipment.
- b) Suitable Personnel Protective Equipment (PPE) must be worn while performing hotwork. If the situation warrants the use of respirators shall also be worn.
- c) Personnel safety issues have to be taken into consideration:
 - burns,
 - noxious fumes and gases,
 - fire and explosions,
 - electric shock,
 - tripping and fatigue.

3.4 PERFORMING HOTWORK

- a) When hotwork is being performed, a fire watch must be maintained at all times. A minimum of one person with a fire extinguisher close at hand is required. The fire watch, depending upon the size, area and scope of the hotwork, may have to extend to adjacent compartments.
- b) The work area must be ventilated, if possible, to allow for air replenishment for the personnel in the area. This reduces the health hazard of breathing noxious fumes or being in a work environment that has a high concentration of noxious fumes.

3.5 POST HOTWORK

- a) Once the hotwork has been completed the equipment is to be secured.
- b) Hot surfaces must be duly marked to avoid accidental personal burns.
- c) Once the area is secured then the fire watch equipment may be returned to its normal position. The work area shall be revisited for a period of 30 minutes to ensure that no risk of fire exists.

4 DOCUMENTATION

- [Coast Guard Standard – Welding Health and Safety Technical Program \(DF0/5762\)](#)
- Hotwork Authorization Permits (Annex D – Forms)
- Equipment maintenance record
- Log Book Entries
- Training Records



Fleet Safety Manual

7.B.5 - LOCKOUT AND TAGOUT

1 PURPOSE

- a) To ensure that persons working aboard Canadian Coast Guard (CCG) vessels are protected from accidental exposure to energized systems such as: electrical, hydraulic, pneumatic, water, gas, or steam pressure; vacuum; high temperature; cryogenic temperature; radio-frequency emissions; potentially reactive chemicals; stored mechanical energy or, equipment actuation while working on or near shipboard systems and equipment.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer shall ensure that this procedure is applied aboard the vessel.

2.2 CHIEF ENGINEER OR DELEGATE

- a) The Chief Engineer or delegate shall approve all lockouts and tagouts for energized systems and to ensure that each event is recorded using a Lockout/Tagout Record Sheet and that all records are logged in a register. The Chief Engineer shall consult with the Commanding Officer prior to locking out or disabling any energized system or equipment which affects the operational readiness or navigational safety of the vessel. The Commanding Officer shall also be notified when the locked-out system is re-energised.
- b) The Officer of the Watch shall document in the Deck log, all notifications regarding Lockouts/Tagouts affecting operational readiness when received.

2.3 DEPARTMENT HEADS

- a) The Department Heads shall ensure that maintenance routines used aboard the vessel for systems or equipment to be isolated includes all relevant information.

3 INSTRUCTION

3.1 SYSTEMS

- a) No person shall remove a lockout or tagout or re-energize a system or piece of equipment that has been locked out or tagged out without receiving the approval of the Chief Engineer or delegate.
- b) The energy-isolating device (circuit breaker, disconnect switch, flow control valve, blank flange, a block, or some similar device used to block or isolate energy) should provide the capability of being locked, or lock wired, in the de-energized or isolated position.
- c) Where the energy-isolating device cannot be securely locked, the system should be blanked with a physical break.
- d) An inspection shall be performed by the Chief Engineer, or their delegate, to ensure that isolation will be achieved by the planned lockout/tagout. Verifying depressurization by breaking a flanged connection, loosening valve bonnets, removing instrument tubing, or other similar actions shall be avoided unless no other means for identifying depressurization exists.
- e) Checks shall be performed during the period that the component or system is isolated to ensure that components remain in the isolated position.

3.2 LOCKS AND TAGS

- a) A lockout device is a device that uses a positive means to hold an energy-isolating device in the safe position and prevents the energizing of equipment. Hasps, chains, and other devices may be treated as lockout devices when used in combination with locks.
- b) An individual key is required for each specific lock and the person responsible for the maintenance of the system or equipment being locked out is to be the only person in possession of the key. "Master key" locks shall not be used as a lockout device. When equipment is locked out over a crew change the oncoming Chief Engineer shall be informed and be responsible for the lock and key.
- c) A tagout is a prominent warning device that can be securely fastened to an energy-isolating device to indicate that the energy-isolating device and the equipment being controlled must not be operated. When systems or equipment are being locked out, a tagout must be placed next to the lockout to indicate the date of the lockout, and the name of the individual who placed the lock and has the key. The tagout is not to be removed by anyone other than the person who placed the tagout or another person who has physically relieved the person who placed the tagout.
- d) Individual Lockout/Tagout Record forms shall be created which suit the needs of the site. A sample is available in Annex D - Forms of the Fleet Safety Manual (FSM).
- e) Lockout/Tagout Records shall be retained aboard for a period of 12 months.

- f) The Chief Engineer shall maintain a lockout/tagout register which shall provide ready reference to the status of systems or equipment locked or tagged out. This register shall include, at a minimum, the following information:
- Unique identifier number corresponding to the number on the lockout/tagout record
 - System or equipment affected
 - Date lockout/tagout opened
 - Person in charge of the work
 - Date lockout/tagout closed
 - Person responsible for closing the lockout/tagout.
- g) This register book, accompanied by all remaining OPEN lockout/tagout records shall form part of the Chief Engineer's changeover notes.

3.3 REMOVING LOCKOUTS AND TAGOUTS

- a) The person who is removing the lockout/tagout shall ensure that the machinery or system is operationally intact and that components within the lockout area are repositioned, if required, to permit safe operations.
- b) Components that could cause automatic operation of a circuit breaker or a motor- or air-operated valve when control power or pressure is restored are in a position such that automatic operation will not occur when the lockout/tagout is removed.

4 DOCUMENTATION

- Lockout Tagout Register
- Deck log entries
- Lockout/Tagout Record (Annex D - Forms)
- Site Specific Work Instructions



Fleet Safety Manual

7.B.6 - ELECTRICAL SAFETY – WORKING ON ENERGIZED CIRCUITS

1 PURPOSE

- a) To ensure that all persons working aboard CCG vessels / stations are protected from accidental exposure to electrical currents and flash burns.
- b) It is important to be aware that working on energized systems is not recommended and should not be a routine practice. When necessary, because of operational requirements or for troubleshooting circuits, energized work must be performed by the person in charge or qualified persons under the terms of the [Maritime Occupational Health and Safety \(MOHS\) Regulations - Part 15 Electrical Safety](#).

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer shall ensure that this procedure is applied aboard the vessel.

2.2 CHIEF ENGINEER, OR DELEGATE

- a) The Chief Engineer, or delegate, shall approve work on all energized circuits. These operations shall be logged in a controlled register.
- b) The Chief Engineer shall consult with the Commanding Officer prior to locking out or disabling any energized system or equipment which affects the operational readiness or navigational safety of the vessel. The Commanding Officer shall also be notified when the circuit is re-energised. Special consideration shall be given prior to disabling any energized system or equipment that affects the operational readiness of the vessel. The Chief Engineer shall produce a list of critical systems / equipment in compliance with section 3.3 (d) of this procedure.
- c) Prior to performing any work on energised electrical circuits, the Chief Engineer shall ensure that one employee at the worksite has been trained in CPR and is able to fulfill that requirement. The employee shall remain on site for the duration of the work being performed.

2.3 EMPLOYEE

- a) No employee shall commence work on any electrical circuit or equipment that must remain energized without the prior approval of the Chief Engineer or delegate.

3 INSTRUCTION

3.1 GENERAL

- a) When performing energized work, a risk assessment and “Energized Circuit Work Permit” shall be completed. Energized work shall never be taken lightly, implementation of best practices, judgment and knowledge of individual systems, and use of Personal Protective Equipment (PPE) is necessary to prevent or reduce the potential for injury.

3.2 CATEGORIES OF HAZARDOUS SITUATIONS

- a) Electrification and Electrocutation.
- These are situations where a worker's body comes into direct contact with or exposed to a live electrical device. These hazards are controlled by wearing PPE and by maintaining a safe distance according to the voltage present.
- b) Arc Flash Burns.
- An equipment malfunction can create an arc flash with consequences that can cause injury to an employee. The amount of energy released by the arc event is directly related to the voltage of the circuit, the short circuit capacity at the point of malfunction, and the amount of time needed for circuit protection to deploy.
- c) Arc Blast.
- When copper changes instantly from a solid to a gas, it causes increased pressure, hazardous noise levels, and a shower of hazardous debris. The sound pressure can be as strong as 160 dB, and projectiles can reach a velocity of 1100 km/h.

3.3 APPLICATION

- a) Personal Protective Equipment and Appropriate Measuring Instruments
- The *CSA Standard Z462-12* serves to accurately determine what PPE is appropriate for a given task. It also defines minimum approach distances and arc rated and flame resistant clothing protection systems. At a minimum, a face shield and protective gloves shall be worn which meet electrical standards for protection for the voltage present.
 - Wearing synthetic fibres or metal accessories is prohibited while performing any work on live circuits, for all classes of vessels.
 - The tools used to perform live electrical work must be fitted with an insulating material. Insulating mats must be inspected regularly to ensure that they are completely intact and have a certificate of conformity with the standard in effect. Electrical equipment solely used in the testing of live circuits shall be tested as per manufactures instructions. Where no instructions exist the equipment shall be tested at a minimum annually.

- b) Vessel / Vessel Class Specific Practices
- Work instructions shall be developed specific to each vessel for energized circuit work. These instructions shall provide employees, guidelines for the categories of tasks to be performed in accordance with the *CSA Standard Z462-12*.
- c) A Risk Assessment attached to the Work Permit must be located on site and include a rescue plan which identifies the circuit to be shut down in the event on an emergency.
- A permit for energized circuit work is mandatory and shall be completed if the equipment operates at a voltage of **240 V or above** and is powered by a transformer **greater than 125 kVA**, or if prior to the closest upstream protection device, the equipment feeder cables are in a shared enclosure with a voltage present that is above 200V.
 - The Chief Engineer shall maintain a register of energised circuit work permits which once completed shall be kept onboard for 12 months.
- d) The Chief Engineer shall produce a list of critical systems / equipment that due to their nature are required for operational readiness for the vessel and remain in a constant energized state. This list shall remain in the permit register for reference. The Energized Electrical Work Permit shall be issued when any electrical troubleshooting work is being performed on this equipment.

3.4 SYSTEM UNDER TESTING, TROUBLESHOOTING AND RETURN TO SERVICE.

- a) If, at any time, an unforeseen situation should occur during the troubleshooting situation of energized circuits, including the detection of a short etc the troubleshooting work shall be stopped immediately and necessary repairs conducted. During the troubleshooting no unexpected loads shall be introduced into the system,
- b) When the electrical equipment is put back into operational status it must be proven ready for safe operation.

4 DOCUMENTATION

- CSA Standard Z462-12
- Site Specific Work Instructions
- Energised Circuit Work Permit
- Register of Energised Circuit Work Permits
- Log Book Entries

| | | | |
|---|--|--|-------------|
| ENERGIZED CIRCUIT WORK PERMIT | | VESSEL: CCGS | |
| This work permit is required when working on equipment operating at 240 volts or more and powered by a transformer of more than 125 kVA . | | | |
| Circuit # | | Location: | |
| Period of validity (Date): | | | |
| MAINTelligence Work order number: | | | |
| Description of Equipment / System: | | | |
| Reason for energized work: | | | |
| <input type="checkbox"/> Equipment troubleshooting <input type="checkbox"/> System calibration <input type="checkbox"/> Other (specify) _____ | | | |
| Risk assessment: The following section shall be completed. | | | |
| Checklist: <input type="checkbox"/> Safe environment <input type="checkbox"/> Work procedures met <input type="checkbox"/> Inspections during work <input type="checkbox"/> Installation of signage required <input type="checkbox"/> Control room and wheelhouse notified of work <input type="checkbox"/> Personal Protective Equipment <input type="checkbox"/> Insulated material involved (tools, mat, ladder etc.) <input type="checkbox"/> Presence of lockout/tagout if required <input type="checkbox"/> Safety tests required | | <input type="checkbox"/> Tags or signs required <input type="checkbox"/> Measuring instruments used appropriate to work <input type="checkbox"/> Metal accessories (jewellery, watch, belt buckle, etc.) removed <input type="checkbox"/> Clear and effective communications among team | |
| | | RESCUE PLAN <input type="checkbox"/> Emergency power disconnect switch identified and accessible <input type="checkbox"/> Other (Specify) _____ _____ | |
| Emergency procedures to be followed: | | | |
| Worker: (Print) | | Signature: | |
| Chief Engineer: | | Signature: | |
| Date issued: | | | |
| Return to service completed / Functional inspection satisfactory | | | Yes No |
| Comments: | | Date: | Time: |



Fleet Safety Manual

7.C.1 - HOVERCRAFT OPERATIONS

1 PURPOSE

- a) To ensure the safe and effective operation and maintenance of Canadian Coast Guard (CCG) Air Cushioned Vessels (ACV).

DEFINITIONS (SPECIFIC TO THIS PROCEDURE)

Air Cushioned Vessel (ACV)

A craft which is operable on or above water. The weight of such craft or a significant part thereof is balanced in one mode of operation by other than hydrostatic forces. For purposes of this procedure, Dynamically Supported Craft (DSC), Hovercraft, and ACV; shall be considered synonymous.

ACV Officer

A person holding the required certificate who is employed by the CCG for piloting and navigating and maintaining an ACV.

ACV Commanding Officer

An ACV Officer holding the required certificate who is employed to command an ACV in the CCG.

Annual Currency

A minimum annual number of hours of Pilot-In-Control and Radar guidance time required by ACV officers.

Certificated

Personnel that have acquired all the necessary professional qualifications enabling them to legally fulfill the requirements of a particular position.

Circuit

A departure and arrival at a safe landing site.

Competency Check Ride

Mission where an ACV Officer demonstrates knowledge of craft limitations, emergency procedures, piloting and navigating skills by carrying out five circuits: two circuits in direct control, one under radar guidance, and two more as a navigator providing radar guidance.

Craft Specific Work Instructions

Comprehensive operational guidelines designed to assist individuals and crews in meeting and maintaining their operational proficiency.

| | |
|----------------------------------|---|
| High-Speed Bridge Team | A team of four persons suitably trained and qualified to conduct high-speed ACV operations at night, and in periods of reduced visibility. |
| In-Year Currency | Period of time during which professional operating skills are considered to remain acceptable. Periods of pilot inactivity exceeding 120 days are subject to a competency check ride. |
| Inspection | Conduct routine testing, examining, adjusting and checking of the structure machinery and systems of an ACV in accordance with the requirements of an approved inspection schedule. |
| Maintenance | Any action necessary for restoring or maintaining a craft or part thereof, including instruments and equipment, in a safe operational condition. |
| Mission Duty Time | Time necessary to prepare and execute mission(s) and the associated administrative and operational functions undertaken before and after a sortie. (For example: stability calculations, cargo loading, pre-flight inspection, Unloading, Fuelling, Log-keeping, & wash-down) |
| Piloting | Control of the direction and speed of a craft with the direct use of lift engines, propeller pitch, bow thrusters, and rudder controls. |
| Radar Guidance | The active use of collision avoidance and positioning information obtained from on board radar for the safe navigation of a craft. |
| Radar Guidance Conditions | Exist during all hours of darkness and when visibility conditions are two miles or less during daylight hours. |
| Rest Period | A period of time during which a crewmember is relieved of all operational duties. |
| Servicing | The replenishment of fuel, engine oil, and other lubricants, hydraulic fluid, engine coolant and windshield washing agent. |
| Type Operating Manual | The operations manual for a specific ACV provided by the manufacturer. |

2 RESPONSIBILITIES

2.1 REGIONAL DIRECTOR, FLEET

- a) The Regional Director, Fleet is responsible for the approval of all Safety Management Systems (SMS) and Work Instructions.

2.2 OFFICER IN CHARGE

- a) The Officer in Charge is responsible for ensuring that the Safety Management System (SMS) including the development and maintenance of operational procedures, maintenance procedures and currency and competency standards for ACV pilots, Engineers and Deck Crews which meet the approved Crewing Profiles is maintained and controlled.
- b) ensuring that the CCG directives and guidelines issued are adhered to;

- c) ensuring that the following documents and publications are updated as required when changes occur:
 - Site Specific Work Instructions/ Procedures/Checklists,
 - Manufacturer's Type Operating Manual,
- d) ensuring that the following logbooks are kept up to date:
 - Personal log books of all ACV certificated crew members;
 - That the ACV technical logbook is completed correctly and that the required information is entered correctly in the ACV maintenance log upon completion of a mission;

2.3 ACV CHIEF ENGINEER

- a) The ACV Chief Engineer is responsible for:
 - ensuring compliance with craft maintenance guidelines;
 - ensuring compliance with the manufacturer's maintenance procedures, and inspection and servicing schedules;
 - ensuring that all engineering personnel under their supervision are properly trained and certificated; and
 - ensuring that manufacturer's maintenance manuals, inspection and servicing schedules are current and logs are updated on a regular basis.

2.4 ACV COMMANDING OFFICER

- a) The ACV Commanding Officer is responsible for:
 - ensuring that the ACV is operated in compliance with the operating and environmental limits published in the manufacturer's type operating manual. These limits may be exceeded, at the discretion of the ACV Commanding Officer, and only when responding to distress situations.
 - ensuring that the duty crew meets all competencies and medical clearances as outlined in the Crewing Profiles established for the craft by verifying the documentation, certification and training records which they provide.
 - Adapting and developing new methods, procedures and work instructions for the safe delivery of the Fleet Operational Plan.

3 INSTRUCTION

3.1 GENERAL

- a) ACV personnel shall carry out operations according to the relevant Procedures Manuals including:
 - *AP 188 - 100S Type Operations Manual;*
 - *AP 188 - 400 Type Operations Manual;*
 - *AP 188 - 100S Safety Management System;*
 - *AP 188 - 400 Safety Management System.*
- b) The Site Specific Work Instructions developed under the SMS for the site and each craft shall be periodically reviewed. Amendments shall be forwarded to the Superintendent Fleet Safety and Security for approval.

3.2 COMPETENCY CHECK

- a) ACV officer who has been away from the operation for a period greater than 120 days shall undergo an annual Competency check ride by the Officer-In-Charge or their designate.
- b) An ACV OIC who has been away from operations for a period greater than 120 days shall undergo a Competency check ride by an ACV Captain who is considered to be current.

3.3 CURRENCY

- a) Annual Currency for ACV Officers shall be constituted of a minimum of 100 hours Pilot-In-Control time and 25 hours of radar guidance time recorded in an approved Personal Logbook and attested to by signature of an ACV Base OIC.
- b) In-Year currency: An ACV pilot shall not be deemed current unless he/she has completed a minimum of five circuits in both pilot and navigator positions, or the equivalent number of hours, during the preceding 120-day period. Active radar guidance shall be used to complete at least two of these circuits. Failure to maintain currency in piloting and radar guidance will necessitate a competency check ride. This check ride shall be monitored and validated by a current ACV Commanding Officer. If the check ride is not successful, 10 hours of on-the-job training must be attested to, in the personal pilot logbook before the ACV pilot is allowed to resume operational duties.

3.4 CRAFT CREW

- a) Hovercraft shall be crewed in accordance with the established crewing profiles. The crew aboard an ACV shall normally consist of an ACV Commanding Officer, one ACV officer to act as pilot or navigator (watchkeeping officer) and a sufficient number of suitably qualified crewmembers to perform the other tasks required to complete the mission.

- b) High Speed Bridge Team: A team shall consist of four persons suitably trained and qualified to conduct high-speed ACV operations at night, and in periods of reduced visibility. The team will be constituted of a certificated ACV Officer in both the pilot and navigator positions with a Primary Lookout situated in the co-pilot seat and a secondary lookout situated for best effect within the cockpit.

3.5 CRAFT TIME LIMITATIONS

- a) The ACV Commanding Officer must carefully monitor crew fatigue under all circumstances, recognizing that some situations are more stressful than others. The time since the last rest period and its duration must also be considered in assessing when crew fatigue has reached the level where further operations without rest would be unwarrantedly dangerous. Other than in exceptionally urgent situations the total craft time as pilot and/or navigator of a craft with a crew of two qualified pilots shall not exceed 12 consecutive hours in visibility conditions greater than one mile during daylight; or 6 consecutive hours in radar guidance conditions.

3.6 MISSION DUTY TIME

- a) The maximum mission duty time for a craft Crewmember is 16 consecutive hours in any period of 24 hours. Daily mission duty time may be extended when a Craft Captain considers it safe to do so:
- during search and rescue activity
 - to complete any craft duty that has been extended as a result of unforeseeable circumstances.

3.7 REST PERIODS

- a) A craft crewmember shall be allowed a rest period of a minimum of six consecutive hours in any given 24 hour period and at least 16 hours of rest in every 48 hour period. This may only be modified for the reasons above under Mission Duty Time.

3.8 MAINTENANCE

- a) Any modification or repair, which constitutes a modification to the craft and may affect the structural integrity, functioning of systems and/or safety of the craft must be approved by the Superintendent, Marine Engineering prior to implementation and recorded. A Configuration Change Request for all modifications or repairs must be forwarded to Superintendent, Marine Engineering, and must include:
- the justification for the modification or repair,
 - a written description,
 - diagrams and / or photographs,
 - the estimated total cost, and
 - the probable impact on operations, craft stability and safety.

- b) Emergency repairs which constitute a modification to the craft and which may affect structural integrity, functioning of systems and/or safety of the craft may be undertaken on the authority of the Chief ACV Engineer when prior approval from the Superintendent, Marine Engineering cannot be obtained. However, the Superintendent, Marine Engineering must be notified no later than the next working day. Records shall be kept of all such occurrences.

4 DOCUMENTATION

- Craft Log Books (Deck Log, Technical Log)
- Personnel Competency Records
- Craft Maintenance Records
- Safety Management System Craft Specific Instructions
- [Fatigue Management – A Guide for Canadian Coast Guard Managers, Officers and Crew](#)

UNCONTROLLED COPY WHEN PRINTED

ANNEX A – AIR CUSHION VEHICLE OPERATING LIMITS

1 AIR CUSHION VEHICLE OPERATING LIMITS

- a) Over land or water mean winds up to 30 knots or with gusts not exceeding 40 knots.
- b) Wave heights should not exceed 2.4 meters (8.0 feet) for steep isolated waves or for wavelengths less than 1.5 times the length of the ACV. This is equivalent to 1.5 meters (5.0 feet) significant .

Note 1: Significant Wave Height (Hsig or H1/3) is defined as the average height – from trough to crest – of the highest one-third of waves during a given time period. The individual Maximum Wave Height during the same period may be 1.5 to 2 times greater than the Significant Wave Height.

- c) Temperatures between -20 °C (-4 °F) and 35 °C (95 °F).

2 RESPONDING TO DISTRESS OR EMERGENCY CALLS

- a) At the discretion of the ACV Commanding Officer, only when responding to distress or emergency calls, the environmental limits on craft operation can be exceeded. Should the situation require the Commanding Officer to exceed the published environmental ACV limits, the Commanding Officer shall exercise due regard to the safety of the crew and craft and consider the following practical conditions as indicators of increasing risk to safety :
 - Wave height and direction sufficient to strike propellers;
 - Wave height sufficient to strike the hovercraft superstructure (pounding, plowing in) or cause spray to obscure the operator's vision;
 - Where there are freezing spray or icing conditions;
 - Wave height and shape sufficient to cause a dangerous loss of cushion integrity;
 - Wind speed (or combined speed/direction) sufficient to slow hovercraft below hump speed or to reduce manoeuvrability; or
 - Wave steepness sufficient to slow hovercraft below hump speed.



Fleet Safety Manual

7.C.2. - SMALL CRAFT OPERATIONS

FORMERLY DFO 7.D.14 – SMALL CRAFT OPERATIONS

7.C.2 – SMALL CRAFT OPERATIONS IS SYNONYMOUS WITH DFO 7.D.14.

1 PURPOSE

- a) To ensure that Small Craft operated from or supported by Canadian Coast Guard (CCG) vessels, and all Small Craft operated by the Department of Fisheries and Oceans (DFO) shore-based units, are operated safely.

Note 1: Small Craft are defined as all vessels below i.e. 15GRT including small non-powered craft, and operated in all DFO working areas; from “mother” ships, offshore, coastal areas, rivers, lakes, streams, landlocked water, etc.

Note 2: Tonnage and length relationships provided by the [Small Vessel Regulations of the Canada Shipping Act \(CSA\) 2001](#) are: 8m-8.5m (26'3"-27'11") is equivalent to 5GRT; and 12m (39.4') is equivalent to 15GRT.

Note 3: Categories of Small Craft include Emergency (Lifesaving) Boats; Fast Rescue Craft (Rigid Hull Inflatables (RHIB) and other types); Patrol Boats (Rigid Hull Inflatables and hard-shell); Workboats (surfboats, auxiliary workboats); Barges (LCM barges, self-propelled barges, dumb barges, Environmental Response barges and Seatrucks); Scientific Craft (survey launches, barges and power boats); Special Craft (catamarans, Cape Island/inshore boats, Personal Water Craft, airboats, small Air Cushion vehicles); and others (yawls, dories, punts, skiffs, canoes, sailboats, training craft).

2 RESPONSIBILITIES

2.1 DIRECTOR GENERAL FLEET

- a) The Director General Fleet shall ensure that standards are in place to support the provisions of this procedure.

2.2 DFO PROGRAM MANAGERS AND SUPERVISORS RESPONSIBLE FOR THE SMALL CRAFT, OR THE COMMANDING OFFICER

- a) DFO Program Managers and Supervisors responsible for the Small Craft, or the Commanding Officer when operating from a CCG vessel or station shall ensure that all personnel within their responsibility receive the requisite training and that all Small Craft are operated and maintained according to these procedures.

2.3 SMALL CRAFT OPERATORS

- a) Small Craft Operators are in charge of ensuring that the Small Craft they are operating and all persons engaged in Small Craft Operations are capable of completing the required tasking.

2.4 COXSWAIN AND OTHER PERSONNEL INVOLVED WITH SMALL CRAFT OPERATIONS

- a) The Coxswain responsible for the operation and other personnel involved with Small Craft operations shall carry out their duties (as applicable) in accordance with this procedure, and shall alert their supervisors of any sub-standard acts, unsafe or improper conditions or practices.

3 INSTRUCTION

3.1 TRAINING AND QUALIFICATIONS

- a) No person shall operate a Small Craft without the applicable certification (described below), and competencies, including type-specific and task-specific training.
- b) Prior to operating any Small Craft on behalf of CCG, every person, regardless of the organization they are associated with, shall have successfully passed the following:
 - **CCG Basic Small Craft Training Course:** for Small Craft capable of: speeds up to 25 knots; operated in less than 30 knots of wind; and where the visibility exceeds 2 miles. This course includes accreditation for the required [Transport Canada certification \(Marine Emergency Duties \(MED\) A3](#) and Small Vessel Operator Proficiency (SVOP) Training).
 - **CCG Advanced/RHIOT Course:** for Small Craft capable of: speeds greater than 25 knots; or when operating any Small Craft in conditions where the wind exceeds 30 knots or; in conditions of restricted visibility. The Basic Course is a prerequisite for the Advanced/RHIOT Course.
- c) Prior to operating any Small Craft on behalf of DFO, every person shall have successfully passed the following courses:
 - **Marine Emergency Duties (MED) A3 and Small Vessel Operator Proficiency (SVOP) Training Courses (accredited by Transport Canada):** for Small Craft capable of: speeds up to 25 knots; operated in less than 30 knots of wind; and where the visibility exceeds 2 miles.
 - **CCG Advanced/RHIOT Course:** for Small Craft capable of: speeds greater than 25 knots; or when operating any Small Craft in conditions where the wind exceeds 30 knots; or in conditions of restricted visibility. The CCG Basic Course or equivalent is a prerequisite for the Advanced/RHIOT Course.

- d) All potential training candidates shall be assessed to ensure that they meet the course pre-requisites by the Marine Superintendent or their delegate before being accepted.
- e) For the purposes of RHOT training, equivalent levels of certification for the pre-requisites may be accepted by CCG on a case by case basis.
- f) Operators of Small Craft larger than 5 GRT (barges, launches, etc.) require formal marine certification issued by Transport Canada (Master limited certificate) in addition to the above course(s).
- g) For Small Craft fitted with radio equipment, radio operators must hold a Restricted Radio Operators Certificate. If a VHF radio capable of Digital Selective Calling (DSC) is fitted onboard the small craft, the Operator shall hold a *Restricted Radio Operator Certificate - Maritime Commercial Qualification* or a *General Operator Certificate*.
- h) For the purposes of RHOT training only, unskilled operators may be permitted to operate the RHIB without an instructor in the boat provided they do so within the following limitations:
 - speed of the craft shall be less than 25 knots
 - wind speeds shall be less than 30 knots
 - the operation of the craft shall be conducted within an area designated by the instructor under his/her authority and direction.
- i) For the purposes of RHOT training, if any of the limitations listed above in (h) are exceeded, a risk assessment shall be completed, as per procedure 7.A.1, (A risk assessment shall be completed every time the conditions identified in (h) cannot be met).

3.2 CREWING

- a) DFO Small Craft shall have sufficient crew to carry out their operation / task safely, securely and effectively. Crew size shall be no less than one qualified operator and one other person on board, unless specific program or site specific tasks dictate otherwise. Such tasks shall be subject to a risk assessment being completed and approved by the Supervisor.

3.3 SMALL CRAFT FAMILIARITY

- a) Specific familiarization plans shall be developed and signed off for each crew member by the Supervisor for each type of Small Craft utilized. At a minimum, operators shall be familiar with:
 - craft systems (steering, propulsion, fuel, electrical, etc.)
 - electronics (gauges, navigation, communications, etc.)
 - location and operation of safety equipment
 - load capacity
 - range at various speeds
 - seakeeping capabilities and stability

3.4 PERSONAL PROTECTIVE EQUIPMENT (PPE)

a) Standards

- Equipment and clothing shall be issued and used in accordance with [National Joint Council, Occupational Health and Safety Directive, Personal Protective Equipment and Clothing, Section XIII.](#)
- PPE requirements relate to type of craft, type of operation, area of operation and specific tasks.

b) Flotation devices

- At all times when on board the Small Craft, all personnel shall wear at minimum an approved lifejacket or an approved Personal Flotation Device (PFD) with enough adequate buoyancy to support the employee and the weight of equipment carried.
- The type and style of PFD shall depend on the conditions present and the type of operation; however, operators should plan for worst-case scenario and prepare accordingly.
- For a PFD to provide the proper flotation it must fit snug and be fastened properly. When vest style PFDs are worn they shall be securely fastened to the body with the cinches tightened.

Self-inflating or auto-inflating PFD's shall not be used as the sole method of buoyancy. The only exception to this shall be during enforcement operations when an individual is wearing ballistic protection. In this event, provided the manufacture's safety warnings are complied with, an automatic inflating type PFD, with a buoyancy rating of no less than 177.81 newtons (30 lbs.) may be used. Enforcement personnel shall wear all other PPE as prescribed by their departmental regulations and guidelines.

c) Thermal Protection

- All persons engaged in Small Craft operations where ambient or anticipated environmental conditions (air temperature, precipitation, and wind) or immersion involves a risk of hypothermia shall be provided with and wear thermal protection.
- Where dry suits are worn, an approved PFD shall be worn as well.

d) Protective Headwear

- Small Craft crews shall wear CCG accepted protective headwear which is appropriate for the operations (i.e. hardhat while conducting cargo operations or slinging work; and helmets while underway at high speed). Only the following helmets are acceptable by CCG for high speed craft operations:
 - the Marine Safety Helmet - PAS 028:2002 (e.g. the Gecko);
 - the Occupational Protective Helmets – AS/NZS1801 (e.g. Pacific Helmets R7H (V, VS, VP), with a breakaway strap);
 - or greater (e.g. the Gallet);
 - the Whitewater Sports – EN 1385 (i.e. wake board helmets are to be used for training purposes **only during** "Capsize Reversal Training").

- e) Footwear, Eye Protection, Hearing Protection and UV Protection
 - Shall be made available and worn according to the Treasury Board directive (see 3.4 (a)) as conditions warrant.
- f) Soft Body Armour
 - CCG personnel taking part in Law Enforcement operations shall be wearing at least the equivalent level of PPE as their Law Enforcement counterpart(s). Please refer to [Fleet Circular 02-2009 – Personal Protective Equipment – Soft Body Armour](#), for more details.
- g) Kill Switch
 - Where kill switches are required or installed, the kill switch lanyard shall be attached to the operator at all times while the motor(s) is operating.

3.5 OPERATIONAL PLANNING AND PREPARATION

- a) Task Review and Risk Assessment
 - Prior to conducting Small Craft operations, the person in charge of the Small Craft shall review the required task and assess the risk before proceeding. (as per procedure 7.A.1)
- b) Pre-Departure Planning
 - Prior to conducting a Small Craft operation the person in charge of the Small Craft and, when operating from a CCG vessel, the Commanding Officer, shall ensure that a Sail Plan has been formulated and logged for the operation, and that the Small Craft is in all respects ready for sea (see checklist below).
 - This Sail Plan shall be prepared for each operation or daily operations, and filed with a responsible person who shall take action in the event of an accident or if the craft is overdue according to the plan. The Sail Plan shall include the following:
 - Small craft name or license number
 - Small craft type, size and description
 - Communications equipment (including frequencies monitored and cellular phone number)
 - Communications plan
 - Names of persons on board
 - Location and time of departure
 - Destination and estimated time of arrival
 - Route and any stop-over points
 - Action to take if the craft misses scheduled communications or is overdue
 - Telephone number of the nearest Joint Rescue Co-ordination Centre (JRCC)
- c) Pre-Departure Checklist
 - A craft-specific check shall be carried out prior to departure that shall include critical equipment checks, valid inspection certificate, visual inspection and a successful communications check.

- Checklists shall form part of the Vessel /Site specific work instructions for Small Craft operations.
 - All small craft, including vessels lifeboat(s), shall have the bilges visual inspected for any apparent ingress of water, upon launching and prior to departure.
 - Craft that are unsafe or un-seaworthy shall not be used and shall be removed from service until repaired.
- d) Pre-Departure and Safety Briefing
- All personnel on board the craft shall be briefed on:
 - Objective(s) of the operation
 - Schedule and duration of the operation
 - Sail plan
 - Anticipated environmental conditions
 - Anticipated hazards and risks
 - Necessary PPE
 - Instructions on the proper wearing of flotation devices
 - Location and use of safety equipment
 - Emergency procedures.

3.6 LAUNCH, RECOVERY AND TRAILERING

- a) Launch, recovery, and trailering operations shall be carried out as per site-specific work instructions. The instructions shall be specific for the type of craft and/or launch/recovery/trailering arrangements and shall include, but not limited to:
- Safe distribution of the weight of the load between the wheels and the hitch. **The tongue weight of the trailer must be between 8 % to 12 % of the total (gross) weight of the boat/trailer combination.**
 - Pre-trailering inspection
 - Checking of all spaces and tanks for water,
 - Electrical wiring including bulbs;
 - Braking system (if installed);
 - U bolts, bolted frame components and/or condition of welds;
 - Greasing of the hubs;
 - Axle assembly including suspension;
 - Ball and coupler;
 - Wheels and bearings;
 - Securing points for sound condition;
 - Rollers for free movement; and
 - Signs of corrosion on the frame especially on the interior walls where visible.

-
- b) The Commanding Officer is to ensure that trailers are flushed well with fresh water after use to reduce the effects of salt water corrosion.

3.7 UNDERWAY OPERATIONS

- a) Range
- DFO small Craft shall not be operated more than 25 nautical miles from the shore or a “mother ship” unless proper risk assessment has been done and approved by the Commanding Officer or the Program Manager.
- b) Safety
- The small Craft operator shall at all times operate at a safe speed, with due regard to safety and the limitations of the crew and the craft, visibility, sea conditions, availability of rescue, relative urgency of the task, traffic density, and navigation hazards.
- c) Risk Assessment
- The Small Craft operator shall continuously assess the conditions. If the risk becomes too great, the operator shall take appropriate action such as standing off, returning to the vessel/station or seeking a suitable refuge. The operator shall pay particular attention when operating in areas of limited depth, in fast current or in surf or breaking seas.
- d) Towing
- When engaging in any towing operation, a small craft operator shall follow procedure 7.C.4.

3.8 POST-OPERATION

- a) Post-Operation Checks
- Upon completion of each operation, a Post Operation Checklist shall be completed by the Small Craft crew. This shall include a visual inspection, closing the Sail Plan, debriefing the crew, identifying defects, completing log entries and preparing for subsequent operations.
- b) Log Book
- All Small Craft operations shall be entered in a log and include: time of departure from the ship or shore location and time of return; names of persons aboard; activities carried out; any notable occurrences; any identified defects or deficiencies; and any corrective action taken.

3.9 SITE SPECIFIC WORK INSTRUCTIONS

- a) These instructions shall be maintained, updated and include items previously noted such as the Pre Departure Checklist, Sail Plan, Briefings, Launch and Recovery Operations, and Trailing Procedures.
- b) Through hull fitting inspections shall be included in the regular preventative maintenance routines for all shipboard small craft including vessel lifeboats. This inspection is to include the removal of exhaust pipe lagging, if required, to allow full inspection of the pipe. This inspection shall be entered in the log when completed.

3.10 BARGE TYPE CRAFT STABILITY

- a) A copy of the operational stability envelope shall be available to the operator. It also shall be available to the Transport Canada Ship Safety Marine inspector during inspections of the unit.
- b) All loading, environmental and safety limitations are to be posted on the unit for the operator's guidance.
- c) All operators of these crafts shall be trained to a sufficient level to ensure they understand the stability limitations of these craft types.

4 DOCUMENTATION

- Small Craft-specific Checklists
- Training Records
- Familiarization Records
- Log Book Entries
- Small Craft Safety Management Guide
- Barge Stability Envelope Documentation
- Sail Plans
- Pre Departure Checklists

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

7.C.3 - COMBINED OPERATIONS WITH HELICOPTERS

1 PURPOSE

- a) To provide for safe and effective joint operations between Canadian Coast Guard (CCG) vessels and helicopters.

2 RESPONSIBILITIES

2.1 REGIONAL DIRECTOR, FLEET

- a) The Regional Director, Fleet shall ensure that at anytime CCG Personnel are being transported on a chartered aircraft; that the pilot and flight crew are familiar with CCG operational guidelines regarding helicopter operations.

2.2 COMMANDING OFFICER

- a) The Commanding Officer is responsible to ensure that all crewmembers and supernumeraries follow the established procedures when operating jointly with helicopters.
- b) The Commanding Officer is responsible to ensure that any operators of chartered helicopters involved in joint operations with the vessel have received prior approval from the Manager, Helicopter Support before landing onboard a CCG Vessel.
- c) The Commanding Officer shall ensure that, where fitted, an annual flight deck inspection is performed. The results of this inspection are to be entered on the Annual Aviation Facility Checklist and forwarded to the Superintendent, Fleet Safety and Security in the region.

2.3 PERSONNEL

- a) The responsibilities of personnel are further detailed in the [Shipboard Helicopter Information and Procedures Manual \(DFO/5282\)](#)

2.4 SUPERINTENDENT FLEET SAFETY AND SECURITY

- a) The Superintendent Fleet Safety and Security shall follow up on any deficiencies noted on the "Annual Aviation Facility Checklist" once received and forwards a copy of the inspection to the Manager, Helicopter Support.

2.5 REGIONAL OPERATIONS CENTER (ROC), OPERATIONS OFFICER IN CHARGE OF HELICOPTER OPERATIONS

- a) The Regional Operations Center (ROC), Operations Officer in charge of Helicopter Operations shall ensure that all non-fleet personnel receive the proper familiarization and view the training DVD's before conducting slinging operations for the CCG.

2.6 MANAGER, HELICOPTER SUPPORT

- a) The Manager, Helicopter Support is responsible to ensure that periodic helicopter facility inspections are conducted.

3 INSTRUCTION

3.1 GENERAL

- a) All vessels shall have access to a copy of the [Shipboard Helicopter Information and Procedures Manual](#) regardless if they are fitted with a helicopter landing platform or not.
- b) All helicopter operations shall be carried out in accordance with the [Shipboard Helicopter Information and Procedures Manual](#). Site specific work instructions shall be prepared by vessels that may be involved in both aboard and ashore flight operations.
- c) Vessels that are not fitted with a helicopter landing platform and consequently may have had little interface with helicopter operations shall thoroughly review the manual prior to any planned helicopter operation involving their vessel.
- d) Where crew are planned to be engaged in flight operations, either aboard or ashore, they shall receive a safety briefing on helicopter familiarization and safety. This safety briefing shall be given to all personnel by a qualified flight deck officer or a helicopter crew member prior to the operations if not previously completed within six months prior to the flight operation.
- e) At a minimum, annual inspections are to be performed on the helicopter facilities onboard the vessel. These inspections are to include the condition of; the structure, the safety equipment, working arrangements, communications, and when fitted, the fuelling system. The Flight Deck Officer shall ensure that the Annual Aviation Facility Checklist is completed during this inspection.
- f) At any time defects or deficiencies are noted with the flight deck these are to be repaired or replaced as soon as possible. Where the identified item is of a safety related matter and can't be repaired or replaced immediately the flight deck shall be taken out of service and the ROC shall be notified.
- g) All inspection deficiencies noted shall be addressed following the timeframe established under procedure 9.A.1.

4 DOCUMENTATION

- Coast Guard Fleet Orders
- Shipboard Helicopters Information and Procedures Manual
- Site-specific and familiarization checklists
- Bridge Helicopter Log Book
- Annual Aviation Facility Checklist
- Passenger Briefing Video

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

7.C.4 - TOWING OPERATIONS

1 PURPOSE

- a) To ensure the safety at sea, prevention of human injury or loss of life, and avoidance of damage to the environment, in particular to the marine environment and to property while engaged in towing operations whether that is when towing other vessels or when Canadian Coast Guard (CCG) vessels themselves are being towed.
- b) This procedure includes the requirement for vessels over 500 GRT to have a written Site Specific Emergency Towing Booklet which covers procedures and equipment for a CCG vessel to be towed in emergency situations.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer is to ensure that when commercial towing services are contracted, that such operations are conducted in compliance with the principles and guidelines contained in this procedure and recognised seamanship practices.
- b) The Commanding Officer is to ensure that towing operations are conducted in compliance with towing policies and procedures outlined within the CCG.

2.2 ALL PERSONNEL

- a) All personnel aboard a CCG vessel involved in towing operations shall ensure that their actions promote the safety of the vessel and crew as the primary objective.

2.3 TUG OPERATOR

- a) The Tug Operator is responsible to provide the tug(s), services, towing equipment and crew in order to safely tow the CCG vessel from a preset site to another preset site.

3 INSTRUCTION

3.1 GENERAL

- a) Towing a disabled vessel can be one of the most demanding and risk-intensive missions undertaken. Following established pre-tow and towing procedures will contribute greatly towards ensuring a safe and successful towing operation. Each situation will also present its own unique challenges that will require the ability to adapt procedures to the circumstances.
- b) Vessels shall develop a Ship-Specific Procedure for Towing Other Vessels that takes into account the capabilities and limitations of the vessel and crew. The *CCG Towing Guide* and the [Policy on Assistance to Disabled Vessels](#) shall be referenced to develop the Ship-Specific Procedure for Towing Other Vessels.
- c) There are times when a CCG vessel requires to be towed either to or from a shipyard or in emergency cases where the vessel has become disabled. Advanced planning is necessary to ensure a well thought out plan allowing for a prepared operation. CCG vessels shall develop a Ship-Specific Procedure for Being Towed that also takes into account the capabilities and limitations of the vessel and crew.

3.2 PLANNING

- a) The competencies and capabilities of the crew to carry out a towing operation safely and effectively including crew complement, level of training, experience and familiarity with the applicable circumstances and any limiting factors shall be taken into consideration when planning any towing operation.
- b) When towing another vessel a communications plan shall be developed. All necessary information for the safety of the tow including rigging, getting underway and the tow shall be communicated. The [Policy on Assistance to Disabled Vessels](#) shall be referenced prior to engaging in any towing operation for a disabled vessel.
- c) When a CCG vessel is being towed, proper planning and assessment of departure/arrival activities from/into facilities should be considered. A meeting shall be organized with this sole purpose. All parties related to work /operation of the vessel shall be present at this meeting.
- d) The use of a Pilot when available should be considered based on their knowledge and experience with commercial tugs in this type of operation.
- e) When CCG vessels are crewed while under tow, watches shall be kept on the bridge and in the engine room for the duration of the operation.

3.3 SHIP-SPECIFIC PROCEDURES

- a) A Ship-Specific Procedure for Towing Other Vessels or for Being Towed shall include, but not be limited to, the following elements:
 - The vessel's configuration and suitability to rig for towing
 - The vessel's size, power and manoeuvrability
 - The equipment available on board (both fixed and portable)

- b) As prescribed by SOLAS MSC.256 (84), vessels over 500 GRT shall establish a Ship Specific Emergency Towing Booklet which describes the process for the vessel to be towed. This booklet shall include the following;
- description of procedures to be followed before and during the towing operations,
 - drawings of the fore and aft deck showing possible towing arrangements,
 - inventory of equipment on board that can be used for emergency towing,
 - means and methods of communication.

3.4 PRIOR TO ALL TOWING OPERATIONS

- a) A Towing Operational Plan shall be defined and made available to all personnel involved in the towing operation. This plan may include the booklet describe in 3.3 (b) but should also include, but not be limited to, the following additional requirements:
- Adequacy of the tug (Capacity, size, power, etc.);
 - Roles and responsibilities of all parties involved shall be clearly defined/ identified: CCG Commanding Officer and crew, ITS, PWGSC, Shipyard representative, Pilot (if applicable) and tug personnel;
 - Date and time of departure to be selected by considering the weather forecast (wind, visibility etc) and forecasted density of traffic;
 - Currents and tides to be considered and time of departure/arrival to be determined accordingly;
 - Briefing on risks and hazards of the route (waters to be transited; currents, tides, shoals etc.);
 - Vessel design and specification (vessel's manoeuvring data);
 - Status of vessel's equipment and machinery to be considered;
 - Structural condition and stability;
 - Adequacy of towing gear;
 - Adequacy of connections to the CCG Vessel;
 - Chafing gear;
 - Emergency towing gear;
 - Establish communication with the tug (VHF work channel, back up communication, etc.);
 - Weather conditions at time of the operation (wind speed and direction, sea state);
 - A contingency plan must be established and follow accepted seamanship practices (emergency wharfs and/or anchorages);
 - Possibility of assisting the tug if partial or full propulsion is available

4 DOCUMENTATION

- CCG Towing Guide
- Ship-Specific Procedures for Towing Other Vessels
- Ship-Specific Procedures for Being Towed
- Ship-Specific Emergency Towing Booklet (Vessels over 500 GRT)
- Towing Operational Plan
- Inventory of Towing Equipment
- Policy on Assistance to Disabled Vessels
- National SAR Manual

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

7.C.5 - CARRIAGE AND USE OF FIREARMS ABOARD VESSELS AND HELICOPTERS

1 PURPOSE

- a) To ensure that firearms and ammunition carried onboard are controlled in such a manner as to safeguard all personnel.
- b) The Commanding Officer or the Pilot-in-Command, as the senior management representative of the Department aboard the vessel / helicopter, are aware of what firearms are aboard, where they are located, and under what circumstances those firearms may be used.

2 RESPONSIBILITIES

2.1 DIRECTOR GENERAL, FLEET OR THEIR DELEGATE

- a) The Director General, Fleet or their delegate shall be responsible for ensuring shipboard firearms practices comply with the [CCG National Firearms Policy](#).

2.2 REGIONAL DIRECTOR, FLEET OR THEIR DELEGATE

- a) The Regional Director, Fleet shall designate specific vessels that are permitted to carry and store onboard agency firearms. This designation does not include vessels which carry law enforcement officers with their firearm in the performance of their duties while using a CCG vessel as a platform.
- b) The Regional Director, Fleet shall ensure that all personnel that handle, store or use firearms as part of their duties receive the training required.
- c) The Regional Director, Fleet, or their delegate, is to make arrangements for a secure facility ashore for the reception and stowage of vessel's firearms on those occasions when the vessel has been removed from service or is temporarily laid-up with no security rounds being maintained.

2.3 COMMANDING OFFICER

- a) The Commanding Officer shall ensure that if their vessel has been designated to carry a firearm that they comply with the storage and unloading requirements set out in the [CCG National Firearms Policy](#).

2.4 COMMANDING OFFICER, OR PILOT-IN-COMMAND OF A CCG HELICOPTER

- a) The Commanding Officer, or Pilot-in-Command of a CCG helicopter, is responsible to ensure that the [CCG National Firearms Policy](#) is explained to crewmembers who have a responsibility to deal with a firearm or ammunition as well as to passengers and officers of law enforcement agencies that have brought onboard a firearm or ammunition as part of their supernumerary capacity and that this procedure is followed as explained.

2.5 COMMANDING OFFICER, PILOT-IN-COMMAND OF A CCG HELICOPTER, OR AGENCY FIREARMS CUSTODIAN

- a) The Commanding Officer, Pilot-in-Command of a CCG helicopter, or Agency Firearms Custodian is responsible to ensure that the Director General, Fleet or their delegate is notified as soon as practicable following any transaction involving an Agency firearm specified in the [Public Agents Firearms Regulations of the Firearms Act](#), or following a change of the Agency firearm's custodian.

2.6 COMMANDING OFFICER, OR PILOT-IN-COMMAND OF A CCG HELICOPTER

- a) The Commanding Officer, or Pilot-in-Command of a CCG helicopter, has the absolute authority to deny boarding to any person who indicates by action or word that they do not intend to comply with the requirements of this procedure.

2.7 PILOTS-IN-COMMAND

- a) Pilots-in-Command of CCG helicopters, as part of the Flight Plan or Flight Notification prior to the flight, shall notify the Regional Operations Centre (ROC) or vessel of the number of firearms that are aboard the helicopter.

3 INSTRUCTION**3.1 VESSEL FIREARMS**

- a) CCG vessels / helicopters may be supplied with firearms for the protection of shore and ice parties from attack by wild animals.
 - The vessel shall normally be issued with two firearms for this purpose. The Regional Director, Fleet may authorize additional firearms at their discretion provided that the authorization is in writing.
- b) The firearms supplied to vessels for protection of remote parties will normally consist of a large calibre rifle and a shotgun.
- c) An appropriate supply of ammunition shall be carried aboard. Normal stock rotation practices shall apply. Consideration shall be given for practice and proper operational maintenance firing of the weapon.
- d) Only trained employees as described in section 3.6 of this procedure shall normally handle firearms, store or remove firearms from stowage except in cases of extreme emergency where danger is imminent and lives are directly threatened.

- e) Signal flare pistols and line-throwing guns are not defined as firearms for the purpose of this procedure.

Note 1: while a line throwing accessory that is powered by an attached shotgun is not considered a firearm, when detached the shotgun becomes a firearm and must be handled in accordance with the requirements of this procedure.

3.2 SCIENTIFIC PARTY FIREARMS

- a) Science parties may bring firearms aboard for use as protection when ranging far from the vessel or during the conduct of gathering scientific samples of marine fauna. The holder of the firearm must present a valid Canadian *Possession and Acquisition Licence* or a [Non-Resident Firearm Declaration / Continuation sheet \(CAFC 909/910\)](#) at the time of boarding.
- b) The Commanding Officer / Pilot-in Command have absolute discretion in determining whether scientific party firearms shall be allowed aboard the vessel or helicopter either in whole or in part.

3.3 LAW ENFORCEMENT AGENCY FIREARMS

- a) Law enforcement agencies include the Royal Canadian Mounted Police, Fishery Officers of the Department of Fisheries and Oceans, provincial police officers, municipal police officers, and in special circumstances, officers or members of the Canadian Armed Forces. CCG crewmembers who have secondary duties as Marine Fishery Officers are not considered to be a member of a law enforcement agency for the purposes of this procedure.
- b) The Commanding Officer / Pilot-in-Command shall be advised on all occasions where it can be reasonably foreseen that firearms will be used in making an arrest or stopping an illegal activity. The law enforcement officers will take into consideration the Commanding Officer's or Pilot-in-Command's observations and suggestions in their planning for the operation. All participants in the operation must be briefed prior to the operation.
- c) Taking into account the plans that have been formulated for an operation where the use of firearms may be required, the Commanding Officer / Pilot-in-Command have the absolute authority to manoeuvre the vessel / helicopter and control the movements of the crew so as to expose the vessel or helicopter and the crew to the least possible danger.

3.4 MARINE FISHERY OFFICERS' FIREARMS (CCG EMPLOYEES)

- a) Marine Fishery Officers are CCG crewmembers who have completed training in Marine Fishery Officer Enforcement activities and who have been authorized to carry firearms while employed in the execution of this particular duty.
- b) When required to fulfill their secondary duties as Marine Fishery Officers and only for those periods when they are deployed from the vessel by the Commanding Officer to execute those duties, firearms will be released from secure storage. Upon return to the vessel, the firearms shall be returned to the vessel's secure firearms stowage.

3.5 FIREARMS STOWAGE

- a) Firearms carried aboard CCG vessels / helicopters when not in use shall be stored in the following manner:
 - kept in the vessel's secure firearms stowage locker, the access to which is strictly controlled by the Commanding Officer / Pilot-in-Command or when authorized, the Chief Officer; or
 - maintained by law enforcement officers upon their persons at all times; or
 - maintained by law enforcement officers in an approved personal firearm storage container under the officer's direct care and control and in strict adherence to the officer's controlling agency's policy. (These arrangements are subject to inspection and approval by the Commanding Officer or his or her delegate.)
- b) All CCG Agency firearms stored on CCG vessels / helicopters shall be stored in an unloaded state and the trigger locked when not in use.
- c) A log book shall be maintained that records: the serial number of firearms stored in, or removed from, the vessel's secure firearms stowage; the times of storage or removal; the quantity of ammunition stored or removed; and, the signature of the individual receiving or removing the firearm. (This section does not apply to helicopters.)
- d) When a vessel is placed in lay-up and security rounds are not maintained, no firearms are to be stored aboard. Firearms are to be transferred to a secure shore facility. At no time shall a firearm remain in a helicopter when unoccupied.

3.6 TRAINING

- a) CCG employees required to handle, store or use firearms under the provision of this procedure shall at a minimum have training equivalent to the Canadian Firearms Safety Course. This training shall be provided by a recognised organization.

4 DOCUMENTATION

- Criminal Code Section 117.08
- DFO Firearms Policy and Procedures
- CCG National Firearms Policy
- Firearms Stowage Log Book
- Training Records



Fleet Safety Manual

7.D.1 - SEARCH AND RESCUE OPERATIONS

1 PURPOSE

- a) To ensure the safety of Canadian Coast Guard (CCG) vessels and crews when engaged in Search and Rescue Operations (SAR).

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer shall ensure that SAR Operations are conducted in compliance with the policies and procedures contained in the *National Search and Rescue Manual (DFO/5449)* and *IAMSAR Vol. III*.

2.2 ALL PERSONNEL

- a) All personnel aboard a CCG vessel involved in SAR Operations are to be aware that their paramount responsibility is to ensure the safety of their own vessel and their shipmates.

3 INSTRUCTION

3.1 GENERAL

- a) SAR Coordination - Joint Rescue Coordination Centres (JRCC) are authorized to task CCG vessels and helicopters for SAR incidents only. The directions of JRCC do not override the responsibility of the Commanding Officers for the safety of their vessel or their crew. Commanding Officers should advise JRCC immediately when a situation would exceed the capabilities of the vessel or their crew.
- b) The Commanding Officer shall notify the ROC as soon as possible when their vessel is tasked to respond to a SAR incident and the response will have an impact on other previously issued Regional Operations Centre (ROC) taskings.

3.2 NAVIGATION BRIDGE AND RESOURCES

- a) Officers standing navigational and engineering watches, and ratings assigned for navigational lookout duties, are not to be assigned tasks related to the conduct of the search and rescue operation that would interfere with the safe navigation of the vessel.
- b) When assigned On Scene Commander (OSC) duties, if the Commanding Officer of a CCG vessel judges that the workload associated with the OSC duties may interfere with the safe navigation of the vessel, anchoring or removing the vessel from active SAR operations are to be considered after consultation with JRCC.

3.3 SEARCH AND RESCUE DEDICATED EQUIPMENT

- a) All CCG vessels shall have at the ready specialized dedicated equipment for responding to SAR incidents. This equipment shall be well maintained and in a ready use state at all times. Refer to [CGFO 207 - SAR Equipment On Board Coast Guard Ships](#) for the SAR equipment required to be carried aboard CCG vessels.
- b) All SAR equipment shall be inspected once at crew change to ensure its location and state of readiness. The inspection shall be recorded and any deficiencies corrected.

3.4 MEDICAL EVACUATION

- a) When advised by the attending medical care provider that a medical evacuation may be the best course of action to deal with survivors, Commanding Officers shall coordinate the evacuation with the appropriate authorities.

3.5 SAR OPERATIONS

- a) Firefighting and Damage Control

CCG has no obligation or authority to engage in firefighting or damage control on board other vessels for the sole purpose of the protection of property. Firefighting or damage control is not SAR and therefore not part of the CCG mandate.

Unless the fire is onboard the CCG vessel, CCG personnel shall not engage in firefighting operations for the sole purpose of protection of property.

The CCG SAR level of service includes the retrieval of persons in distress, providing or their initial medical or other needs and delivering them to a place of safety.

In such cases, the role of the CCG is to assist the crew of the stricken vessel to evacuate and get to a place of safety. Sometimes this means that CCG personnel may need to proceed to an area that may contain fire, smoke, etc. in order to effect a rescue.

In order to ensure that these humanitarian assistance related activities are conducted safely, all CCG vessels must, under the *Canada Labour Code*, carry Personal Protective Equipment (PPE) required to protect our employees.

The majority of CCG's clients, such as fishermen and crews of commercial vessels, have the same level of training as our own crews; therefore, if they have been unable to contain a fire or perform the necessary damage control measures, it is unlikely that our own crews will be able to provide any additional assistance.

After applying the Risk Assessment procedures, CCG personnel may attempt to assist survivors from a vessel on fire, including getting close enough to the vessel on fire to be exposed to heat, smoke and/or an oxygen-deprived atmosphere or where there is a risk of explosion when all of the following hazards and controls are present:

- if the decision to attempt such a response is agreed upon by all members of the response team
- employees are fully briefed as to their roles and responsibilities prior to the mission so that they have a clear understanding of the levels and limitations of assistance they can provide
- the equipment and training of the CCG crew is sufficiently high as to do so safely (the level of CCG involvement is dependent upon available leadership, experience, training, and equipment)
- communications protocols have been discussed and are understood by all personnel taking part in the response
- the crew of the stricken vessel requests or agrees to it
- all other conditions of CCG personnel safety are present and can be maintained throughout the operation.

When all of the above-mentioned hazards and controls have been evaluated, and when the chance of success is high, then CCG personnel may proceed to assist the crew of the stricken vessel to evacuate.

Coast Guard crews must remember that they have very little information about the stricken vessel, and the little information they may have has been provided by someone who is in a state of distress at the time. The entire team's safety is paramount throughout the entire response.

b) Towing Assistance to Disabled Vessels

Specific separate policies exist for the towing of another vessel. These policies are to be referred to prior to engaging in any towing operation. At a minimum the following should be referenced;

- *CCG Towing Guide*
- *Policy on Assistance to Disabled Vessels*
- *National SAR Manual*
- Procedure 7.C.4

c) Search and Rescue Training Exercises

Prior to the commencement of SAR exercises with DND resources, a tasking order is to come from the ROC. The ROC will advise the vessel of the location, date and time of the exercise. The ROC to advise JRCC of the commencement and completion times of the DND training exercises.

Prior to commencement of the exercise, the vessel Commanding Officer is to have a briefing on the mission with the Helicopter / Vessel Captain. This briefing shall include emergency procedures.

During training exercises, CCG fleet vessels are not to be used as datum for air dropped rescue equipment.

For Cape Class vessels, all hoist training exercises with the Cormorant helicopter will be restricted to the bow only.

4 DOCUMENTATION

National Search and Rescue Manual

IAMSAR Manual Volume III

Personnel Training Records

CGFO 207 - SAR Equipment on board Canadian Coast Guard Ships

Policy on Assistance to Disabled Vessels

Procedure 7.C.4 - Towing Operations



Fleet Safety Manual

7.D.2 - MARINE AIDS TO NAVIGATION OPERATIONS

1 PURPOSE

- a) To ensure the safe and efficient completion of floating and fixed aids operations by Canadian Coast Guard (CCG) Fleet personnel.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer is responsible for ensuring the safe completion of both floating and fixed aid operations by their vessel or work crew.

2.2 MARITIME SERVICES DIRECTORATE

- a) The Maritime Services Directorate is responsible for setting the service standards for marine aids to navigation. These standards are published as *Marine Aids Directive 2.2400*.

3 INSTRUCTION

3.1 GENERAL

- a) All equipment, including any provided by the program, such as cranes, derricks, wires, ropes, chains, chain nippers, pulleys, falls, and fittings involved in the processes (or involved with the fixed aid) shall comply with *Marine Safety Standards* or suitable equivalent such as the *Canadian Standards Association (CSA)*. Such equipment shall be inspected according to the [Canada Shipping Act \(CSA\) 2001- Cargo, Fumigation and Tackle Regulations](#) and shall be recorded. Other equipment shall be inspected periodically, at least prior to use, and the inspection recorded.
- b) An assessment of the inherent risks associated with the task is to be performed and steps shall be taken to mitigate those risks as per procedure 7.A.1.
- c) Personal safety equipment is to be identified and used by all personnel involved in the processes.
- d) Effective communications shall be established and agreed upon before any work takes place.

3.2 RISKS INHERENT IN THE SERVICING OF FLOATING AIDS INCLUDE, BUT ARE NOT LIMITED TO:

- a) The area on deck where the work is carried out shall be kept free from debris and other dangers such as snow, ice, seaweed, mussels, etc. (as much as is reasonably possible).
- b) Buoys to be de-iced to the furthest extent possible before being lifted.
- c) Persons not involved in the processes shall remain clear of the deck area as far as possible during the operation.
- d) Where necessary, lines shall be used to maintain control of buoy/stone.
- e) Where chain nippers are used in the process, they shall have a T4 Certificate of approval rating. The nipper shall have a number marked on it that clearly identifies the appropriate certificate.
- f) The buoy chain shall be checked for degradation as the buoy is being lifted. Where degradation has been identified and the chain replaced, the old chain shall be tagged indicating the location where it was lifted.
- g) All persons shall stay well clear of the flaked chain when buoy is being deployed.
- h) Buoy lugs visually inspected before deployment.
- i) Except in abnormal conditions, the buoy shall not be lifted by the cage.
- j) Most of the small plastic buoys now in service have no internal strength and the lifting lug on the buoy can handle the weight of the buoy and the slack in the chain only.
- k) Buoys when placed on deck or ashore shall be temporarily secured as soon as possible.
- l) Buoys to be lashed for weather.

3.3 IN ADDITION FOR FIXED AIDS SUCH RISKS SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING;

- a) To ensure general safety and work procedures are followed, a supervisor shall be assigned to a shore party, where the shore party is greater than two people.
- b) The site shall be inspected prior to commencement of work, to identify any safety concerns.
- c) No person shall operate a chain saw without having been provided with training on this piece of equipment. (i.e. chain saw course).

3.4 SHORE PARTIES

- a) In many areas of Canada there is a possibility that shore parties may be attacked or threatened by wild animals. In areas where wild animal encounters can be reasonably anticipated, the Commanding Officer should consider equipping one member of the shore party with a firearm that is appropriate to the perceived threat.
 - No other duty shall be assigned to an armed lookout while ashore.

3.5 COMMUNICATIONS

- a) In accordance with section 3.4, the shore party shall be equipped with a radio transceiver and regular communications checks shall be carried out between the vessel and the shore party.

4 DOCUMENTATION

- Marine Aids Directives
- Equipment Installation Instructions
- Tackle Inspection Records
- Training Records

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

7.D.3 - SCIENCE OPERATIONS

1 PURPOSE

- a) To ensure the safe and efficient completion of science programs by Canadian Coast Guard (CCG) Fleet and Scientific personnel.

2 RESPONSIBILITIES

2.1 REGIONAL DIRECTOR, FLEET

- a) The Regional Director, Fleet shall ensure that contracts or agreements for the use of a CCG vessel include a requirement for the science party to comply with the Fleet Safety Manual (FSM).

2.2 COMMANDING OFFICER

- a) The Commanding Officer is responsible for and shall ensure the safety considerations identified in this procedure are carried out.

2.3 SENIOR SCIENTIST

- a) The Senior Scientist shall ensure compliance with the requirements of the FSM, the *DFO Radiation Safety Program Manual* and the *DFO Laboratory Safety Manual* and shall ensure that appropriate Personal Protective Equipment (PPE) shall be worn by scientific personnel while working aboard CCG vessels.

3 INSTRUCTION

3.1 GENERAL

- a) All safety risks that are inherent in the program shall be identified and every precaution shall be taken to mitigate these risks. The crew of the vessel shall be advised of the precautions to be taken, the need for protective equipment or practices, and the nature of contingency plans before operations are commenced.

- b) The work program, together with the plan/itinerary provided by the Senior Scientist shall provide detailed instructions regarding the work to be performed including equipment provided, possible difficulties or hazards which could be expected; and copies of necessary documentation such as equipment installation instructions, Material Safety Data Sheets (MSDS), firearm permits, etc.
- A cargo manifest including all pertinent MSDS information shall be provided to the vessel prior to loading by the senior scientist.

3.2 ADDITIONAL RISKS

- a) There are specific areas of concern related to scientific operations aboard CCG vessels that go beyond the risks normally associated to vessel's operations. As some science involves experimentation it is not possible to provide an all-encompassing list of hazards but some of the more common areas for attention are:
- All wires, hooks, chains, and accessory gear used in any part of the processes shall have the appropriate certificate as required under the [Cargo, Fumigation and Tackle Regulations](#).
 - All equipment brought onboard shall be secured to the satisfaction of the Commanding Officer or their delegate.
 - All hazardous materials are to be identified prior to being loaded aboard. A list of the hazardous materials aboard, including the MSDS shall be maintained onboard.
 - Communications shall be set up and agreed upon before any work takes place. Communications includes radio procedure, hand signals, voice commands, etc.
 - Persons not immediately involved in the processes being performed shall remain clear of the scientific work area.
 - Lifting points on heavy scientific gear shall be inspected prior to deployment.
 - Where hazardous materials have been used, stored or retrieved, (especially noting toxic chemicals, biological waste, and or radioactive materials) an appropriate authority shall ensure testing, by qualified persons, and ensure the area is clear of any residual or trace elements upon completion of the scientific program or voyage.
 - Contingency Plans shall be developed and in place, addressing all health, safety and environmental risks relating to the project.

3.3 GUIDANCE OF LABORATORY OPERATIONS

- a) For the guidance of laboratory operations conducted aboard vessels, the *DFO Laboratory Safety Manual (DFO/5790)* shall be carried aboard vessels equipped with permanent laboratory facilities. Where operations are being established temporarily, the onboard Scientist-in-Charge shall provide a copy of the manual to the vessel upon boarding.
- Fume Hoods – shall meet the minimum requirements, be properly maintained and are subject to annual inspections by the National Radiation Safety Officer (NRSO), delegated Regional Radiation Safety Officer (RRSO) or an accredited lab facility.
- b) Appropriate site-specific work instructions shall be developed for the safe completion of Science operations.

3.4 PROTECTION OF SHORE PARTIES

- a) In many areas of Canada there is a possibility that shore parties may be attacked or threatened by wild animals. In areas where wild animal encounters can be reasonably anticipated, the Commanding Officer shall consider equipping one member of the shore party with a firearm that is appropriate to the perceived threat. Where the Commanding Officer believes that an armed lookout is not appropriate to the level of risk, given: the location; the field of view; and, that the shore party is equipped with proven repellents and that all members of the shore party have been provided with awareness training on the additional risks involved from wildlife threats or attacks. The Commanding Officer may elect, in consultation with the shore party, not to provide an armed lookout.
- b) All firearms shall be handled in accordance with Procedure 7.C.5.
- c) No other duty shall be assigned to an armed lookout while ashore.
- d) In accordance with section 3.2, the shore party shall be equipped with a radio transceiver and regular communications checks shall be carried out between the vessel and the shore party.

3.5 USE OF RADIOISOTOPES ONBOARD CCG VESSELS

- a) The use of radioisotopes on board CCG vessels is under the responsibility and authority of DFO and its Consolidated Licence issued by the Canadian Nuclear Safety Commission (CNSC). The use of radioisotopes is governed by DFO's National Radiation Safety Committee. Any and all transportation, usage, and disposal of radioisotopes shall be carried out in accordance with the policies and procedures contained in the *Departmental Radiation Safety Policy* and the *DFO Radiation Safety Manual*, including the standards and regulations of the CNSC.
- b) One person shall oversee the safe use of radioisotopes for a Mission. The Designated Mission Radiation Safety Officer is named by the RRSO in consultation with the Chief Scientist, and is responsible for ensuring that all radioisotopes used during the mission, including loading, offloading and packaging for transport complies with all relevant regulations and that the vessel is effectively decontaminated at the end of the mission.
- c) For radioactive materials, the appropriate authority is the Designated Mission Radiation Safety Officer.
- d) Any person using radioisotopes (open and sealed sources) shall operate under either a valid Internal Permit issued by DFO or, by special arrangement; a licence issued by the CNSC and have an appropriate level of training. The person in charge of the activity shall obtain the written approval of the RRSO by completing *Form # 15A Notice of Intent to Use Radioisotopes Onboard Ship* at least 6 weeks prior to departure. All non-DFO users shall complete *Form 15B Users Working with Radioisotopes Acknowledgement*
- e) Wipe tests shall be conducted by the designated Mission Radiation Safety Officer at least twice during each mission (once at the start of the experimental program and once at the end of the program) and at least weekly for the duration of the experimental program. Areas found to have contamination, shall be quarantined until such time as they have been cleared for use. The Commanding Officer, Senior Scientist, CCG ROC shall be informed immediately, and steps taken, to ensure the

health and safety of all crew is protected. The Chief Scientist and, if radioactive materials related, the RRSO shall be notified as soon as practicable and in any instance within 24 hours of the discovery of the contamination.

- f) The wipe tests results, as recorded on *Form # 11 of the DFO Radiation Safety Manual* shall be forwarded as per the requirements noted on *Form # 11*.
- g) Refer to: (attached Annex A) items 3, 4, 5, and 7 for a detailed list of the requirements for the Scientific Plan/Itinerary pertaining to the use of radioisotopes on board CCG vessels.

4 DOCUMENTATION

- CCG Tackle Register
- Manufacturer's Test Certificates
- Material Safety Data Sheets
- Scientific Plan / Itinerary
- The following forms referenced below, are located in the DFO Radiation Safety Manual.
 - Form # 11 Wipe tests results
 - Form # 15A Notice of Intent to Use Radioisotopes Onboard Ship
 - Form # 15B Users Working with Radioisotopes Acknowledgement
- Radiation Safety Program Manual
- DFO Laboratory Safety Manual

ANNEX A – SCIENTIFIC PLAN / ITINERARY

Scientific Plan/Itinerary

A detailed plan/itinerary shall be provided by the Senior Scientist outlining, as a minimum, the following elements:

1. The nature of the work to be performed;
2. Equipment that will be required; equipment shall be pre-maintained (overhauled, inspected, and trialed to ensure that it is in satisfactory condition). Documentation, manuals, certificates, calibration record, testing requirements, Safe Working Loads are available to the vessel upon arrival;
3. Where radioactive materials are to be carried the name and contact numbers of the Regional Radiation Safety Officer and the Site Radiation Safety Officer (RRSO) shall be provided
4. Where radioactive materials are to be carried the Designated Mission Radiation Safety Officer shall be named by the RRSO in consultation with the Chief Scientist;
5. Radioactive materials to be used or stored onboard the vessel including, but not restricted to radioactive isotopes, shall be identified;
6. Providing the name of the person who will be responsible for ensuring that hazardous materials brought aboard, or created during the scientific program, are cleared from the vessel upon completion of the voyage;
7. For any mission(s) where radioisotopes will be used the Designated Mission Radiation Safety Officer, prior to departure, shall ensure they have;
 - a. Obtained written approval of the RRSO by completing *Form #15A Notice of Intent to Use Radioisotopes On Board Ship*;
 - b. Obtained a copy of the applicable CNSC licence or Internal Permit(s);
 - c. Ensured that the users identified on *Form #15A* have received adequate training, and;
 - d. Ensured that all non-DFO personnel have completed *Form #15B*;
8. Equipment producing sound levels requiring hearing protection shall be identified;
9. Specialized navigation, sounding or communication equipment requirements shall be identified;
10. Other equipment that may contain or present a risk to the operator or handler shall be identified;
11. Dangerous or toxic chemicals to be used or stored onboard the vessel shall be identified and WHIMS/MSDS information shall be supplied;
12. Small boat requirements shall be shown;
13. Any and all explosives shall be identified;

14. The level of expected support from vessel personnel including, but not restricted to, actual use or proximity to items shall be identified;
15. The amount of hours of vessel's personnel time to support Scientific Staff shall be estimated;
16. Special protective equipment/clothing required for vessels personnel in specific scientific operations shall be identified;
17. Loading and storage problems shall be forecast;
18. Specialized skills required of vessel personnel shall be listed;
19. Any mission follow-up reporting requirements shall be identified.

UNCONTROLLED COPY WHEN PRINTED

ANNEX B – LIST OF REGIONAL RADIATION SAFETY OFFICERS

| Contact | Position | Telephone | Fax |
|---------------------|---|---------------------------------------|----------------|
| Melanie Quenneville | National Radiation Safety Officer | (250)363-6449 (613)978-1436 (cell) | (250)363-6746 |
| Gary Maillet | Regional Radiation Safety Officer Newfoundland and Labrador Region | (709) 772-7675 | (709) 772-4105 |
| Richard Nelson | Regional Radiation Safety Officer Maritimes & Gulf Regions | (902) 426-4332 | (902) 426-6695 |
| Eric Parent | Regional Radiation Safety Officer Quebec Region | (418) 775-0643 | (418) 775-0740 |
| Kerry Wautier | Regional Radiation Safety Officer Central & Arctic Region | (204) 984-6606 | (204) 984-6587 |
| Kelly Malange | Regional Radiation Safety Officer Pacific Region | (604) 824-4706 | 604) 858-3757 |

UNCONTROLLED COPY WHEN PRINTED

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

7.D.4 - MARINE ENVIRONMENTAL EMERGENCY RESPONSE OPERATIONS

1 PURPOSE

- a) To ensure the safety of Canadian Coast Guard (CCG) vessels and crews when engaged in Marine Environmental Emergency Response Operations.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer is to ensure that Marine Environmental Emergency Response Operations are conducted in compliance with policies and procedures contained in the [National Contingency Chapter of the Marine Spills Contingency Plan](#) and pertinent Regional Contingency Chapters, if in place.

2.2 ALL PERSONNEL ABOARD

- a) All personnel aboard a CCG vessel involved in Marine Environmental Emergency Response Operations are to be aware that their paramount responsibility is to ensure the safety of their own vessel and their shipmates.

2.3 ALL EQUIPMENT INVOLVED IN LIFTING

- a) All equipment involved in lifting shall be inspected according to the [Canada Shipping Act \(CSA\) 2001 Cargo, Fumigation and Tackle Regulations](#) and shall be recorded. Other equipment shall be inspected periodically, at least prior to use, and the inspection recorded.

3 INSTRUCTION

3.1 GENERAL

- a) National Environmental Response Objective:
 - In the event of a marine pollution incident, the CCG shall ensure that all efforts are made to protect people, property and the environment.

b) Environmental Response Coordination:

- CCG vessels may be tasked to engage in a Marine Environmental Response Operation in the following situations:
 - Where Environmental Response (ER) is responding to a spill or potential spill from a vessel in the capacity as either the On-Scene Commander (OSC) or Federal Monitoring Officer (FMO).
 - Where Environmental Response is responding to a mystery spill as OSC or when the polluter is unknown, unwilling or unable to conduct an effective response.
- Any utilization of CCG vessels shall be coordinated through the Regional Operation Centres (ROC).
- Upon being tasked to a response operation, the Commanding Officers/OICs should immediately contact the ROC to clarify administrative arrangements and operational expectations with the ER duty officer. Vessels may be required to provide the following, depending on the limitations or constraints of the vessels:
 - Investigation of spill reports for the purpose of confirmation
 - Commanding Officers/OICs to act as interim OSC
 - Commanding Officer/OIC will be the principle point of contact aboard for the CCG OSC or FMO.
 - Evidence gathering including sampling taking, photography, videography and documentation.
 - Transportation of response material and personnel
 - Communication platform
 - Surveillance and monitoring
 - Spill response; deployment of equipment, oil recovery storage, transport and/or transfer.
 - Initial cleanup and recovery
 - Hotel services
 - Platform for emergency evacuation
 - Site safety, i.e. first aid, crowd control
 - Recovery and/or towage of the polluting vessel.

3.2 SAFETY CONSIDERATIONS

- a) Protection of human health and safety are fundamental objectives in any pollution incident response operation. The use of safe work procedures and practices help to reduce health and safety risks to response personnel, the surrounding community and the environment.
- b) Health and safety is the overall responsibility and first priority of the incident OSC. The health and safety of the personnel aboard a CCG vessel engaged in an environmental response operation shall remain with the Commanding Officer.

- c) Prior to participation in a response operation or exercise, Officers and crew should meet and review the [Health and Safety Plan - Annex A of the CCG Marine Spills Contingency Plan](#) and consider the specific elements that relate to the imminent operation or exercise. Where this meeting is not practical, a Senior Officer shall be made available to address any concerns brought up by the crew.
- d) Key shipboard operations contributing to the completion of the response operation shall be carried out in accordance with the Fleet Safety Management System (SMS). Site specific work instructions shall be available to prevent oil contamination of the accommodation sections.

3.3 TRAINING

- a) The abilities of the crew are the most important factor to consider during the process of planning Environmental Emergency Response Operations. The Site Safety Awareness, Basics of Oil Spill Response (BOSRC), Marine Spill Response Operations (MSROC), Hazmat Awareness and the On Scene Command Course (OSC) are training courses specifically designed for Environmental Emergency Response Operations. Marine Environmental Emergency Response Competency profiles for a vessel are posted aboard the vessel in accordance with Procedure 6.A.1.
- b) CCG vessels and crews are to participate, when possible, in environmental response exercises so as to meet the competency profiles of their particular vessels. Commanding Officers shall ensure that these exercises meet the specific missions their vessels are capable of completing in an actual incident.

3.4 ENVIRONMENTAL RESPONSE DEDICATED EQUIPMENT

- a) CCG vessels generally carry environmental response equipment to suit the requirement of their Shipboard Oil Pollution Emergency Plans.
- b) When involved in an oil pollution incident, the Commanding Officer may request one or more Environmental Response personnel (or equivalently trained personnel) to be carried aboard to supervise and/or assist the deployment, recovery and operation of pollution countermeasures equipment.

3.5 FIREFIGHTING

- a) Where fires are to be fought in attempting to contain pollution, crews shall follow *procedure 7.D.1 - 3.5 (a)*.

3.6 DAMAGE CONTROL

- a) Where damage control activity is required to attempt to contain pollution, crews shall follow *procedure 7.D.1- 3.5 (a)*.

3.7 TOWING

- a) Where towing becomes part of the response in attempting to contain pollution, crews shall follow *procedure 7.C.4*. The authority for Environmental Response to engage in a towing operation resides under *Part 8 – Section 180 of CSA 2001*.

4 DOCUMENTATION

- CCG Marine Spills Contingency Plan
- Ship Competency Profile
- Personnel Training Records
- Vessel's exercise program
- Site Specific Work Instruction

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

7.D.5 - ICEBREAKING OPERATIONS

1 PURPOSE

- a) The purpose of this procedure is to ensure the safety of Canadian Coast Guard (CCG) vessels and crews, as well as the safety of persons being assisted, when engaged in icebreaking operations.
- b) This procedure does not attempt to provide detailed instructions on icebreaking operations. It is intended to set a broad policy on safety matters of particular consideration during icebreaking operations.

2 RESPONSIBILITIES

2.1 REGIONAL DIRECTOR, FLEET

- a) The Regional Director, Fleet shall ensure that the Commanding Officers assigned to icebreaking vessels have a well founded knowledge of icebreaking operations and have the appropriate skills and experience necessary to perform that task.
- b) The Regional Director, Fleet may when conditions warrant crew vessels with an experienced Chief Officer or Supernumerary Commanding Officer when icebreaking operations require extended navigation in confined waters or difficult conditions.

2.2 COMMANDING OFFICER

- a) The Commanding Officer shall ensure that icebreaking operations are conducted in compliance with written procedures and best practices. They shall have a full understanding of the limitations of the vessel in its design, features and interaction with the ice.

2.3 CHIEF ENGINEER

- a) The Chief Engineer shall ensure that the vessel has been prepared for icebreaking operations and cold weather precautions implemented. This includes the closing of selected water tight doors and recirculation of sea water when necessary. Regular rounds of the engineering spaces shall be conducted.

2.4 SUPERINTENDENT, REGIONAL OPERATIONS CENTRE (ROC)

- a) The Superintendent, ROC is responsible for providing taskings to vessels for icebreaking services. In consultation with the Commanding Officer they shall ensure that a public notification is made when icebreaking operations may impact transportation links on or through ice, the recreational use of the ice or ice management activities. In consultation with Commanding Officers, provide notification to Regional Director Fleet when Sailing Orders or ice tasking requires extended navigation in confined waters or difficult conditions.
- b) The Superintendent, ROC shall ensure that as part of vessel sailing orders for icebreaking operations that copies of the annual publications for icebreaking operations and services be provided to vessels tasked with such a duty.

2.5 SUPERINTENDENT ICEBREAKING SERVICES

- a) The Superintendent Icebreaking Services shall ensure that vessels assigned to arctic operations are provided with an Ice Service Specialists where necessary.

3 INSTRUCTION

3.1 GENERAL

- a) The knowledge and ability required by mariners for the conduct of safe icebreaking operations can be gained through on the job training and self-study, but it is primarily gained through experience.
- b) Unique risks associated with icebreaking operations include potential vessel damage to the hull, propellers, rudders, and machinery of both the icebreaker and any vessels escorted. Risks to personnel include injury due to violent and unexpected vessel motion, potential hearing loss due to noise, and fatigue. Fatigue is a major concern and is addressed separately.
- c) In certain areas, ice may be used as a transportation link or for recreational purposes. There are also numerous instances of public and private ice management operations undertaken such as booms protecting power dams, ferry track clearing and dock bubbler systems. It is important that icebreaking operations take into account all users of the ice and that these users are notified of icebreaking operations.

3.2 VESSEL CAPABILITY

- a) The Commanding Officer shall ensure that a Site Specific Work Instruction is available giving details of the designed ice capability of their vessel. This instruction shall include any specific considerations that have been determined for that particular vessel, which may include a restriction from entering ice of any type.
- b) The Commanding Officer shall ensure that the vessel is only operated in ice in accordance with the Site Specific Work Instruction. Exceptions to this shall only be made in emergency situations or after direct consultation with the Regional Director Fleet. Such consultation shall be documented in the vessel's log.

- c) Commanding Officers shall pay particular attention to controlling the speed at which they operate in ice, particularly when moving astern. Due consideration shall be given to the risk of vessel damage due to excessive speed while in ice.

3.3 TRAINING AND EXPERIENCE OF DECK OFFICERS

- a) On the job training in icebreaking operations is essential for the CCG so that experienced Officers are available for the purposes of fatigue management, career development and for succession planning.
- b) Commanding Officers shall provide on the job training to Deck Officers, particularly Chief Officers, regarding all aspects of icebreaking operations. This shall include providing opportunities for Chief Officers to manoeuvre the vessel in ice, alongside wharfs and alongside other vessels. If the Commanding Officer has reasons for not conducting this training, the issue shall be discussed with the Regional Director Fleet.
- c) Although experience in the ice is the key factor, self study is also important. CCG vessels engaged in icebreaking operations shall carry *The Ice Navigation Manual* and [*Ice Navigation in Canadian Waters*](#). These references shall be made available to all Deck Officers on board the vessel. Additional reference publications are available and should be carried at the discretion of the Commanding Officer. Some of those additional publications/ reference material are listed in section 4 of this procedure.
- d) Regional training plans should take into consideration, where available, ice navigation courses for identified Officers.

3.4 FATIGUE

- a) The fatigue levels of all personnel on the vessel are a significant consideration during icebreaking operations due to the high levels of noise, the erratic motion of the vessel and extended icebreaking operations. The fatigue level of the Commanding Officer and Deck Officers is particularly significant due to the high level of mental concentration required during icebreaking operations, especially night operations.
- A particular problem exists during extended operations in confined waters, such as the St. Lawrence River and the Great Lakes Basin. In these areas, navigation continues around the clock. Sometimes, it is unsafe to stop and the operation must continue until the vessels are secured in port. In order to provide for the required rest periods, the Commanding Officer shall ensure that a sufficiently experienced Officer provides relief on the Navigation Bridge to the Commanding Officer so that hours of work legislation are met.
- b) Where appropriate the Regional Director, Fleet shall ensure that a suitable relief for the Commanding Officer is available on board the vessel during continuous icebreaking operations so that the provisions of the hours of rest legislation can be met.
- c) Commanding Officers shall consult with the Master or Pilot of vessels under ice escort to ensure that their fatigue levels are considered. Commanding Officers shall consider suspending ice escorts for a rest period overnight, if the operation allows.

- d) The Superintendents ROC shall take into consideration fatigue management and hours of rest legislation when tasking of vessels for continuous ice escorts.

3.5 ICE ESCORT OPERATIONS

- a) The escort of other vessels through ice is a particularly hazardous aspect of icebreaking operations. Risk of collision is high and damage to the escorted vessel, which usually has a lower Ice Class than the icebreaker, is possible, especially if speeds are excessive.
- b) Where multi-vessel convoy escorts are required, where necessary, the Commanding Officer should contact the ROC to discuss the details of the tasking.
- c) Commanding Officers shall ensure that the Bridge Team consists of an Officer directly responsible for conning the icebreaker and watching the escort, and another Officer responsible for normal Bridge and navigational duties. This requirement may be suspended during periods of simple navigation and a safe following distance when the Officer on Watch can safely attend to all of the duties.
- d) Commanding Officers shall consult the escorted vessel's Master or Pilot regarding safe speed and escort distance. This consultation shall be recorded in the Deck Log.

3.6 OTHER USERS OF ICE

- a) Commanding Officers shall be alert for other users of ice, such as recreational users, vehicle transportation links and ice management operations. Icebreaking operations may be suspended until the Commanding Officer has confirmed that the ROC has notified other users of the icebreaking operation and it is safe to continue the icebreaking operation.

3.7 EMERGENCIES

- a) Commanding Officers shall take ice conditions into account when planning shipboard contingency plans and exercises. This includes:
- Recovering a person overboard.
 - Ice/water rescue.
 - Abandoning vessel in ice.
 - Cold weather survival equipment.
 - Protection from polar bear attack.
 - Unauthorized access to the vessel via the ice.

3.8 SITE SPECIFIC WORK INSTRUCTIONS

- a) Vessels, where appropriate, shall create work instructions that cover off mission sets and those elements which are critical for the safe conduct of that task. Consideration should be given to include vessel capability, handling characteristics, safe speed and other factors relevant to the task. Additional consideration shall be given to the complexity of the mission set due to environmental conditions and vessel limitations and risks associated with the task. The instructions need not be in a checklist but rather items to consider when planning the conduct of the mission set.

- b) Mission Sets include the following:
- Flood Control
 - Harbour Breakout
 - Track Maintenance
 - Single Vessel Escort and Multi-Vessel Convoy
 - Transit
 - Science Mission

3.9 VESSEL TASKINGS

- a) All taskings for Icebreaking operations from the public shall be forwarded to Marine Communication and Traffic Services (MCTS) for action.

4 DOCUMENTATION

- Site Specific Work Instructions
- Fatigue Management – A Guide for Canadian Coast Guard Managers, Officer and Crew
- Central And Arctic - Arctic Operations Order (Annual Edition)
- Arctic Operational Guidance (Annual Edition)
- Operational Guide, Winter Icebreaking Program Eastern Canada (Annual Edition)
- The Ice Navigation Manual (House, Lloyd, Toomey and Dickens)
- Ice Navigation in Canadian Waters
- Manual of Ice - MANICE



Fleet Safety Manual

7.D.6 - ENFORCEMENT BOARDING OPERATIONS

1 PURPOSE

- a) To ensure that enforcement boarding operations supported by Canadian Coast Guard (CCG) vessels are conducted in a controlled and safe manner. Enforcement boarding includes all times where armed law enforcement personnel attempt to board another vessel for the purpose of enforcing the laws of Canada.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer of a CCG vessel has the ultimate authority and responsibility for taking all necessary actions for the health, safety and security of the vessel and crew (including all Enforcement Agency personnel on board the vessel or CCG-operated boarding craft). The Commanding Officer shall ensure that only trained CCG personnel are involved in the boarding process. The Commanding Officer has the final determination as to whether a CCG supported boarding operation will occur.

2.2 ENFORCEMENT AGENCY LEAD

- a) The Enforcement Agency Lead is responsible for all enforcement activities conducted by the vessel and the crew. The Enforcement Agency Lead shall liaise and plan all boarding operations with the Commanding Officer. They shall ensure that notes and other documentation required for enforcement purposes are recorded by a designated Enforcement Officer. This documentation may draw on, but remains independent of the required CCG documentation.

2.3 COXSWAINS/BOARDING CRAFT OPERATORS

- a) Coxswains/Boarding Craft Operators are to ensure that the boarding craft is disembarked, embarked and operated in a safe manner, as per Procedure 7.C.2. There may be occasions where, due to the physical capacity of the Rigid Hull Inflatable (RHIB), it will not be possible to have two persons in the RHIB while it stands by the boarded vessel. In such situations, the Commanding Officer and the Coxswain shall ensure, by taking all prudent measures, that the operation is conducted safely. The Coxswain has the same authority over the boarding craft as a Commanding Officer.

3 INSTRUCTION

3.1 NAVIGATION SAFETY

- a) To ensure the safety of the CCG vessel the Officer-of-the-Watch shall not be required to monitor the operations of the boarding party or the remote party. The Commanding Officer or a lookout shall be employed for this purpose.
- b) All personnel not directly involved in the operations shall remain well clear from the field of view from the Bridge. The gun mounting and the boat recovery area must be clear and unobstructed at all times.
- c) As the [Navigation Safety Regulations](#) do not require CCG vessels to maintain the Automatic Identification System (AIS) in operation at all times, Commanding Officers shall use their discretion and disable the transmission mode of their AIS as follows:
 - When they feel it is safe to do so and the nature of the operation warrants it;
 - Or upon instruction from Regional Operations Centre (ROC).
- d) When CCG vessels employ stealth mode of operation the Commanding Officer shall notify the Marine Communications and Traffic Services (MCTS) Centre in the area that they have done so.
- e) Due to operational requirements, it is imperative that all vessels supporting Conservation and Protection, Northwest Atlantic Fisheries Organization (NAFO) and security related programs; apply the stealth mode to the Automatic Voluntary Observing Ships system (AVOS) to prevent their position from being disclosed.

3.2 BOARDING OPERATIONS

- a) All Boarding Operations shall be conducted in accordance with the *Assistance to Law Enforcement Operations Manual*, Rigid Hull Inflatable (RHIB) Operators Training and under the guidance of the Commanding office under recommendations from Law Enforcement personnel.
- b) CCG Fleet vessels and crews that are conducting Enforcement Boarding Operations may be involved in a number of potentially high-risk activities. Risks inherent with these operations are to be identified and then are to be mitigated through the development and application of site-specific work instructions.
- c) Only CCG officers or crew who have been specifically trained shall be permitted to engage in boarding operations. At a minimum, only CCG personnel that received the DFO armed boarding training can take part in known risk boardings.
- d) Boardings shall be conducted under the direct observation of the CCG vessel and an order by the Commanding Officer to abandon attempts to board or to recover the boarding team shall take precedence over any instructions made by the boarding party leader.
- e) Boarding will be attempted only where it has been determined by Enforcement Officers, in consultation with the Commanding Officer and the Coxswain of the boarding RHIB, that the boarding can be achieved without undue risk to the safety of the boarding officers or the CCG crew assisting in the operation.

- f) The boarding RHIB shall standoff the boarded fishing vessel in the closest safe position until signalled by the boarding team leader that all is safe aboard the boarded vessel. At this time the boarding RHIB can return to the CCG vessel until signalled to return to pickup the boarding team.

3.3 OPERATION PLANNING AND PREPARATION

- a) All personnel involved shall be briefed on the plan for the operation with regards to their role, limitations to their participation and conduct, the identification and communication of potential hazards and the command and control of any Boarding Parties.
- b) Communications frequencies, alternate frequencies, alternate signalling methods, and contact times must be established and confirmed before the operations commence. Communications equipment must be tested before use.
- c) In addition to the Personal Protective Equipment (PPE) outlined in Procedure 7.C.2, all CCG personnel taking part in the boarding operation shall wear the equivalent level of PPE as the Enforcement Officer(s).
- d) Where firearms are used in the conduct of domestic boardings, their use shall be controlled in accordance with Procedure 7.C.5.

3.4 UNKNOWN RISK BOARDINGS SHALL BE CONDUCTED IN THE FOLLOWING MANNER

- a) CCG personnel involved as a boarding craft operator in an Unknown Risk boarding shall deliver Enforcement Agency personnel to, and retrieve them from the vessel being boarded.
- b) If at any time prior to the boarding the target vessel exhibits outward resistance, the RHIB shall return to the vessel and the operation shall be reviewed.
- c) CCG personnel may, upon request by the Enforcement Agency Lead with the concurrence of the Commanding Officer of the CCG vessel support Enforcement Agency personnel, but will not directly engage in Policing duties.

3.5 TRAINING AND QUALIFICATIONS

- a) The training required before CCG personnel may be engaged in any Unknown Risk boarding's is the CCG Rigid Hull Inflatable Operator Training (RHOT) Pacing and Boarding Module.
- b) Only the CCG personnel that received the DFO armed boarding training can take part in known risk boardings.

4 DOCUMENTATION

- Assistance to Law Enforcement Operations Manual
- Site-Specific Work Instructions.
- Checklists for Boarding Craft.
- Log Book entries
- Training Records



Fleet Safety Manual

7.E.1 - HANDLING PETROLEUM PRODUCTS

1 PURPOSE

- a) To ensure that bunkering or transfer of petroleum products is completed safely and without harm to the environment.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer shall ensure that all persons involved in bunkering or transfer operations are competent and familiar with the *Shipboard Oil Pollution Emergency Plan (SOPEP)* (when carried) and that all reasonable precautions are taken to avoid pollution during the operations taking into consideration weather, tidal and wind condition.
- b) The Commanding Officer shall ensure that local or Port State (checklists and extra drill requirements) harbour regulations for the prevention of pollution are complied with during bunkering operations.
- c) The Commanding Officer shall ensure that the vessel is in all respects secured for the bunkering operation.

2.2 THE COMMANDING OFFICER AND CHIEF ENGINEER

- a) The Commanding Officer and Chief Engineer aboard small vessels shall have a Site Specific Work Instructions for handling petroleum products.

2.3 CHIEF ENGINEER

- a) The Chief Engineer is to ensure transfer and bunkering operations including tanks for aviation fuel are carried out in a safe manner and that all hoses used in external transfer operations are inspected and certified annually, this includes fuel hoses located at shore stations. The Chief Engineer must be fully aware of the quantity and types of fuel products loaded onboard. A checklist shall be completed for all bunkering operations. The Chief Engineer may request proof of certification from any contractor.

2.4 CHIEF ENGINEER AND CHIEF OFFICER

- a) The Chief Engineer and Chief Officer are to establish the personnel involved with the bunkering operations, a schedule if required (meal relief/job rotation) and ensure that all equipment and other supplies for the operation are made available to the persons involved.

3 INSTRUCTION

3.1 GENERAL

- a) All CCG Vessels shall utilise Site Specific Work Instructions / Checklists for transfer / bunkering operations. All transfer operations shall be conducted using a checklist identifying the capacities of the tanks and quantity of fuel to be filled in the specific tank. At no time shall any tank be filled to greater than 95% capacity.
- b) Site Specific Work Instructions shall be developed in accordance with applicable regulations and any additional local, port or harbour requirements. These fuelling instructions/checklists shall be broken down into four (4) categories; before operations, during operations, when topping up tanks, and after operations.

3.2 FUEL SAMPLES

- a) When bunkering vessel tanks or shore based tanks: The Bunker Delivery Notices (BDNs) shall be kept and readily available for inspection at all times. The BDNs shall be retained for a period of three years from the date of delivery.
- b) Fuel samples shall be taken at time of delivery, sealed and signed by both the Supplier and Master or Officer in Charge of bunkering. The sample shall be cross referenced with the BDN and retained under the vessels control for a period of not less than 12 month.
 - Note 1: Smaller vessels that bunker at retail facilities such as marinas are not required to follow 3.2 (a) of this procedure but may choose to do so if there is a question regarding the quality of the fuel being bunkered.
 - Note 2: Vessels that fuel from shore based tanks where fuel samples have been retained as part of 3.2 (b) do not need to take additional fuel samples.

3.3 SECURITY OF FUEL & OIL SUPPLIES:

- a) Vessels shall provide for the security of all fuel and oil supplies onboard; to ensure they are safeguarded and do not pose a risk or threat the health, safety, security of personnel, the vessel or the environment.

- All fuelling stations shall be secured and locked to deny unauthorised access. Vessels, that regularly carry gasoline, aviation fuel, lubrication oil, etc., that do not have dedicated internal storage tanks for those products shall utilize appropriately designed, sized and dedicated on deck storage tanks (i.e. jettison tanks). The use of portable storage containers (i.e. jerry cans and drums) is to be kept to a minimum. On deck storage tanks shall be locked and small portable fuel containers and drums shall be secured appropriately (i.e. flammable storage lockers that are properly vented and grounded) to minimize risks involved with their use.
- In instances where open deck storage of portable petroleum product storage containers is unavoidable (i.e. re-supply or infrequent operational requirements) they shall be secured utilizing tamper tags, tamper tape, paint drops at threaded cap joints or locks and regularly monitored

4 DOCUMENTATION

- Shipboard Oil Pollution Emergency Plan (when carried)
- Site-Specific Checklists
- Oil Record Books
- Chief Engineer's Log Book
- Deck Log Book
- Waste Oil Disposal Records
- Helicopter Log Book
- Records of Transfer Hose Inspection



Fleet Safety Manual

7.E.2 - HANDLING AND DISCHARGE OF OILY WATER

1 PURPOSE

- a) To ensure, that all Canadian Coast Guard (CCG) vessels do not violate environmental regulations and standards through the disposal of their oily mixtures.

2 RESPONSIBILITIES

2.1 CHIEF ENGINEER

- a) The Chief Engineer shall ensure that the equipment used for handling oily water meets the requirements and is properly maintained.
- b) The Chief Engineer is responsible to ensure that all oily water is disposed of in a safe and environmentally friendly manner.

3 INSTRUCTION

3.1 GENERAL

- a) Personnel involved must be familiar with the regulations for the prevention of pollution and with the operation and maintenance of the oily water separator systems before being allowed to operate the oily water separator systems.
 - Site Specific Work Instructions are required covering familiarization with the governing regulations, operation and maintenance of the bilge system and the oily water separator.
- b) Alternatives for handling the oily water produced in vessels consist of containment for shore facility discharge or treatment to purify to regulated levels and subsequent discharge.
- c) Vessels not required to be equipped with an oily water separator shall store their oily water in holding tanks or proper containers and dispose of it to a shore facility in accordance with the environmental regulations in effect within the region. In such cases Site Specific Work Instructions or checklists are to be used.
- d) Where oily water holding tanks are fitted, oily water may be pumped into the tank and allowed to settle before being pumped overboard via the oily water separator.

- e) No oily water shall be pumped directly overboard; without having been processed through an approved and properly functioning oily water separator equipped with an approved monitoring device that will prevent discharge overboard if the oil content exceeds the limit prescribed by the regulations that are in effect for the location of the vessel at the time of the proposed discharge.
- f) The Bridge must be notified prior to pumping and the start/stop times shall be recorded in the deck log.
- g) The vessel must be underway when overboard discharge is taking place and all oily water pumping operations must be recorded as per the requirements of the Oil Record Book. Each entry shall be signed by the Officer in Charge of the operation, and each page shall be signed by the Commanding Officer.
- h) Disposal of oily water from CCG vessels shall be contracted only with those who have been licensed or registered by provincial authorities for the disposal of petroleum products.
- i) Knowledge of the effects of cleaning agents, chemicals and dirt on the effectiveness of the equipment shall be understood.
- j) The containment of petroleum product leaks and the prevention of contamination of the bilge by cooling water treatment and other chemicals will greatly improve the operation of the oily water separator.
- k) Calibration of the Oil Content Meter shall be done at least every five years or more frequently if required.

4 DOCUMENTATION

- Calibration Records of the oily water separator
- Log Book Entries
- Oil Record Book Entries
- Site Specific Work Instructions.
- Contracted Oily Water Disposal - Receipts



Fleet Safety Manual

7.E.3 - HANDLING AND DISCHARGE OF BLACK AND GREY WATER

1 PURPOSE

- a) To ensure that Canadian Coast Guard (CCG) vessels dispose of their black water (sewage) and grey water (waste) in accordance with applicable regulations and in an environmentally sound manner paying particular attention to local restrictions.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer shall be aware, in their area of operation, where sewage and waste water discharge is restricted or prohibited. At any time that the vessel is operating in one of these areas they shall ensure that the Engine Room is notified and that the automatic discharge is disabled or that discharges are controlled.

2.2 CHIEF ENGINEER

- a) The Chief Engineer shall ensure that fitted treatment equipment meets discharge requirements and is properly maintained.

2.3 COMMANDING OFFICER, CHIEF ENGINEER AND THE SUPERINTENDENT MARINE ENGINEERING

- a) The Commanding Officer, Chief Engineer and the Superintendent Marine Engineering shall ensure that, where appropriate, the vessel is fitted with sewage equipment to control discharge. Where vessels are assigned to areas where discharge is prohibited, fittings shall be installed to allow for discharge to designated facilities ashore.

3 INSTRUCTION

3.1 OVERSEE / OPERATE SYSTEM

- a) Maintenance of the Black and Grey Water systems is to be integrated into the vessel's operational maintenance routine. Where manufactures specific instructions are lacking, Site Specific Work Instructions shall be developed for the operation and maintenance of the system.

- b) Vessel familiarization or the use of placards or signage at fixtures shall be utilized to ensure that personnel do not introduce oily waste or other pollutants into the grey or black water system. This may include warnings about the use of excessive soap which limits the operation of the treatment portion of the plant.

3.2 TREATING BLACK AND GREY WATER

- a) Where approved marine sewage treatment plants are installed, ensure that certified environmentally friendly products are used both for treatment and cleaning (according to manufacturer's instructions). Where installed, run the system on automatic and ensure that the machinery is operating properly through regular checks and in accordance with the maintenance plan prescribed by the manufacturer. When performing maintenance ensure that there are no local regulations prohibiting cleaning / de-sludging operations.

3.3 HOLDING TANKS

- a) Where holding tanks are used in place of treatment plants or when discharges are restricted from vessels with approved treatment plants due to geographical areas, the tank level shall be monitored as required.
- b) On vessels not equipped with an approved marine sewage treatment plant or a lack of a treatment plant altogether, holding tanks shall be fitted with valves which may prevent overboard discharge.

3.4 DISPOSAL OF BLACK AND GREY WATER

- a) Dispose of black and grey water shall be in accordance with municipal, national and international standards, equipment manufacturers' instructions and site specific work instructions.
- b) At no time shall sewage be discharged into waters where sewage discharge prohibitions are in effect.
- c) When chlorine is used as a disinfectant in the treatment process of sewage the discharge of a residual of the chlorine shall not be greater than 0.5 mg/L
- d) For vessels operating in the Great Lakes, unless a vessel is equipped with approved equipment that complies with the regulations, sewage shall not be discharged into the Great Lakes or St. Lawrence River;
- until past the downstream gates to Montreal's St-Lambert Lock
 - within 4 miles of shore
 - between 4 and 12 miles off shore unless the sewage has been macerated and disinfected.

4 DOCUMENTATION

- Site-specific work instructions – as appropriate
- Manufacturer's operating and maintenance instructions
- Placards or signage at sinks and drains and lavatories



Fleet Safety Manual

7.E.4 - DISCHARGE OF BALLAST WATER

1 PURPOSE

- a) To ensure that all waters are protected from non-native fish, other aquatic organisms, and harmful substances that could be discharged in ballast water.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer shall ensure that the vessel complies with the Transport Canada publication [Voluntary Guidelines for the Control of Ballast Water Discharges from Ships Proceeding to the St. Lawrence River and the Great Lakes – TP 13617](#) when operating in those waters. There may be other regulations respecting discharges that apply within the vessel's operational zone and where these regulations require control of ballast water they must be followed.
- b) The [Canada Shipping Act \(CSA\) 2001 - Regulations for the Prevention of Pollution from Ships and for Dangerous Chemicals](#) must also be observed with reference to the sections on oily water discharge to prevent oil contaminated ballast water discharge.

3 INSTRUCTION

3.1 Ballast discharges

- a) Ballast discharges are to be logged.
- b) To ensure that Commanding Officers receive the most up-to-date advice regarding regulations or standards applicable to the discharge of ballast water, they shall contact the Marine Communications and Traffic Services (MCTS) for the latest directions received from the local authorities within the Region.

4 DOCUMENTATION

- Log Book Entries
- Oil Record Book



Fleet Safety Manual

7.E.5 - HANDLING, STORAGE, AND DISPOSAL OF HAZARDOUS MATERIALS

1 PURPOSE

- a) To ensure that all Canadian Coast Guard (CCG) employees are familiar with safe handling, storage and disposal of hazardous materials and that the materials are disposed of in an environmentally sound manner.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer must ensure that all products containing hazardous materials are identified to the standard required by the [Transportation of Dangerous Goods Regulations](#), and in the case of international voyages, to the *International Maritime Dangerous Goods Code*. Hazardous materials shall be labelled clearly, handled, maintained and stowed according to these standards.

2.2 ALL PERSONS WHO ARE HANDLING HAZARDOUS MATERIALS

- a) All persons who are handling hazardous materials shall be trained to meet the requirements of these procedures to ensure their safety as well as the protection of the environment.

3 INSTRUCTION

3.1 GENERAL

- a) All known hazards at a work site must be identified and this information must be included in the sailing orders. This applies, for example, to structure demolition and site clean-up.
- b) The Regional Environmental Coordinator is the Departmental official who is the primary reference point for the proper handling, storage and disposal of Hazardous Materials. This officer has developed contingency plans to deal with environmental hazards and incidents.

- c) Workplace Hazardous Materials Information System (WHMIS) practices and procedures will be followed.
- d) The following are examples of hazardous materials or special waste that may be encountered aboard the vessel and should be handled, stored and disposed of in accordance with these procedures:
- Asbestos waste
 - Polychlorinated biphenyls (PCB)
 - Radioactive isotopes (e.g. smoke detectors, specific gauges)
 - Waste oil and filters
 - Anti-freeze
 - Oily bilge sludge, oil or water
 - Fuel, oil, solvent, paint
 - Gas cylinders
 - Other used liquid or solid chemicals
 - Battery acids, caustic liquids
 - Used batteries
 - Oily rags
 - Biomedical waste - general – items contaminated with blood or bodily fluids such as bloody gauze, tampons and gloves.
 - Biomedical waste - contaminated sharps – materials that can puncture, penetrate or cut the skin and have come into contact with a bodily fluid or micro-organism such as syringes, lancets and broken laboratory glass.
 - Contaminated or uncontaminated marine specimens from vessel laboratories

3.2 HANDLING AND STORAGE

- a) Procedures provided in the Material Data Safety Sheets, under [Transportation of Dangerous Goods Regulations](#) and under the *International Maritime Dangerous Goods Code* will be followed.
- b) A list, indicating the storage area, shall be maintained for all hazardous substances that are used, produced, handled or stored in the workplace.
- c) Where a hazardous substance is stored, handled or used in a workplace, signs shall be posted in conspicuous places warning every person granted access to the workplace of the presence of the hazardous substance and of any precautions to be taken to prevent or reduce any hazard of injury to health.
- d) Every employee shall receive training with respect to hazard prevention and control at the workplace including all hazard information disclosed by the supplier of the hazardous substance or by the employer on a material safety data sheet or label. This training shall be reviewed once a year and records shall be maintained.

- e) CCG Employees who must use sharps regularly for medical reasons (diabetes, allergies, etc.) are responsible to carry or use sharps containers. This container should be stored at a location where the use of the sharps occurs most often.
- f) In circumstances where a dedicated sharps container is not available it is permitted to use, as an interim measure, a suitable receptacle to safely store, transport and dispose of sharps. A suitable receptacle is hard-sided, has a lid that can be closed and has been labelled: biomedical waste.
- g) Personnel who accidentally come in contact with blood or bodily fluids shall give immediate notice to a supervisor and first aid attendant. Details of the accident shall be documented. All exposed personnel shall seek medical advice regarding the need for any follow-up.

3.3 DISPOSAL

- a) For specific information on disposal of Hazardous Material, the Regional Environmental Coordinator should be contacted for instructions.
- b) General biomedical waste that does not contain contaminated sharps and does not pose a threat to the public health, once contained in double thickness (double-bagged), impervious plastic bags, can be disposed of in accordance with Procedure 7.E.6.
- c) CCG vessels will carry an approved sharps disposal container as per [Annex A of Canadian Coast Guard Fleet Logistics Standard 400.00.07](#) and [CGFO 207](#). Contaminated sharps shall be placed into the approved container. It shall be located in a secure, and convenient location on board.
- d) It is not necessary to include disinfecting solutions or chemicals in sharps containers.
- e) CCG vessels are not permitted to treat biomedical waste or contaminated sharps on board the vessel by means of either disinfection or incineration. Contaminated sharps must be disposed of according to provincial standards at a shore-based facility.
- f) Disposal of waste oil from CCG vessels shall be contracted only with contractors who have been licensed or registered by provincial authorities for the disposal of petroleum products.

3.4 MATERIAL SAFETY DATA SHEETS (MSDS)

- a) A MSDS must be obtained for every hazardous substance stored, handled or used on board.
- b) A MSDS must be:
 - obtained for every hazardous product received aboard unless there is already a MSDS aboard for that product and that sheet is less than three years old;
 - updated as soon as possible, but not more than 90 days after new hazard information concerning that product becomes known;
 - renewed every three years ensuring that the product held aboard matches exactly the information contained in the new MSDS. If there is any doubt that the new sheet contains information that pertains only to a new formulation of the product which is not the version of the product presently stored aboard then the existing MSDS should be annotated that: no update for this product version or formulation is available;

- held for every hazardous product that is aboard. If a manufacturer's MSDS is not available to the vessel, then a sheet must be prepared showing the product name and the words: not available.
- c) MSDS can be maintained in physical or electronic formats provided that, whichever format is chosen, the information is readily available to employees.

4 DOCUMENTATION

- Material Safety Data Sheets
- Oil Record Book
- Requisitions with Disposal Contractors
- Site-specific Checklists
- Training records

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

7.E.6 - HANDLING AND DISCHARGE – SOLID WASTE

1 PURPOSE

- a) To ensure that all solid waste is collected processed, stored, recycled and disposed of in accordance with applicable regulations and in an environmentally sound manner and to protect employees from health risks related to waste handling and storage

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer is the environmental officer for the vessel/station and shall ensure that this procedure is implemented and that a Site Specific Work Instruction is developed.

3 INSTRUCTION

3.1 GENERAL

- a) The management for the handling and discharge of solid waste shall be in accordance with the [Canada Shipping Act \(CSA\) 2001 - Regulations for the Prevention of Pollution from Ships](#) and for *Dangerous Chemicals and Annex V of the International Convention for the Prevention of Pollution from Ships (MARPOL)*
- b) Recycling of solid waste in accordance with local regulations and the CCG *Environmental Policy*, shall take place where local programs exist. Where no local programs exist, consideration shall be given to recycled solid waste being sorted and stored appropriately until transport to the nearest recycling facility can be arranged.
- c) Station mode vessels in addition to 3.1(a) shall meet all Provincial and municipal laws, including local any restrictions, for waste management ashore.
- d) Under no circumstances shall solid waste be discharged into any waters or released into the environment.
- e) Personal Protective Equipment (PPE) shall be used to reduce the risk of injury or disease from the handling of waste and cautionary notices posted in storage areas.
- f) Any waste disposal equipment fitted aboard the vessel (incinerators, compactors, shredders) shall be operated in accordance with the manufacturer's instructions.
- g) The operation of the incinerator shall be recorded

3.2 STATION MODE VESSELS

- a) Station mode vessels shall develop a Waste Management Plan for dealing with solid waste disposal at their site. Any interface that occurs between a vessel/station and a shore based facility for the disposal of solid waste (i.e. CG Base, Vessel, Yard, Mobile unit, Marina, municipal service etc.), shall be in accordance with applicable local regulations and in an environmentally sound manner.

3.3 GARBAGE RECORD LOG

- a) All vessels greater than 400 gross tonnage and all vessels less than 400 gross tonnage but certified to carry greater than 15 persons shall establish and maintain a Garbage Record Log. All vessels which do not meet this requirement may choose to establish a Garbage Record Log if the recording aids in the tracking of garbage disposed of for local regulatory or municipal requirements.
- b) Each discharge operation, or completed incineration, shall be recorded in the Garbage Record Log and signed for on the date of the incineration or discharge by the officer in charge. Each completed page of the Garbage Record Log shall be signed by the Commanding Officer of the vessel.
- c) The entry for each incineration or discharge shall include date and time, location of port facility, description of the garbage and the estimated amount incinerated or discharged.
- d) The Garbage Record Log shall be kept on board the vessel and in such a place as to be available for inspection in a reasonable time. The Garbage Record Log shall be retained on board for a period of two years after the last entry is made in the Log. After this period, they can be destroyed.

Note 1: The Garbage Record Log is the legal document that shall be used by regulatory authorities to determine whether a vessel is in compliance. A calculated waste burden is assigned to each person aboard for each day at sea and the Log is used to calculate whether the amounts of waste disposed and reported was appropriate.

- e) In the event of discharge or accidental loss of solid wastes an entry shall be made in the Garbage Record Log of the circumstances of, and the reasons for, the loss. An Incident Investigation Report shall also be filed.

3.4 PROCESSING

- a) Depending on factors such as the type of vessel, area of operation, and size of crew, vessels may be equipped with incinerators, compactors, food waste disposal units or other devices for shipboard garbage processing. Appropriate members of the crew shall be assigned for operating this equipment on a schedule commensurate with vessel needs.

3.5 SHRED FOOD WASTE

- a) When a vessel/station is equipped with a waste disposal unit, shred all food waste for discharge in the grey or black water systems. Disposal through the grey water system should be used only where this does not contravene applicable regulations. At no time shall shredded food waste be discharged from a vessel within 3 nautical miles from shore.

3.6 COMPACT GLASS AND LIGHT METALS

- a) Wet and dry waste and plastic containers may also be compacted. Pay particular attention not to compact explosive items such as pressurized containers (aerosol cans).

3.7 INCINERATE

- a) When a vessel is equipped with an incinerator, incinerate non-recyclable, paper and paper products, plastic, etc. Marine incinerators are predominantly designed for intermittent operation, hand fired and fed by hand. The ash or vapour may be hazardous. The ash from the combustion of some plastic products may contain heavy metal or other residues, can be toxic and should not be discharged into the sea. Ashes shall be retained onboard, where possible, and discharged at port reception facilities. Due to the potential environmental and health effects from combustion of by-products e.g. scraped paint, impregnated wood and PVC-based plastics, special precaution is required.

3.8 STORED WASTE

- a) Waste shall be stored in a designated area on the deck or ashore (container, mesh cage or other storage) and care should be taken to identify and separate recyclable from non-recyclable.
- b) Clean and disinfect storage area after each use.

3.9 DISPOSE WITH PROPER AUTHORITIES

- a) Contact proper authorities (port, municipality or other) upon arrival in port so that waste may be appropriately disposed of (possible recycling, etc.). Ensure that waste removal contractors engaged by the vessel or station are reputable licensed firms.

4 DOCUMENTATION

- Manufacturer's Instructions
- Garbage Record Book
- Log Book Entries



Fleet Safety Manual

7.E.7 - ENVIRONMENTAL STEWARDSHIP

1 PURPOSE

- a) The Canadian Coast Guard (CCG) has established an Environmental Policy which meets or exceeds all applicable environmental legislation and where possible applies best practices to reduce our environmental footprint. The CCG is committed to protecting the environment while remaining operational and to ensure that all operations conducted within the CCG are done so in consideration of the environment.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer shall ensure that, where possible, steps to reduce environmental impacts from the vessel and its equipment are considered and implemented. Equipment shall be used and maintained in a way that the airborne emissions are kept to a minimum.

2.2 ALL EMPLOYEES

- a) All employees shall be aware of the *CCG Environmental Policy* and apply best practices whenever possible to reduce our environmental footprint.

2.3 OPERATORS OF EQUIPMENT

- a) The operators of equipment shall be familiar with this procedure and Site Specific Work Instructions, to ensure that equipment is operated in a safe, economical, efficient and environmentally sound manner.

3 INSTRUCTION

3.1 GENERAL

- a) Machinery is to be used in accordance with the manufacturer's specifications. Fuel quality is to be controlled through the application of [Canadian General Standards Board standards](#) in all fuel procurement activity. Unnecessary idling and low loading is to be avoided.

- b) All vessels shall meet or exceed *MARPOL 73/78 Annex VI – Regulations for the Prevention of Air Pollution from Ships* as applicable within the regulations. All vessels 400 GRT and above on International Voyages, are required to have an International Air Pollution Prevention Certificate (IAPP).
- c) Where vessels are fitted with incinerators for the burning of waste, these incinerators are to be maintained and operated in accordance with the manufacturer's instructions.
- d) Every precaution should be taken to reduce the release of volatile organic compounds (VOCs) by avoiding or reducing the use of environmentally unfriendly solvents and coatings onboard the vessel.
- e) Green products: all vessels and stations where appropriate, shall consider and convert to green products to reduce our environmental footprint.

3.2 FUEL CONSUMPTION GUIDES

- a) The overall objective of a fuel consumption guide is the minimization of fuel consumption and as a consequence a reduction in airborne emissions. All CCG vessels capable of producing 1000kW for propulsion are to develop a fuel consumption guide. The optimum condition indicated by the guide should be followed in normal operating circumstances insofar as the conditions and the activity in which the vessel is engaged permit.
- b) Vessels under 125 GRT shall have tables indicating the speed and fuel consumption at various RPM. This table shall be referenced when planning taskings near the capable range for the vessel.

4 DOCUMENTATION

- Site Specific Work Instructions
- Engine log book entries
- Maintenance Records
- Fuel Consumption Guide



Fleet Safety Manual

7.E.8 - USE OF HALOCARBONS

1 PURPOSE

- a) To ensure that equipment using halocarbons is maintained so as to prevent releases of halocarbon.
- b) To ensure that halocarbon used at Canadian Coast Guard (CCG) sites or on board CCG vessels complies with the [Federal Halocarbon Regulations 2003 \(FHR\)](#).

2 RESPONSIBILITIES

2.1 GENERAL

- a) For the purpose of the FHR, the owner of all systems containing halocarbon onboard any CCG vessel is the Commissioner of the CCG. The Commissioner is represented onboard the vessel by the Commanding Officer.

2.2 COMMANDING OFFICER

- a) The Commanding Officer shall ensure that this procedure is followed aboard the vessel and that halocarbon releases are properly reported using the Incident Investigation Report (IIR).

2.3 CHIEF ENGINEER WHO ENGAGES THE SERVICES OF A CONTRACTOR

- a) The Chief Engineer who engages the services of a contractor is responsible to assure that the contractor fully complies with the requirements of this procedure.

2.4 CHIEF ENGINEER

- a) The Chief Engineer shall be the sole authority for granting permission to work on equipment containing halocarbon on board the vessel or station. The Chief Engineer is also responsible for the maintenance of the equipment, the service logs and the inventory of halocarbon onboard the vessel

2.5 CERTIFIED PERSON

- a) Only a certified person shall install, service, leak test or charge a halocarbon into a refrigeration, air conditioning, or fire extinguishing system.

- b) A certified person is a person holding a valid third class marine engineering certificate or higher and has completed the Environmental Awareness Course for the Environmentally Safe Handling of Refrigerants (previously for handling Ozone Depleting Substances) for the purpose of the FHR.

2.6 SUPERINTENDENT FLEET SAFETY AND SECURITY (SFSS)

- a) The SFSS is responsible to send copies of all halocarbon release reports to the Regional Environment Coordinator.

3 INSTRUCTION

3.1 GENERAL

- a) FHR – shall be referenced for all equipment that uses halocarbon either onboard a CCG vessel or at a CCG station

3.2 MAINTENANCE AND LEAK TESTING

- a) Maintenance and inspection of equipment containing halocarbon must be integrated into the vessels operational maintenance routine so that all systems are maintained and inspected as defined in the FHR and amplified in the [Environmental Code of Practice for Elimination of Fluorocarbon Emissions from Refrigeration and Air Conditioning Systems](#).
- b) Site specific work instructions that show the proper sequence for changing over refrigeration plants and air conditioning must be posted in the proper area to prevent accidental halocarbon release.
- c) Refrigeration or air conditioning systems larger than 19 kW operating with a halocarbon, shall be leak tested at least once every twelve (12) months.
- d) All leaks should be repaired immediately, whenever possible. In the event that it is not possible to effect repairs within seven (7) days following detection, the unit must be pumped down and isolated until suitable repairs are completed.
- e) No person shall charge a refrigeration system or an air conditioning system with a halocarbon for the purpose of leak testing the system, except when recommended in the *Refrigerant Code of Practice*.
- f) No person shall charge a refrigeration system or an air-conditioning system unless it has been leak tested.
- g) Anyone who proposes to destroy, disassemble, or remove from service a system must, in advance, recover all halocarbons in a container designed for the reuse of halocarbons and must, in advance, complete a notice with all the required information in Annex D - Forms. A copy of this notice shall be kept on file for five (5) years and a copy sent to regional environmental coordinator to update the inventory (see section 3.5).
- h) Environment Canada maintains the position that any decommissioned system that still contains any halocarbon quantity must still be maintained and leak-tested as if it was still operational.

3.3 SERVICE LOGS

- a) A service log containing as a minimum the information outlined in Annex D – Forms, must be maintained for all systems and equipment using halocarbons.
- b) This service log must be on board. Charging and discharging of equipment must be recorded in the service log.
- c) Maintenance on all systems must be recorded in a service log.

3.4 MARKINGS REQUIRED ON SYSTEMS

- a) A label indicating that the system has been leak tested (for refrigeration or A/C systems larger than 19 kW) or that the system has been serviced has to be placed near the system in a readily visible location. Details to be included on the labels are stated in Annex D - Forms.
- b) Systems that have been decommissioned must be tagged and marked with the information contained in Annex D - Forms. Note that when the equipment has been removed from the vessel, the records must indicate final disposition of the system.

3.5 INVENTORY

- a) An inventory of all systems containing halocarbon must be maintained aboard. All the information shown under inventory in Annex D - Forms must be included. Annually a copy of the inventory must be sent to the Regional Environmental Coordinator through the SFSS. Any changes to the reported inventory (Acquisition or disposal of systems) must be reported to the Regional Environmental Coordinator through the SFSS within thirty (30) days of the change.
- b) All systems in inventory shall be marked by a unique numbered tag. The inventory tags are available through the Regional Environment Coordinator.

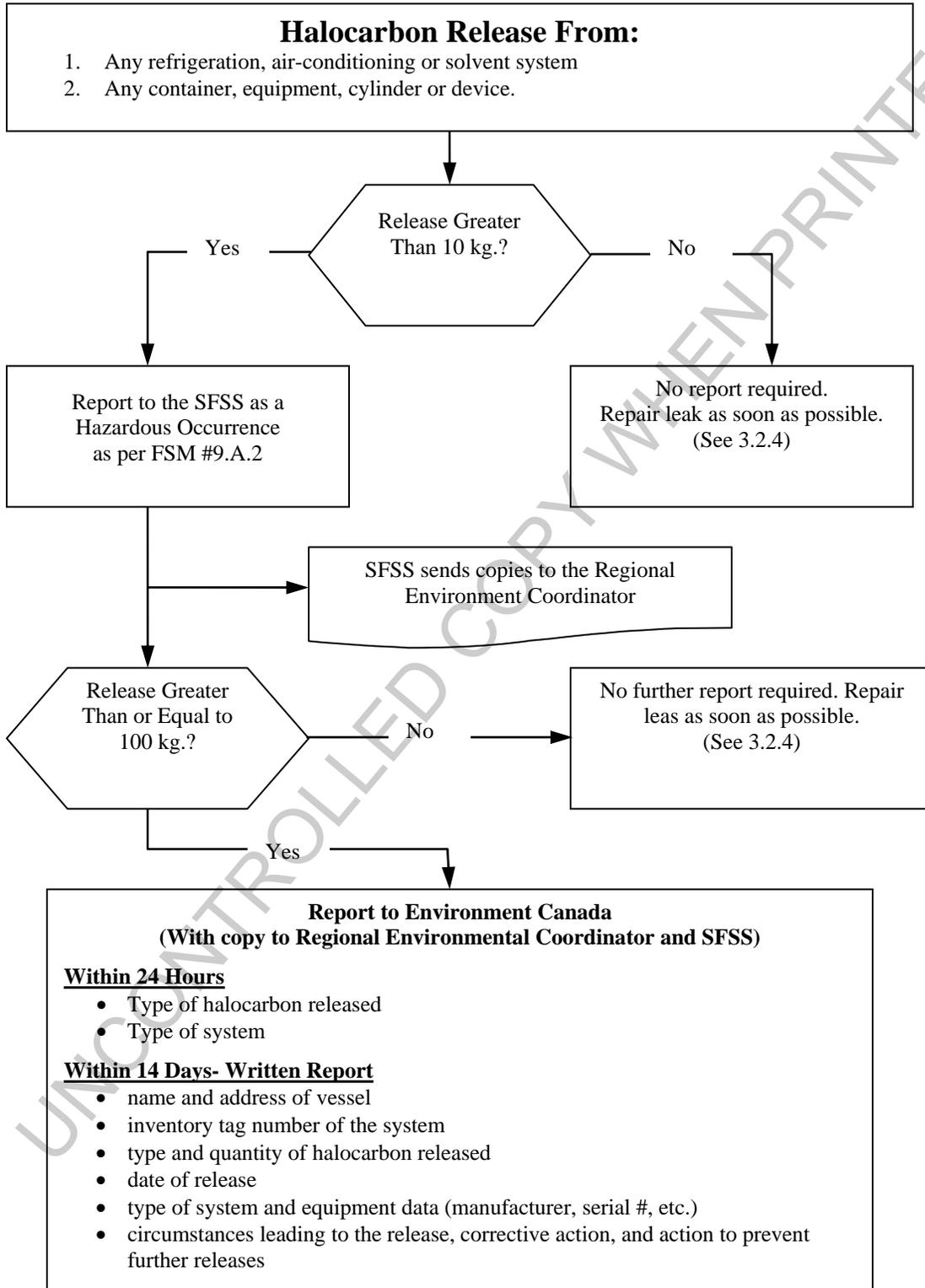
3.6 MAINTENANCE OF RECORDS

- a) All records, reports, leak tests and notices required by this procedure, shall be kept onboard for a period of five (5) years beginning on the date of their issuance and shall be made available to Environment Canada upon request.

4 DOCUMENTATION

- Service Records
- Record Of Inventory
- Log Book Entries
- Reports Of Releases
- Federal Halocarbon Regulations 2003
- DFO kW Calculations

ANNEX A – RELEASES OF HALOCARBON FLOWCHART



ANNEX B – RELEASES OF HALOCARBON – MAILING ADDRESSES FOR REPORTS TO ENVIRONMENT CANADA REGIONS

Mailing Addresses for Reports to Environment Canada Regions

| Geographic Region | Emergency Reporting | |
|--|--|---|
| | Emergency Number | Mailing Address |
| Province of British Columbia and Yukon Territory | (604) 666-6100 Fax: 604-666-9059 E-mail: FHR.PYR@ec.gc.ca | Manager of Inspection Program Pacific & Yukon Region, Environment Canada #201 - 401 Burrard St Vancouver, BC V6C 3S5 |
| Province of Alberta | (780) 499-2432 <i>Alberta Division 24-hour spill line</i> Fax: 780-495-2451 E-mail: FHR2003.EED-PNR@ec.gc.ca | Manager of Inspection Program – Prairie & Northern Region, Environment Canada Twin Atria 2 Room #200 4999-98 Avenue NW Edmonton, AB T6B 2X3 |
| Province of Saskatchewan | (306) 536-9991 <i>Saskatchewan Division 24-hour spill line</i> | |
| Province of Manitoba | (204) 981-7111 <i>Manitoba Division 24-hour spill line</i> | |
| Northwest Territory Nunavut Territory | (867) 920-8130 <i>Northern Division 24-hour spill line</i> | |
| Province of Ontario | (416) 346-1971 <i>Call forwarded to Provincial Spills Action Centre</i> Fax: 905-333-3952 E-mail: FHR.Ontario@ec.gc.ca | Manager of Inspection Program – Ontario Region, Environment Canada, 845 Harrington Court. Burlington, Ontario L7N 3P3 |
| Province of Quebec | (514) 283-2333 Fax: 514-496-2087 E-mail : InstalFed.Dale-RQ@ec.gc.ca | Manager of Inspection Program –Quebec Region Environment Canada 105 Rue McGill, 4th Floor Montreal, Quebec H2Y 2E7 |
| Province of New Brunswick Province of Prince Edward Island Province of Nova Scotia | 1-800-565-1633 Fax: 902-426-7924 E-mail: chr2003@ec.gc.ca | Manager of Inspection Program Environment Canada 16 th Floor, Queen Square 45 Alderney Drive Dartmouth, Nova Scotia B2Y 2N6 |



Fleet Safety Manual

8.0 - EMERGENCY PREPAREDNESS

1 EMERGENCY PREPAREDNESS

The Canadian Coast Guard (CCG) Fleet has prepared specific contingency plans to deal with potential shipboard emergencies. These plans have been developed to cover both vessel and shore response to any incident and to ensure that the CCG Fleet responds to an emergency in a coordinated, prompt, and effective manner.

2 SHIP AND SHORE BASED CONTINGENCY PLANS AND EXERCISES

CCG Fleet has established contingency plans for dealing with a variety of shipboard emergencies. These contingency plans include those defined by SOLAS and emergency situations which effect the normal operation of the vessel.

Contingency plans are to be exercised at regular intervals and select exercises shall include the participation of the shore support offices. Following an exercise, a debriefing shall be held to review the actions taken in response to the situation and to review the contingency plan to ensure that it remains effective.

3 VESSEL PREPAREDNESS FOR DEALING WITH EMERGENCIES

CCG Vessels shall have procedures in place to increase the self-help capabilities of the vessel through early detection and prevention of incidents. Security routines shall be established in compliance with the Policy on Government Security. Fire detection and prevention procedures shall be established.

Employees shall be trained in the provision of assistance for dealing with medical emergencies. Ships shall carry medical supplies and equipment to assist in the care and treatment of the injured.



Fleet Safety Manual

8.A.1 - VESSEL AND SHORE-BASED CONTINGENCY PLANS

1 PURPOSE

- a) To ensure that both vessel and shore based personnel are prepared to respond to emergencies.
- b) To ensure Commanding Officers and crews are prepared to deal with emergencies and that any request for assistance will result in a timely, appropriate and structured response by the shore-based management team to alleviate or resolve the emergency as required.

2 RESPONSIBILITIES

2.1 DIRECTOR, OPERATIONAL SUPPORT

- a) The Director, Operational Support is responsible to ensure that the National Coordination Centre (NCC) can be staffed by qualified personnel to appropriately disseminate information on a 24 hour a day basis should the need arise.

2.2 REGIONAL DIRECTOR, FLEET

- a) The Regional Director, Fleet is responsible to ensure that adequate support is provided to the Commanding Officers during emergency situations for vessels within their region. The Regional Director, Fleet shall monitor the activities and support provided on an ongoing basis during the emergency situation. The Regional Director, Fleet shall determine, in consultation with the Regional Response Team members and where practical the Commanding Officer, what level of support is needed.
- b) Where the Regional Director, Fleet is unavailable their responsibility shall be clearly delegated to another responsible person and documented.
- c) In addition, where necessary, the Regional Director, Fleet shall:
 - when any response team members are unavailable and are replaced by someone on an acting basis; the relief personnel shall be made aware of their responsibilities under this plan and shall ensure that their contact numbers are made readily available.
 - take charge of the Emergency Response Team (where the Regional Director, Fleet does not normally take charge another member of the team shall have this responsibility clearly delegated to them)

- ensure all answers and statements to media queries are authorized.
- authorize all announcements to next of kin and organize personal visits if necessary (e.g. fatalities or serious injuries).
- liaise with legal services if required.

2.3 THE COMMANDING OFFICER

- a) The Commanding Officer is responsible to ensure that the vessel and crew are familiar and prepared to deal with emergencies by having developed, maintained and exercised contingency plans specific to their vessel.
- b) The Commanding Officer has the responsibility and the ultimate authority to take whatever action they deem appropriate and necessary to ensure the safety of life, safety of the vessel and equipment and protection of the environment.
- c) Whatever the emergency, the Commanding Officer shall as soon as is practicable, inform the Regional Operations Centre (ROC) by the most appropriate means.

2.4 SUPERINTENDENT REGIONAL OPERATIONS CENTRE

- a) The Superintendent, ROC is responsible for ensuring that the Operations Centre is maintained in a state of readiness to be able to provide support to fleet vessels for all identified emergencies. The Superintendent, ROC shall be the communications link between the vessels and the emergency response team. The Superintendent shall also provide a link between the CCG Fleet and Program Officers with regard to effected operations or program personnel.

2.5 MARINE SUPERINTENDENT

- a) The Marine Superintendent is responsible for providing the Regional Director, Fleet with all of the necessary information on the vessel crew, supernumeraries and passengers on board as well as information on next of kin. The Superintendent shall also co-ordinate the provision of relief and/or support personnel for extended or large-scale emergency operations.

2.6 SUPERINTENDENT MARINE ENGINEERING

- a) The Superintendent Marine Engineering is responsible for providing the provision of technical information in the form of plans drawings etc. and for the provision of technical, engineering and support services.

2.7 DIRECTOR AND SUPERINTENDENTS FLEET SAFETY AND SECURITY

- a) The Director (DFSS) and Superintendents Fleet Safety and Security (SFSS) are responsible for ensuring each member of the Fleet Emergency Management team is issued with an up to date copy of the Fleet [Emergency Management Plan \(FEMP\)](#) and that they are familiar with their responsibilities. The SFSS shall monitor the response provided to each situation and ensure follow up reviews and investigations are carried out in order to continuously improve response to emergency situations.

3 INSTRUCTIONS

3.1 GENERAL

- a) The CCG have established National and Regional Fleet Emergency Management Plans and Vessel Specific Emergency Management Plans to provide an appropriate framework for response to incidents and emergencies.
- b) These plans are to be reviewed following emergency or exercise situations to ensure that they remain effective and are appropriate for the emergency situation.
- c) The NCC shall be used as the Headquarters' Fleet Emergency Management Centre. The NCC shall be the national focal point for all communications relating to the emergency and shall ensure that regular Situation Reports and briefings are prepared for presentation to the Director General, Fleet. When the Headquarters' Fleet Emergency Management Plan is invoked, the Communicator and NCC staff shall liaise with the appropriate ROC.

3.2 GENERAL DIRECTIONS TO COMMANDING OFFICERS

- a) If immediate tug assistance is required, the Commanding Officer has the authority to make their own terms with whoever is able to assist them. The fact that an agreement has been made, and with whom, shall be recorded in the Deck Log Book. The ROC and JRCC should be informed at the first available opportunity.
- b) If tug assistance is required when the vessel is in no immediate danger, the Commanding Officer should contact the ROC. The ROC will endeavour to arrange a tow on the best terms available. The Commanding Officer must keep the situation under review and if it deteriorates he must take any action necessary to maintain the safety of life and of the vessel.
- c) During any incident or emergency situation it is probable that the vessel will be contacted in one way or other by the media to answer questions or make statements. Commanding Officers and all crew shall refer all such questions and requests for statements to the ROC unless authorized otherwise.

3.3 REPORTING

- a) If a vessel is involved in an incident or emergency situation the Commanding Officer shall report the matter as soon as is practical to an MCTS station by the most appropriate means available.
- b) Commanding Officers should be aware that certain security precautions are required when sending reports containing sensitive information. (reports containing a name, date of birth, SIN, etc.) Refer to the *DFO IT Designated and Classified Material Labelling and Handling Standard* and the [Information Designation/Classification and Acceptable Practices quick reference table](#). Wherever possible all communications shall be conducted via a secure method. When unavoidable, and messages must be passed via open and unsecured means, injuries shall be described using the casualty code numbers contained in [Annex 5D of the National SAR Manual](#).

3.4 MUSTER LISTS AND BUNK CARDS

- a) Muster Lists for emergency stations shall be prepared and approved by the Commanding Officer. On two-crewed vessels both Commanding Officers shall sign the Muster List. Each cabin shall also have a placard that indicates the primary and secondary escape routes and each bunk shall have bunk card that shows the emergency station designated duties for the occupant.

3.5 VESSEL ALONGSIDE

- a) A specific plan shall be developed for emergencies that occur when the vessel is alongside and is not crewed with the full complement as identified in the muster list. In all cases where emergencies occur with the vessel alongside with reduced crew the Regional Operations Centre shall be advised as soon as possible so the appropriate support can be provided. These plans are to be located in a conspicuous place, be readily identifiable, and at a minimum, shall include the following information:
 - A list of all persons currently aboard.
 - The location and means of available shore communication (i.e. land line, cell phone, radio, etc.)
 - An emergency contact list containing at least the following:
 - ROC
 - Local Fire Department
 - Other local shore support contacts that may be available
 - Procedures for releasing the fixed firefighting system.
 - Procedures and locations of equipment to provide emergency oil spill response.
- b) The specific reduced crew plan shall also be detailed in the lay-up, dry dock or refit plan required by Procedures 10.A.3, 10.A.4 and 10.A.5. This plan shall be exercised at least once during the alongside period to ensure currency.

3.6 RECORD KEEPING

- a) Complete and detailed records shall be maintained on all emergencies including all actions taken. These will normally be recorded in the deck log.

3.7 ACTIONS TO BE TAKEN

- a) The list below identifies emergencies for which each vessel shall have a developed contingency plans and/or checklists. Changes to the plans and/or checklists shall be approved by the Regional Director, Fleet.
 - Main Propulsion Failure
 - Electrical Power Failure
 - Steering Loss

- Collision
 - with another vessel
 - with a fixed object
- Grounding, Stranding, Striking
- Shipboard Fires
- Abandon Ship
- Person Overboard
- Injury/illness
- Cargo Shifting, Spilling, Jettisoning
- Pollution
- Flooding
- Helicopter Accident
- Structural Failure
- Acts of Piracy – Breach of Security
- Emergency Towing Procedures **

** Emergency Towing Procedures became a SOLAS requirement for all vessels above 500 GT effective January 1st 2012. Due to the nature of CCG operations the requirement for towing is captured as part of Procedure 7.C.4.

4 DOCUMENTATION

- Fleet Emergency Management Plan
- Site Specific Contingency Plans and Checklists
- Regional Contingency Plans and Checklists
- Log Book Entries



Fleet Safety Manual

8.A.2 - VESSEL AND SHORE EMERGENCY EXERCISES

1 PURPOSE

1.1 GENERAL

- a) To test the effectiveness of both the vessel and shore-based contingency plans at regularly scheduled intervals. Drills and Exercises provide for continuous improvement of the system and increased proficiency of personnel for dealing with incidents and emergency situations.

DEFINITIONS:

A **Drill** is a test of an individual element of a contingency plan.

An **Exercise** is a test of the entire plan and includes an interface between the vessel and shore-based resources.

A **Communications Check** occurs when the Regional Operations Centre (ROC) or National Coordination Centre (NCC) initiates communication with all players during a drill or exercise so as to determine the availability and response time of the players.

2 RESPONSIBILITIES

2.1 REGIONAL DIRECTOR, FLEET

- a) The Regional Director, Fleet is responsible to ensure emergency exercises are conducted, and that all Fleet personnel, as required, participate fully.

2.2 REGIONAL DIRECTOR, INTEGRATED TECHNICAL SERVICES

- a) The Regional Director, Integrated Technical Services is responsible to ensure personnel under their direction fully participate in emergency exercises and scenarios as required.

2.3 SUPERINTENDENT, REGIONAL OPERATIONS CENTRE

- a) The Superintendent, ROC is responsible for scheduling and coordinating the emergency exercises and the training of members of the ROC in their duties regarding emergency situations. They shall prepare written reports of each exercise.

2.4 COMMANDING OFFICER

- a) The Commanding Officer has the responsibility to ensure that contingency plans specific to their vessel are in place, maintained, scheduled and are exercised at frequent intervals to maintain crew proficiency in dealing with emergency situations.

3 INSTRUCTION

3.1 GENERAL

- a) Exercises may be different for each vessel or shore-based office and should be in accordance with the various types of emergencies likely to arise.

3.2 EXERCISES

- a) All messages related to the conduct of an exercise shall be identified by a header and footer that prominently indicate that: THIS IS AN EXERCISE.
- b) When, during the conduct of an exercise, a real incident occurs, requiring message notification, the real time message shall be identified prominently in the header and footer that: THIS IS NOT AN EXERCISE. Voice messages shall be prefixed with the appropriate marine communications prefix indicating an emergency condition (PAN or MAYDAY) and ended with the statement: THIS IS NOT AN EXERCISE.
- c) A debriefing shall be held as soon as possible after each exercise is completed. The debriefing shall include a representative from each section and as many of the participants as possible.

3.3 OTHER EMERGENCY EXERCISES

- a) Actual incidents where the majority of the items identified in the contingency plan were utilised may be considered to an exercise for the purpose of this section. The particulars and lessons learned shall be maintained with the record of drills and exercises.

3.4 SCHEDULE

- a) For the purposes of this section, exercises are not required to be scheduled during non-operational periods.
- b) Contingency drills and exercise shall be conducted at evenly spaced intervals. A schedule of emergency exercises shall be developed and maintained by each vessel and shore-based office. Where appropriate, the shipboard emergency exercises will be coordinated with shore based emergency exercises.

3.5 NATIONAL HEADQUARTERS

- a) The NCC shall schedule and conduct one exercise with one region each year so that every five (5) years each region shall have participated in an exercise with the NCC. These National Exercises should be matched to the Regions according to the planned External Regional Office schedule

3.6 REGIONS

- a) The ROC shall develop an exercise schedule that ensures each element of the contingency plan is evenly spaced and exercised within a consecutive three (3) year period. The ROC schedule shall also ensure that all vessels are exercised for all contingencies over time.
 - Annually two exercises shall be conducted with at least two (2) vessels and shall include a communications check with Headquarters (NCC).
 - Annually – three (3) regional exercises shall be a Communication Check with vessels as they carry out their exercises.
 - Where the Region is scheduled to participate in an exercise with the NCC, the Regional Director, Fleet shall ensure that regional vessel(s) are also scheduled to participate, thereby exercising all three (3) levels simultaneously.

3.7 SHIPBOARD

- a) All statutory exercises are in addition to any required by this procedure.
- b) In addition to requirements of the *Fire and Boat Regulations*, the following shall be carried out
 - Crew boarding and manoeuvring of boats away from the vessel shall be carried out, at a minimum, semi-annually.
 - Radio communication systems are to be tested.
 - Donning of immersion suits shall be carried out, at a minimum, semi-annually.
- c) The developed exercise schedule shall ensure that each element of the vessels contingency plan is exercised at evenly spaced intervals and, by each crew, within a consecutive two (2) year period.
- d) Security drills shall be scheduled and combined with contingency plan drills at least once per year - per crew.
- e) The ROC will coordinate with the vessels (as above) when exercises are carried out to verify communications.

3.8 COMMUNICATION CHECKS

- a) The NCC shall conduct ten (10) communications checks each year. (Two (2) with each of the five regions).
- b) Regions shall develop a schedule for periodic testing of secure communications with all operational vessels within the region, the results shall be logged.
- c) Any vessel departing for the Arctic shall ensure the functionality of all communication equipment on board prior to departure; this verification check shall be entered in the log.

3.9 REPORTING

- a) A report shall be generated giving full particulars of the exercise and debriefing conducted noting the results, deficiencies, corrective actions taken etc. Reports shall be held at the site where the exercise was conducted.

Note 1: Certain information may be sensitive, especially if the exercise is integrated with a security component. Sensitive information shall be protected to the appropriate classification level.

- b) Vessels shall record exercises in both the Deck Log and the Commanding Officer's change-over notes in addition to the requirement described in section 3.8 (a).

4 DOCUMENTATION

- Vessel and Shore-based Exercise Schedules
- Exercises Reports
- Log Book Entries
- Change Over Notes

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

8.B.1 - SECURITY OF THE VESSEL

1 PURPOSE

1.1 GENERAL

- a) The extent to which the Canadian Coast Guard (CCG) can ensure the security of personnel and its assets directly affects its ability to ensure the continued delivery of services.
- b) This procedure outlines those measures that shall be taken to ensure compliance with the Policy on Government Security (PGS) for all vessels.

2 RESPONSIBILITIES

2.1 DIRECTOR GENERAL, FLEET OR DELEGATE

- a) The Director General, Fleet or delegate is responsible to ensure that the overall requirements of this procedure are applied aboard all CCG vessels, to approve Ship Security Plans and to ensure that the appropriate resources (financial, personnel, training, and equipment) are supplied to the vessels so as to enable implementation of the vessels security plan.

2.2 REGIONAL DIRECTOR, FLEET OR DELEGATE

- a) The Regional Director, Fleet or their delegate is to advise immediately Commanding Officers and the Regional Director, Fleet of other regions which may be impacted, of any intelligence received that indicates that the security of a Coast Guard vessel or other asset may be compromised or threatened. The Regional Director, Fleet, in consultation with the Director General, Fleet or the Commissioner of the CCG, as appropriate, in consideration of an increase in MARSEC Level by Transport Canada (TC), information received from Canadian security agencies, local law enforcement agencies or CO's of CCG vessels, can order an increased security posture for all affected vessels within their region.

2.3 ALL VESSEL PERSONNEL

- a) All vessel personnel have a collective responsibility for maintaining the security of the vessel in accordance with the procedures developed for the vessel and the training provided.

2.4 ALL CCG PERSONNEL

- a) All CCG personnel are responsible to be familiar with and apply the requirements of the Policy on Government Security (PGS) and its supporting policies, standards, directives and guidelines as well as DFO Departmental Safety & Security Policies, Standards and Guidelines developed in support of the PGS. These encompass, but are not limited to, physical security, access control (i.e. persons, goods, cargo, etc.), security of information in any form (i.e. hardcopy, electronic, communication, transport, transmittal, storage, etc. and all components of Information Technology (i.e. computers, servers, cabling, hardware, software, etc...))

3 INSTRUCTION

3.1 GENERAL

- a) Security requirements of the PGS apply to all assets of the Government of Canada.
 - All vessels of the CCG are required to follow the PGS. Vessels of greater than 100 GRT are required to hold vessel specific Ship Security Plans written to reflect the requirements of the PGS.
 - Vessels of less than 100 GRT and all shore stations shall have contingency plans for security preparedness. These shall include ensuring that the vessel can be locked at all times while unattended even at remote locations.

3.2 DAY BOATS, HELICOPTERS, HOVERCRAFT

- a) Consideration should be given, when an increased security posture has been implemented, to securing the unit at a CCG facility, or airport facility in the case of helicopters, where security is maintained. In other instances, if feasible, removing the unit from the area of concern may be considered.
- b) When securing at a CCG facility or airport facility is not operationally feasible, the unit shall be locked and rendered temporarily inoperative. Dependant on the threat consideration of supplementing the security of the unit by guard or other means should be considered.
- c) When arriving at a unit that has been unmanned, a thorough walk-around and onboard inspection shall be performed looking for any signs of attempted entry, tampering, or foreign objects, prior to starting any machinery.
- d) Any attempted breach of the unit's security is to be reported immediately to port security, facility security, airport security, and/or law enforcement authorities, as applicable, as well as to the Regional Operations Centre (ROC) and the Superintendent Fleet Safety and Security (SFSS). An Incident Investigation Report (IIR) shall be submitted to the SFSS. The SFSS shall forward a copy of the report to the DFO Corporate Regional Security Officer and the Director Fleet Safety and Security.

4 DOCUMENTATION

- Policy on Government Security
- DFO Departmental Safety & Security Policies, Standards and Guidelines
- Site Specific Security Plans / Procedures / Contingencies
- Incident Investigation Report

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

8.B.2. - FIRE PREVENTION AND DETECTION

1 PURPOSE

- a) To ensure that there is a systematic approach employed aboard operational vessels to detect and prevent fire.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer is to ensure the relevant regulations respecting fire prevention preparedness applying to the vessel are respected.

2.2 CHIEF ENGINEER

- a) The Chief Engineer is to ensure that the fire detection and control equipment is maintained and ready for immediate use.

3 INSTRUCTION

3.1 FIRE PATROLS

- a) Fire patrols shall comply with the following:
 - the vessel's organisation shall be such that patrolling is efficient, having regard to size and type of vessel; the maintenance of the patrol at all times while crew is on board shall be the responsibility of the Commanding Officer.
 - arrangements shall be made whereby the patrol shall report periodically to the Officer in Charge;
 - the patrol system shall be maintained when vessels are in port with crew on board;
 - every part of the vessel accessible to the fire patrol shall be visited regularly.
- b) Log entries or punch clock entries shall be maintained of patrols conducted

3.2 FIRE DETECTION SYSTEMS

- a) The fire detection and control station shall be set to alert the crew in the event of detection or the change in the monitoring condition onboard the vessel. This system shall be monitored when crew is on board.
- b) When a fire is discovered by a Crewmember, they shall activate the manual fire alarm, try to contain the fire and contact the bridge to give specific information. The ship board emergency plan should then be used.
- c) Log entries to be maintained for all alarms and maintenance performed on the fire detection system.

3.3 FIRE PREVENTION

- a) In order to prevent fire, the following should be kept in mind:
 - Keep spaces clean to prevent accumulation of flammable material and allow for detection of leakage.
 - Control welding, burning, and grinding activities
 - Limit quantities of flammable materials stored on board to reduce risk and store in a safe location when not in use.
 - Limit the use of low flashpoint solvents in maintenance and cleaning activities.
 - Maintain electrical protective devices and circuits in good order.
 - Trace and correct ground faults as they appear.
 - Equipment to be maintained in accordance with manufacturers' specifications
 - Keep electrical air heaters free from dirt and obstructions.
 - Limit leakage of combustible liquids from equipment and collect leakage in drip trays which are emptied often.
 - Ensure adequate ventilation is provided to prevent the accumulation of heat or flammable vapours.
 - Ensure shields are in place to prevent combustible materials coming in contact with hot surfaces of 220 degrees Celsius or above.
 - Maintain exhaust lagging and seals in good condition.
 - Do not store flammable materials near possible sources of heat even if found cold.
 - Pay particular attention to the condition of hydraulic hoses and high pressure fuel lines.
 - Leak test oxy-acetylene equipment before use.
 - Dispose of oily rags using an approved container.
 - Appliances shall not be left on when unattended
 - Grease screens and exhaust fan trunking should be cleaned regularly

- Grease accumulations to be removed wherever found
- High lip pans are to be used to avoid grease spills and fires
- Keep laundry dryer(s) lint traps and exhaust trunking free from lint build-up.

3.4 MUSTER LISTS AND BUNK CARDS

- a) Muster Lists for emergency stations shall be prepared and approved by the Commanding Officer in compliance with the [Fire and Boat Drill Regulations. On two-crewed vessels](#) both Commanding Officers shall sign the Muster List.
- b) Each cabin shall have a placard that indicates the primary and secondary escape routes and each bunk shall have a bunk card that shows the emergency stations and designated duties for the occupant.

3.5 PUBLIC ADDRESS SYSTEM

- a) The public address system shall be maintained in good order.
- b) The vessel's complement shall be trained in the use of the public address system.

4 DOCUMENTATION

- Site Specific Contingency Plan
- Log Book Entries

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

8.B.3 - FIRST AID AND MEDICAL SERVICES ABOARD VESSELS

1 PURPOSE

- a) To ensure Canadian Coast Guard (CCG) vessels provide personnel trained to a reasonable level of medical care when responding to the injury or illness of employees.

2 RESPONSIBILITIES

2.1 DIRECTOR GENERAL, FLEET

- a) The Director General, Fleet shall provide, through consultation with the Treasury Board and Health Canada, a comprehensive list of medications and equipment to be carried aboard CCG vessels. The area of operation, the size of the crew, and the length of voyage are to be considered in the production of this list.
- b) Regional Directors, Fleet shall ensure that first aid certificate training courses are conducted at frequent and regular intervals within the Region to maintain or improve the self-help capabilities of the Fleet in regard to emergency first aid response.

2.2 COMMANDING OFFICERS

- a) Commanding Officers shall ensure that:
 - The medical supplies and equipment required by this procedure are carried aboard and that they are secured from unauthorized use.
 - The first aid trained personnel required by this procedure are carried aboard at all times.
 - Signs are placed, and the vessel's complement is instructed, to report all injuries immediately to their respective supervisor.

2.3 PERSONNEL TRAINED IN THE PRINCIPLES OF FIRST AID

- a) Personnel trained in the principles of First Aid shall diligently apply themselves to exercises and refresher training to maintain their skills at an optimum level.

3 INSTRUCTION

3.1 REFERENCE

- a) The common source of reference to be carried aboard CCG vessels for emergency medical response is the [International Medical Guide for Ships](#) published by the World Health Organization. This publication has been adopted and endorsed by the International Maritime Organization and the International Labour Organization for seafarers.

3.2 FIRST AID ATTENDANTS

- a) As per the [Maritime Occupational Health and Safety Regulations \(MOHS\) Part 6 \(106\)](#), each vessel shall carry aboard, within their normal complement, at least one person who holds a marine advanced first aid certificate. In any question as to the equivalency of a tendered certificate, the Marine Superintendent shall be consulted.
- b) CCG vessels shall comply with the requirements of CGFO 535 – Rescue Specialists Aboard CCG Ships. This meets or exceeds the requirement of section 3.2 (a).
- c) The names of the first aid certificate holders are to be posted in conspicuous locations easily accessible to the vessel's complement.

3.3 FIRST AID SUPPLIES AND EQUIPMENT

- a) Vessels are to maintain records of medical supplies held aboard to ensure that the quantities held are appropriate to the scale issued by the Director General, Fleet as per [Canadian Coast Guard Fleet Logistics Standard 400.00.07 - Pharmaceuticals, Medical Supplies, and Related Items](#) and that medication has not time-expired or will not time-expire during the planned voyage.
- b) In addition to any stock of medical supplies held aboard the vessel, there shall be a sufficient number of approved First Aid Kits to meet the [Maritime Occupational Health and Safety Regulations \(MOHS\)](#), placed in conspicuous locations and identified by prominent signs.
- c) First Aid Kits shall also be provided to all parties working remotely from the vessel.
- d) First Aid Kits are not to be locked or held in locked inaccessible spaces. The use of tamper seals is permitted to ensure that the inventory is accurate.
- e) The First Aid Kits are to be inspected monthly during the vessel's operational periods and are to be replenished as required.

3.4 PHYSICIAN SERVICES

- a) Physician oversight and authorization is required to administer many items already available in medical kits and pharmacies onboard CCG vessels. This oversight shall be obtained prior to the use of CCG supplied pharmaceutical or to obtain medical support or advice regarding the assessment of a patient's medical condition.
- b) Contact information shall be provided in a Fleet Circular published as required when the contact information changes. This information shall be readily available to the First Aid attendant.

3.5 RECORDS

- a) Vessels shall maintain registers of all first aid treatment provided aboard the vessel.
- b) The register is not to be removed from the vessel.
- c) Each entry in the first aid record shall be signed by the person who provided the first aid

4 DOCUMENTATION

- List of Marine Advanced First Aid Certificate Holders
- Copy of Approved Scale of Pharmaceuticals, Medical Supplies, and Related Items (Annex A to CGFLS 400.00.07)
- First Aid Treatment Register
- Stock Records of Pharmaceuticals and Medical Supplies with Time Expiry Dates
- Inspection Record of First Aid Kits

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

9.0 - REPORTS AND ANALYSIS OF NON-CONFORMITIES, ACCIDENTS, SECURITY INCIDENTS AND HAZARDOUS OCCURRENCES

1 REPORTS OF NON-CONFORMITIES AND OBSERVATIONS

Reports of non-conformities or observations can be raised by any individual. These are raised to highlight a health, safety, security or environmental deficiency. Whenever possible, the Commanding Officer or Site Manager shall take immediate corrective action.

Any non-conformity or observation report generated shall be closed out at the site level within the timeframe established unless a written request for an extension was requested.

The Commanding Officer shall report all non-conformities and observations to the Superintendent Fleet Safety and Security including any action taken to date.

All reports are reviewed by the Director / Superintendent Fleet Safety and Security and relevant senior management.

2 INCIDENT REPORTS AND INVESTIGATIONS

All incidents are to be thoroughly investigated with the aim of determining the root cause and applying the appropriate corrective action.

Any plans for corrective action will be aimed at ensuring that recurrences of incidents or deficiencies in the Safety Management System are avoided.

Investigation reports are analysed with the objective of improving health, safety, security and pollution prevention activities aboard vessels.

3 SHIPBOARD OCCUPATIONAL HEALTH AND SAFETY COMMITTEES

Representatives from CCG vessels shall engage in Occupational Health and Safety Committee activities. Meetings shall be regularly scheduled and results from the meeting posted for the review by the crew.

Incident, non-conformities and observation reports shall be reviewed by the respective Occupational Safety and Health Committee where they were raised. These reports shall be analyzed with the aim of improving health, safety, security and pollution prevention activities aboard vessels.



Fleet Safety Manual

9.A.1 - SAFETY MANAGEMENT SYSTEM REPORTS OF NON-CONFORMITIES AND OBSERVATIONS

1 PURPOSE

- a) To ensure that all non-conformities (NCR) and observations are reported, investigated (corrective actions applied and closed out) and analyzed in order to reduce the possibility of reoccurrence.

2 RESPONSIBILITIES

2.1 PERSONNEL

- a) Personnel are responsible to identify and report all non-conformities/observations to their supervisor.

2.2 COMMANDING OFFICER / SHORE SITE MANAGER

- a) The Commanding Officer / Shore Site Manager are responsible to:
 - analyze all non-conformities within their area of responsibility;
 - Non-audit NCR's: The Commanding Officer and Superintendent, Fleet Safety and Security (SFSS) shall determine the appropriate type of NCR issued (Major, Minor, Observation).
 - determine and implement appropriate corrective action;
 - transmit Non-Conformity / Observation reports to the SFSS.

2.3 DIRECTOR/SUPERINTENDENT, FLEET SAFETY AND SECURITY

- a) The Director/Superintendent, Fleet Safety and Security is responsible to
 - ensure that all Non-conformity / Observation Reports have been analyzed and that appropriate corrective action has been taken.
 - ensures that this procedure is understood by vessel personnel and shore staff
 - ensure that the response to the reporting is prompt, effective and appropriate to the circumstances.

3 INSTRUCTION

3.1 REPORTING

- a) All Employees shall identify and report in writing all non-conformities / observations to their supervisor. The Commanding Officer / shore site manager must report the non-conformity/observation to the SFSS and jointly determine the type of NCR (Major, Minor, Observation) and assign a sequentially numbered Non-Conformity / Observation Report.
- b) When a non-conformity has been identified, the Commanding Officer / Shore Site Manager, in consultation with the SFSS (where appropriate), shall develop and implement appropriate corrective action. If the non-conformity is corrected immediately, the report is still required.

Note 1: For regions utilising the Optional Modified Certification Process for Station Mode Vessels, all findings that are raised during Station Audits are to be issued to the station, referencing the vessel located at the Station at the time.

- c) Not all reported observations may require corrective action but a report indicating what action was taken, if any, must be filed with the SFSS nevertheless.
- d) The SFSS shall maintain a register of all Non-Conformities / Observations and is responsible to ensure that corrective action is completed in the specified time frame. The SFSS shall ensure that the person who identified and reported the non-conformity or observation receives a copy of the completed report.

3.2 CORRECTIVE ACTION

- a) The responsibility for developing a corrective action plan rests with the position signing the non-conformity report as the Vessel/Department Representative.
- b) A major non-conformity filed against a vessel must be addressed immediately, at least to the point where it can be down-graded to a minor non-conformity, before the vessel can be released for operations.
- c) In cases where the Commanding Officer or shore site manager does not have the necessary resources or authority to implement the corrective action plan, they shall forward a copy of the non-conformity to the appropriate senior officer ashore. In these circumstances, the Commanding Officer or shore site manager is to notify the SFSS of the particulars of the situation so that the SFSS can consult with senior management and ensure that assistance is provided to address the non-conformity situation within the time limit set.
- d) While corrective action remains outstanding, personnel shall be briefed and cautioned concerning the use of the procedure or the equipment affected by the report of non-conformity.

- e) There may be cases during follow-up on a reported non-conformity whereby the review determines that the corrective action has not been implemented or is not effective. If this follow up occurs prior to the next planned internal audit then this shall be noted in the follow-up section and the NCR will remain open. At the next scheduled internal audit when NCR follow-up takes place and it is found that the corrective action has not been implemented or is not effective; the original non-conformity report should be annotated and closed and the original non-conformity should be re-issued on the next available sequential non-conformity number, with an appropriate cross-reference of numbers shown.

3.3 TIMELINES FOR CORRECTIVE ACTION

- a) A corrective action plan (CAP) shall be forwarded within the time prescribed by the Classification Society. For those cases where immediate correction is not possible, the plan shall contain the title of the individual(s) who is/are being assigned responsibility for completion and milestone dates to assess progress towards full completion of the plan. If the CAP as originally developed cannot be met then a note has to be attached justifying the delay.
- b) The majority of reported minor non-conformities will be within the capacity of the Commanding Officer or shore site manager to effect immediate corrective action and where this is the case, a corrective action plan must be developed and recorded no later than seven (7) days following receipt of the NCR. Vessels on a dual system (lay-day or 46.6) shall provide the CAP no later than forty-five (45) days in order to ensure that both crews have a chance to review the plan.
- c) The time required to fully implement a corrective action should not be more than ninety (90) days (not including lay-up time) from the date on which the non-conformity is reported. If this time is exceeded, the responsible Commanding Officer / Shore Site Manager should provide to the SFSS the estimated date for completion and a new follow-up date should be established.
- d) All reported non-conformities/observations can be closed out either when confirmation is received by the SFSS that the CAP has been implemented or upon review at a future audit.

3.4 REVIEWING NCR/OBSERVATIONS

- a) All reported non-conformities/observations shall be included on the agenda of the shipboard OHS Committee. All vessels shall retain copies of all non-conformities/observations for a period of five (5) years from the date they were closed out.
- b) In order to provide for continuous improvement of the SMS, copies of all Non-Conformities and Observations must be forwarded to the Director, Fleet Safety and Security for review and to identify any national areas of improvement. These reports are to be reviewed on a regular basis with annual reports being prepared by the Director, Fleet Safety and Security for presentation to the National SMS Review Committee for discussion and decision.

4 DOCUMENTATION

- Sequential Register of NCR's
- Minutes for Shipboard Occupational Health and Safety Committee Meetings
- Superintendent, Fleet Safety and Security File of NCR's

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

9.B.1 - REPORTS OF HAZARDOUS OCCURRENCES, INJURIES, UNSATISFACTORY CONDITIONS AND SIGNIFICANT NEAR MISSES

1 PURPOSE

- a) To ensure that all hazardous occurrences, injuries, significant near misses and unsatisfactory conditions are reported and that all reported occurrences are properly investigated and analyzed with the objective of improving health, safety, security of individuals, assets and protection of the environment.
- b) This procedure is supplementary to any requirement to issue a call for aid through the use of a MAYDAY message to the Search and Rescue Network.
- c) Proper investigation and reporting also provides the necessary information to identify potentially unsafe acts, unsafe conditions or areas of high risk. It assists in identifying direct cause, root cause and determining corrective actions to reduce or prevent similar occurrences in the future. This information is also extremely important for statistics, analysis, determining effectiveness, program direction and continuous improvement of the Safety Management System (SMS).

Note 1: It should be clearly understood that this Procedure does not supersede or replace additional official reports which may be required by regulatory authorities, such as:

- the *Canada Labour Code, Part II*
- the *Aeronautics Act*
- the *Shipping Casualties Reporting Regulations (CSA)*
- the *Transportation Safety Board Regulations*
- the *Federal Halocarbon Regulations*
- the *Guidelines for Reporting Incidents Involving Dangerous Goods, Harmful Substances and/or Marine Pollutants (TP9834)*

2 RESPONSIBILITIES

2.1 ALL EMPLOYEES

- a) All employees have a responsibility to report all hazardous occurrences, injuries, significant near misses and unsatisfactory conditions to their supervisor.

2.2 NON-FLEET EMPLOYEE(S)

- a) Non-Fleet Employee(s) have a responsibility to report all hazardous occurrences, injuries, significant near misses and unsatisfactory conditions to their supervisor for their information and follow up.

2.3 SUPERVISOR

- a) The Supervisor is responsible to investigate and report all hazardous occurrences, injuries, significant near misses and unsatisfactory conditions that occur within their area of responsibility and to take prompt action to initiate corrective action to prevent a recurrence

2.4 COMMANDING OFFICER

- a) The Commanding Officer (in conjunction with the Pilot-in-Command) is responsible:
- to ensure that complete preliminary and amplifying reports are transmitted and to forward the Incident Investigation Report (IIR) to the Regional Operations Centre (ROC).
 - to ensure that all incidents involving even the most minor injury on duty or near miss involving the vessel, working aboard, engaged away from the vessel, crews at shore sites including any personnel that are not part of the vessel's regular compliment, i.e. other Government personnel, contractor's employee's etc, are properly investigated and recorded.
 - and to inform the Superintendent Fleet Safety and Security (SFSS) of all hazardous occurrences, injuries, significant near misses and unsatisfactory conditions

2.5 REGIONAL OPERATIONS CENTRE

- a) The ROC shall be the distribution centre for all IIRs to other Government agencies and to the SFSS as required.

2.6 SUPERINTENDENT, FLEET SAFETY AND SECURITY

- a) The SFSS is responsible:
- to ensure that all reports are reviewed, analyzed to ensure that they contain the necessary information to determine the appropriate corrective action required is implemented. If information is missing from the report's the SFSS or their delegate shall contact the vessel/site and request the necessary information;
 - to ensure that the response to the reports is prompt, effective and appropriate to the circumstances;

- to ensure that the response to reports for all hazardous occurrences, injuries, significant near misses and unsatisfactory conditions has been taken are prompt, effective, appropriate to the circumstances and within the time limits set in section 3.1 (c) of this procedure.

2.7 MARINE SUPERINTENDENT

- a) The Marine Superintendent is responsible to ensure that Workers Compensation Board (WCB) forms are forwarded to the Regional Occupational Health and Safety Officer.

2.8 MANAGER, HELICOPTER SUPPORT

- a) The Manager, Helicopter Support is responsible to investigate and review reports related to helicopter operations.

2.9 INCIDENT INVESTIGATION REPORTS

- a) All IIRs and the resulting corrective actions are to be reviewed by the OHS Committee at the workplace.

3 INSTRUCTIONS

3.1 GENERAL

- a) In general all reported Hazardous Occurrences, Injuries; significant Near-Misses and Unsatisfactory Conditions shall be investigated by the supervisor and an occupational safety and health committee representative, other than the supervisor, with the objective of improving health, safety, security and pollution prevention activities.
- b) Following the formal report of any Hazardous Occurrences, Injuries; Significant Near-Misses and Unsatisfactory Conditions, a corrective action plan (CAP) shall be developed that is aimed at action to prevent a recurrence.
- c) Corrective action that is within the scope of the vessel or site's authority and resources; requires a plan to be filed within seven (7) days of the occurrence. For issues that must be referred to higher authority for action – a plan is to be filed within thirty (30) days of the occurrence. Corrective action should be implemented and completed within ninety (90) days of the occurrence.
- d) For vessels temporarily transferred between regions – the host region shall provide to the vessels home region, all reports of hazardous occurrences, injuries, unsatisfactory conditions, and significant near misses. The vessels home region is responsible for entering this information into the Fleet Safety and Security database.

3.2 HAZARDOUS OCCURRENCES, INJURIES, SIGNIFICANT NEAR MISSES AND UNSATISFACTORY CONDITIONS

- a) A reportable marine accident is an accident resulting directly from the operation of the vessel where:
- person sustains a serious injury or is killed as a result of:
 - being on board the vessel or falling overboard from the vessel
 - coming into contact with any part of the vessel or of its contents, or
 - the vessel
 - sinks, founders or capsizes,
 - is involved in a collision,
 - sustains a fire or an explosion,
 - goes aground
 - sustains damage that affects its seaworthiness or renders it unfit for its purpose
 - is missing or abandoned.
- b) A reportable helicopter accident results when:
- a person sustains serious injury or is killed as a result of:
 - being aboard the helicopter,
 - coming into contact with any part of the helicopter,
 - being directly exposed to jet blast or rotor downwash,
 - or when the helicopter:
 - sustains damage or failure that has an adverse affect on strength, performance, or flight characteristics and requires major repair or replacement of any part
 - is missing or inaccessible.
- c) A reportable marine incident is an incident resulting directly from the operation of the vessel where:
- a person falls overboard from the vessel,
 - the vessel unintentionally makes contact with the bottom without going aground,
 - the vessel fouls a utility cable or pipe, or an underwater commodity pipeline,
 - the vessel is involved in a risk of collision,
 - the vessel sustains a total failure of any machinery system,
 - the vessel sustains a shifting of cargo or a loss of cargo overboard,
 - the vessel is intentionally grounded or beached to avoid an accident,

- any crew member whose duties are directly related to the safe and secure operation of the vessel is unable to perform the crew member's duties as a result of a physical incapacitation that poses a threat to the safety and security of any person, property or the environment, or
 - any dangerous goods are released on board or from the vessel.
- d) A reportable helicopter incident includes:
- engine failure or shutdown as a precaution,
 - transmission or gearbox malfunction,
 - smoke or fire,
 - difficulties in control due to system malfunction, weather, wake turbulence, uncontrolled vibrations, or operations outside the flight envelope,
 - failure to remain within take-off or landing area,
 - crew member incapacity where safety is threatened,
 - fuel shortage requiring diversion or landing priority,
 - refuelling with incorrect or contaminated fuel,
 - collision or risk of collision,
 - crewmember declares an emergency or indicates emergency requiring priority handling,
 - slung load released unintentionally or as a precautionary measure, or
 - any dangerous goods are released in or from the helicopter.
- e) A disabling injury is an employment injury or illness that:
- prevents an employee from reporting to work or from effectively performing all the duties connected with the employees regular work on any day following the day on which the injury or disease occurred, whether or not the day following is a working day for the employee.
 - results in a loss by an employee of a body member or part of a member or in the complete loss of the usefulness of a body member.
 - results in the permanent impairment of a body function of an employee.
- Note 1:** Section (e) refers to [Maritime Occupational Health and Safety Regulations\(MOHS\), Part I \(1\)](#)
- f) A significant near miss is:
- An undesired event, which in different circumstances could have resulted in harm to people, has or could have had an impact on the operational status of the vessel, damage to property and/or loss to a process.
- g) A Security Incident:
- a threat or act of violence toward employees while on vessels business or otherwise affecting the vessels security or operation.

9.B.1

REPORTS OF HAZARDOUS OCCURRENCES, INJURIES, UNSATISFACTORY CONDITIONS AND SIGNIFICANT NEAR MISSES

- a compromise of any vessels asset, or any act or omission that could result in a compromise;
- h) An unsatisfactory condition is defined as:
 - Technical problems, breakdown or deficiencies with systems or equipment that do not meet the definition of a Hazardous Occurrences but may affect the safe operation of the machinery or the safe / efficient delivery of the program and where the sharing of the information related to the condition may improve the overall safety / efficiency of the operation.
- i) Retention of parts after significant failure or damage:
 - Failed or damaged parts in vessel equipment and systems that are subject to an investigation through the submission of a Hazardous Occurrence (HO) and Non-Conformance (NCR) shall be retained onboard the vessel or on shore, properly numbered as evidence, following the formal reporting of that incident.
 - The retention of the part(s) shall allow Engineering Services to review the incident report and determine if additional information or scrutiny of the retained part(s) is required to complete the investigation.
 - The responsible Engineering Services Manager shall indicate that the part(s) are no longer required and may be disposed of through normal procedures.

3.3 THE PRELIMINARY REPORT

- a) It is important, for a number of reasons, for management ashore to be fully aware of any incident involving a CCG vessel or a CCG helicopter that impacts the vessels program. The formal report does not provide the immediacy of information required by management ashore to respond to inquiries by parliamentarians, members of the media, or members of the families of the crew. For this reason, vessels and helicopters shall provide a preliminary report in accordance with this procedure.
- b) The ROC shall be responsible to establish and maintain a list for the dissemination of Hazardous Occurrence Preliminary and Amplifying Reports.
- c) The Preliminary Report, which is a descriptive notification of a reportable marine or helicopter accident or incident or disabling injury, shall be dispatched as soon as possible, but within twenty-four (24) hours of the incident, to the ROC which shall disseminate the report to the following offices:
 - National Coordination Centre (NCC);
 - Director, Fleet Safety and Security (DFSS);
 - Regional Director, Fleet;
 - Superintendent, Fleet Safety and Security (SFSS).
- d) If the incident happens while the employee was working ashore, and results in any of the following, the preliminary report shall also be made from the ROC by telephone to a health and safety officer of Human Resources and Social Development Canada as soon as possible but not later than 24 hours:
 - the death of an employee;
 - a disabling injury to two or more employees;

- the loss by an employee of a body member or a part thereof or the complete loss of the usefulness of a body member or a part thereof;
- the permanent impairment of a body function of an employee;
- an explosion;

Note 1: This report is in addition to any immediate radio report that must be filed with the authorities as required by the *Transportation Safety Board Regulations – Section 3(1)*.

3.4 MESSAGE OUTLINE

The report shall be transmitted using the format outlined below, i.e. address, followed by the text, which must be identified by the letter designator for each topic reported on, followed by the Commanding Officer's / Pilot-in-Command's signature.

- A** the identity of the Fleet Unit from which the report is being made
- B** the nature of the accident/incident
- C** the identity of the vessel(s) and/or helicopter involved in the accident /incident
- D** the date, time (local) and location of the accident /incident
- E** the present state of seaworthiness or airworthiness of the vessel or helicopter involved and a brief assessment of damage, if applicable
- F** the intended action of the damaged or affected vessel or helicopter
- G** assistance required, if any, and services already summoned
- H** a statement of persons killed, missing or injured, if any
- I** whether the accident/incident has caused or is likely to cause an obstruction to navigation or any other serious hazard,
- J** whether or not the accident/incident has caused or is likely to cause pollution of any waters, including details as per *Guidelines for Reporting Incidents Involving Dangerous Goods, Harmful Substances and/or Marine Pollutants (TP9834E)*, as applicable
- K** miscellaneous information, not included above, of significance to addressees such as state of weather and sea, present and forecast.

- a) In the event of a spillage of cargo or bunkers, the following items should be added:
 - type of oil or cargo spilled
 - cause of incident (overflow, broken hose, hull damage, etc)
 - quantity Spilled
 - rate of spillage
 - cleanup attempted by vessel or third party
- b) The Preliminary Report shall be transmitted using the most appropriate means available taking into consideration *CGFO 130.00* and the nature of the occurrence. Commanding Officers shall be aware that certain security precautions are required when sending reports containing sensitive information. i.e. reports containing a name, date of birth, SIN, etc. (Refer to the *DFO Designated and Classified IT Media - Labelling and Handling Standard*)
- c) When vessels are under operational control of a region other than its home region, preliminary reports shall be sent to the assignment region which will provide a copy to the home region.

3.5 THE AMPLIFYING REPORT (WHEN REQUIRED)

- a) An Amplifying Report may be sent at the Commanding Officer's / Pilot-in Command's discretion following the Preliminary Report to inform authorities when significant changes in the situation have occurred, pertinent additional information has become available, or confirmation of assistance is required. The identity of persons injured and an update on their condition, as well as the identity of persons whose lives have been lost, should also be included in this report. The Amplifying Report shall follow the same format and distribution as the Preliminary Report.

3.6 THE WRITTEN REPORT (INCIDENT INVESTIGATION REPORT (IIR))

- a) The legal requirement is that a written report shall be completed within twenty-four (24) hours immediately following the first landing after the incident. For vessels at sea that may not be entering port for a number of days, the CCG expects, except in extraordinary circumstances, that a written report shall be transmitted within seventy-two (72) hours of the incident taking place. With all requisite fields completed, this report shall represent the findings of the onboard investigation and provide a comprehensive record of; the incident description and determinations as to cause and the assigned corrective action to prevent recurrence.
- b) A copy of the IIR shall be forwarded to the ROC for distribution to other Government authorities as appropriate and the SFSS.
- c) In addition to the report in Para 3.3 (a), where a member of the vessel's complement has been injured, the appropriate Workers Compensation Board (WCB) documentation must be completed in accordance with the appropriate Provincial Rules and Regulations. Upon completion, these forms shall also be forwarded to the Marine Superintendent who must immediately forward them to the Regional Occupational Health and Safety Officer. It is not necessary to distribute copies of WCB forms to the other addressees shown in section 3.3 (c). The Marine Superintendent shall maintain copies of the WCB forms.

- d) Non Fleet employee(s): A copy of the Hazardous Occurrence report shall be sent to the employee(s) supervisor for their information and action.

3.7 MINOR INJURIES

- a) For a minor injury, a written report shall be completed as soon as possible following the injury. (An Incident Investigation Report (IIR) shall be used).
- b) In addition to the written report, the appropriate Workers Compensation Board documentation must be completed in accordance with the appropriate Provincial Rules and Regulations. These forms are to be forwarded as per section 3.6. (c) of this procedure.

3.8 FIRST AID TYPE INJURIES

- a) For First Aid type injuries, the documentation required is an entry in the First Aid Log Book or WCB First Aid Sheet of the injury and the treatment provided. This book/sheet shall be retained onboard for a period of two (2) years after the date of last entry. This shall serve as verification of the reporting of the injury should there be subsequent difficulties encountered by the employee in making a complete recovery.

3.9 UNSATISFACTORY CONDITIONS AND SIGNIFICANT NEAR MISSES

- a) Unsatisfactory Conditions and Significant Near Misses shall be reported. The IIR form shall be used to report the incident to the SFSS.

3.10 NOTIFICATION OF CLOSURE OF REPORTS

- a) Vessels are to be notified of any Regional Reviews or closure of written reports.

3.11 REPORTING TO DFO OCCUPATIONAL HEALTH AND SAFETY

- a) The SFSS shall, upon receipt of reports of Hazardous Occurrence, Disabling Injury and Minor Injury, send a copy of the preliminary or written report to the Regional Occupational Health and Safety Officer for the regulatory requirement of Employer's Annual Hazardous Occurrence Investigation Report.
- b) The copy of the report shall indicate:
- That occurrence is investigated by Fleet
 - Which jurisdiction the incident falls under (MOHS or COHS – see note)
 - The information is provided for statistical purposes only.

Note 1: A MOHS incident is when the activity performed by the employee is part of the marine operation, or the occurrence is the direct result of loading and unloading the vessel within the swing of the vessel's boom or on the gangway.

3.12 SECURITY INCIDENT

- a) Upon receipt of a preliminary report related to a security incident where it is evident immediate investigative action is required the ROC shall notify the SFSS as well as the DFO Regional Security Officer, as soon as practicable, of the incident. This report shall follow the general format as outlined in section 3.4 of this procedure.
- b) If necessary an amplifying report shall be submitted and shall follow the general format as outlined in section 3.5 (a) of this procedure.
- c) A written report (IIR) of all security incidents shall be made as soon as possible after the incident to the ROC.
- d) The ROC shall forward a copy of this report to the SFSS as well as the DFO Regional Security Officer.

4 DOCUMENTATION

- First Aid Log Book Entries
- Incident Investigation Report

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

9.B.2 - MAJOR HAZARDOUS OCCURRENCE – FORMAL INVESTIGATION

1 PURPOSE

- a) To ensure that all major hazardous occurrences and significant near misses are investigated under formal Terms of Reference (TOR) are adequately investigated to fully establish causes, to prevent any possible recurrences, to improve the safety understanding of crews and shore managers, and to make necessary changes and improvements to the Safety Management System (SMS).
- b) To ensure that recommendations made pursuant to an investigation of a major incident receive full attention of senior management, are acted upon and that lessons learned are communicated.

Note 1: Investigations by regulatory agencies, police agencies, or coroners and other officers of the Courts, are separate and apart from the Canadian Coast Guard's (CCG) internal responsibility to self investigate, correct, and improve the CCG's SMS.

2 RESPONSIBILITIES

2.1 COMMISSIONER OF THE CCG

- a) The Commissioner of the CCG shall convene a formal investigation into any major hazardous occurrence that:
 - involves the death or a serious threat to the life of any person aboard a CCG vessel or helicopter;
 - produces serious injuries requiring hospitalization or medical evacuation to more than one person as a result of the same incident at the worksite;
 - is a collision, grounding, striking, fire or explosion that occurs aboard a CCG vessel, small craft or helicopter where the estimated costs of the loss are expected to exceed one million dollars (\$1,000,000) or is a total constructive loss of the vessel or small craft.
- b) The Commissioner of the CCG may convene an investigation into any hazardous occurrence or near miss that involves the operation of a CCG vessel or helicopter when there is potential for the investigation to advance safety.

2.2 ASSISTANT COMMISSIONER

- a) The Assistant Commissioner may convene an investigation into any hazardous occurrence or near miss involving a CCG vessel or helicopter operating in their area of responsibility, other than in circumstances listed in section 2.1 of this procedure. The Assistant Commissioner shall not commence an investigation into a hazardous occurrence or near miss where the Commissioner has already indicated that an investigation shall be convened.

2.3 SUPERINTENDENT FLEET SAFETY AND SECURITY (SFSS)

- a) The SFSS is responsible for receiving reports from vessels and investigation teams, ensuring that investigation teams are suitable for the task at hand, and verifying that recommendations to correct hazardous occurrences have been effectively implemented.

2.4 LEAD INVESTIGATOR

- a) The Lead Investigator is responsible for confidentiality of information received, submitting progress reports as required, reporting to convening authority and ensuring timelines are met as specified in the Terms of Reference, making any recommendations as per section 1.1 (b) of this procedure and assist the SFSS in assembling a suitable investigative team. Lead Investigator shall also ensure the investigation team adheres to the terms of reference as submitted by the convening authority.

2.5 EMPLOYEES

- a) Employees have a responsibility to cooperate with an investigation.

3 INSTRUCTION

3.1 INVOKING AN INVESTIGATION AND FILLING OF THE REPORT

- a) Only the Commissioner or Assistant Commissioner may convene a formal investigation into an incident regarding a CCG asset. Any other incident where an internal investigation would have the potential to advance safety would still require approval from the Assistant Commissioner and terms of reference.
- b) Following the initial report of a hazardous occurrence or near miss, the investigation convening authority shall notify both the Director Fleet Safety and Security and the SFSS, the Commissioner or the Assistant Commissioner, the Director General; Fleet, Integrated Technical Services and Maritime Services that they intend to cause an investigation to be conducted into the circumstances of the hazardous occurrence or near miss. They, in turn, shall notify the convening authority within twenty-four (24) hours of their concurrence with the proposed investigation and submit any proposed changes to the action plan including their directorate participation in the investigation.

- c) The intention of the convening authority to investigate shall be expressed in the form of written Terms of Reference (TOR) issued to the lead investigator. The TOR shall state any specific requirement for involvement of any other Directorate in the investigation and be signed and dated by the originator. Copies of the TOR shall be issued to the appropriate offices subordinate to the convening authority and to the Commanding Officer of the vessel or Pilot-in-Command of the helicopter involved. An example is shown as Annex A of this procedure.
- d) The convening authority shall provide the necessary resources and authority (time, equipment, people, and finances) to the investigative team to properly carry out the investigation function.

3.2 THE INVESTIGATION TEAM

- a) The investigation team should be kept as small as possible but appropriately sized to meet the objectives of the investigation and the magnitude of the loss.
- b) This team must include, the Superintendent, Fleet Safety and Security, a representative of each directorate that the convening authority has indicated wants to be involved in the investigation and, a representative from the Shipboard Occupational Health and Safety Committee or the appointed Safety and Health Representative

Note 1: *The [Canada Labour Code, Section 135\(6\)\(e\)](#) requires the participation of the OHS Committee in all inquiries and investigations pertaining to occupational health and safety. This requirement is further reinforced in the *Treasury Board Standard – Committees and Representatives Directive*.*

- c) In the case of a helicopter accident, the Manager, Helicopter Support from CCG Fleet Headquarters shall be assigned to the investigation team in addition to any other members selected by the lead investigator. Pilots and engineers of CCG helicopters are employees of Transport Canada, Aviation Services; therefore, Transport Canada may request their presence on a CCG internal investigation team. The Manager, Helicopter Support shall be responsible for inviting and directing representatives of Transport Canada under the general direction of the lead investigator.
- d) The lead investigator, or at least one member of the investigation team, shall have received formal training in investigation methodology.

3.3 CONDUCT OF THE INVESTIGATION

- a) The investigation team shall conduct on-site inspections and interviews of all involved persons having any connection with the hazardous occurrence or near miss.
- b) Normally, two (2) members of the investigation team shall be present at all interviews of persons connected with the hazardous occurrence or near miss and notes shall be taken. These notes shall be included in the background material to the investigation report. The lead investigator may use various means to make a verbatim record of interviews.

- c) Interviewees are to be advised, before they are interviewed and in sufficient time to make any necessary arrangements, that they have the right to be accompanied, represented, or advised by an attorney or counsel of their choice. The person accompanying the employee cannot be a person who has been identified as a potential interviewee in the investigation at hand. Any costs associated to having such assistance remain the responsibility of the employee.
- d) Original documents shall remain aboard the vessel and photocopies of the originals should be entered in the investigation report.
- e) All materials gathered, statements recorded, or notes made during an investigation may be called into evidence in a court of law or may be subject to release under the provisions of the [Access to Information and Privacy Acts](#). Interviewees are to be made aware of this fact.

3.4 INVESTIGATION REPORT

- a) The investigation report shall contain the following elements:
 - Factual information relevant to the investigation
 - information related to certification, training, experience, and duty hours of personnel directly involved in the incident
 - Description of damage or injuries incurred
 - Location of the incident both geographically and site oriented
 - Date and time of the incident
 - Other related factors such as state of tide, weather, sea condition, visibility, traffic, etc at the time of the incident
 - The sequence of events that led to the hazardous occurrence or near miss highlighting the potential safety significant events (Any event that played a role or could have played a role in causing an occurrence or an event that is deemed worthy of further analysis).
 - Analysis
 - How the incident occurred (The existence of unsafe acts / conditions that led to the event.)
 - Why the incident occurred (The identification of underlying acts or conditions.)
 - Direct causes and contributing factors
 - Conclusions
 - Findings (The lack or inadequacy of Control systems that led to the event)
 - Recommendations
- b) The investigation team is to identify any system failure(s), make recommendations to reduce the risk of a recurrence and to improve the SMS. The investigation team shall not make recommendations for disciplinary action to be taken as result of the hazardous occurrence.
- c) The report shall always refer to position titles as opposed to name of individuals.

- d) Prior to completion of the report nothing should prohibit the investigation team in making recommendations for temporary measures to address substandard acts or conditions, such as a fleet bulletin or stop work order.
- e) Before presenting the final report, the lead investigator shall, on a confidential basis, send a copy of the draft investigation report to the SFSS, the lead investigator should verify/recommend that pertinent sections of the draft are to be sent to each person who in their opinion, has a direct interest in the findings. These persons shall be given a reasonable opportunity to make representations to the investigation team with respect to the draft report before the final report is prepared.
- f) The lead investigator shall consider representations made pursuant to section 3.4 (e) of this procedure before the final report is prepared. The lead investigator may reconvene the investigation team to consider representations at his or her discretion.

3.5 DISTRIBUTION AND COMMUNICATION OF INVESTIGATION REPORT

- a) Upon completion of the investigation, the convening authority receiving the report shall call a special meeting of the interested parties (Director / Superintendent, Fleet Safety and Security, lead investigator, etc) to discuss the report and its recommendations in order to develop an action plan.
- b) The action plan shall include a communication plan. The distribution of the report and action plan shall be as broad as possible and, at a minimum, be the Commissioner or the Assistant Commissioner, the Director General; Fleet, Integrated Technical Services, Marine Programs and the Director / Superintendent, Fleet Safety and Security as appropriate.
- c) The appropriate (regional and national) SMS review committee shall review the action plan on the recommendations and proposals contained in the report and these actions are to be recorded in the minutes of the meeting.
- d) The actions to be taken to address the recommendations of the investigation report shall be tracked by the appropriate Director / Superintendent Fleet Safety and Security and Convening Authority until such time as they feel that all deficiencies have been addressed to close out the Formal Investigation Report. Recommendations that have been rejected shall be annotated to that effect with justification documented.

4 DOCUMENTATION

- Investigation Team's Terms of Reference
- Investigation Report

ANNEX A – TERMS OF REFERENCE

To: XXXX XXX**Date:** July 3, XXXX**SAMPLE TERMS OF REFERENCE – INCIDENT INVESTIGATION
ENGINE ROOM FIRE ABOARD CCGS XYZ ON JULY 1, XXXX**

In accordance with the authority and procedures contained in the Fleet Safety Manual in section 9.B.2, you are directed to investigate the circumstances surrounding a fire in the engineroom of CCGS XYZ on July 1, XXXX, while at anchor at Iqaluit, Nunavut Territory.

A preliminary report was made by the vessel on July 1, XXXX, and was received by me on July 2, XXXX. A copy is attached.

You are to assemble an investigation team that shall include at least one other person who holds a Transport Canada Marine Safety, or CCG, certificate of competency. The team shall also include a representative member of the vessel's Occupational Safety and Health Committee in the investigation.

All reasonable costs for travel to and from the vessel and to meet with any witnesses who may not be aboard the vessel at the time of the investigation may be charged against my office. My administrative assistant will co-ordinate the necessary documentation.

All Departmental personnel are required to assist the investigation by responding to the teams questions and providing any requested documentation. Any failure to co-operate is to be reported immediately to me.

The investigation team is to determine:

- What occurred, including the sequence of events.
- The immediate contacts that led to the incident.
- The existence of any substandard acts or conditions that led to the event.
- The identification of the basic or underlying causes of the event.
- Any lack of management systems control that led to the event.
- The response of the emergency management team.
- The estimated immediate financial costs of the incident.
- Where it can be reasonably determined, the estimated associated costs of the incident such as vessel delay time, training of replacements, equipment substitution, etc.

The team is to identify any system failure(s), make recommendations to reduce the risk of a recurrence, to improve the Safety Management System. The investigation team shall not make recommendations for disciplinary action to be taken as result of the incident.

The team is to provide any assistance or information that may be requested by officials of the Marine Safety Directorate of Transport Canada, the Transportation Safety Board of Canada, or other official body that may be investigating this incident. You are authorized to act as the owner's representative in assisting investigative agencies or requesting information that they may have already gathered.

The report is to be made to me no later than August 2, XXXX.

Signature of Convening



Fleet Safety Manual

9.C.1 - SHIPBOARD OCCUPATIONAL HEALTH AND SAFETY (OHS) COMMITTEES

1 PURPOSE

- a) To ensure that the Canadian Coast Guard (CCG) Fleet complies with the requirements of the [Canada Labour Code II, regarding Workplace Health and Safety Committees](#).

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer is responsible to ensure that Shipboard OHS Committee meetings and Shipboard OHS Inspections are held at regular intervals, and that minutes of such meetings and inspection checklists are distributed in accordance with this procedure.

2.2 THE WORKPLACE HEALTH AND SAFETY COMMITTEES SHALL:

- a) develop and submit recommendations for the improvement of health and safety practices and programs at the worksite
- b) correct hazards or to minimize exposure to hazards to permissible exposure limits.
- c) review policy, standards and regulations pertaining to health and safety.
- d) initiate or recommend suitable corrective action to the Commanding Officer.
- e) participate in all inquiries and investigations pertaining to occupational health and safety aboard the vessel.

2.3 ALL CREW

- a) All crew have the responsibility to immediately report to their Supervisor any occupational health and safety concerns on board the vessel or at the worksite.
- b) When requested, Crew members shall participate in OHS activities, meetings and inspections.

3 INSTRUCTION

- a) All CCG Fleet crewed vessels, above 15 GRT, and stations are required to have OHS Committees. However, where a vessel with a crew of less than ten (10) chooses not to form a committee, one person from that crew, not in a managerial position, must be appointed to the local Joint OHS Committee and attend the meetings on behalf of the crew.
- b) Committee membership shall include both an employer co-chair and an employee co-chair; who shall jointly chair all meetings. The committee shall also include an officer and a crew representative from each department aboard.
- c) Where committees have been established, OHS meetings shall be held at regular intervals so that in a one year period a minimum of nine (9) meetings have been held at the worksite. (Regular intervals means equal spacing between meetings and held over a one year period of time)
 - On vessels and stations operating under a dual crew system, meetings and inspections shall be conducted at regular intervals. Meetings and inspections shall be evenly distributed between both crews.
 - On seasonal vessels and stations, meetings and inspections are not required to meet the minimum of nine (9) in a one year period. However they shall be conducted at regular intervals not exceeding a period of six (6) weeks during the operational season.
- d) Shipboard OHS inspections are to be conducted on a systematic basis, so that every part of the vessel is inspected at least once each year or in the case of a seasonal vessel once each season. Records are to be maintained of inspections and, if necessary, follow-up inspections conducted to correct deficiencies and ensuring that corrective or preventative actions are taken.
- e) Individual regions may require meetings on a differing frequency than stated above and such frequency is permitted provided that the minimum stated in this procedure is observed.
- f) A meeting shall be held following any hazardous occurrence.
- g) The agenda for a regular safety meeting shall include the following items:
 - A review of the minutes of the previous meeting and a determination of what action is required to address any outstanding items.
 - A review of the pertinent Hazardous Occurrence Investigation Reports and other related accident and/or safety and health reports.
 - A review of findings from Shipboard OHS Inspections conducted since last meeting.
 - A review of any safety management system related issues such as non-conformity reports.
 - A review of safety policies, standards, regulations, or bulletins received since the last meeting including amendments to the Fleet Safety Manual (FSM).

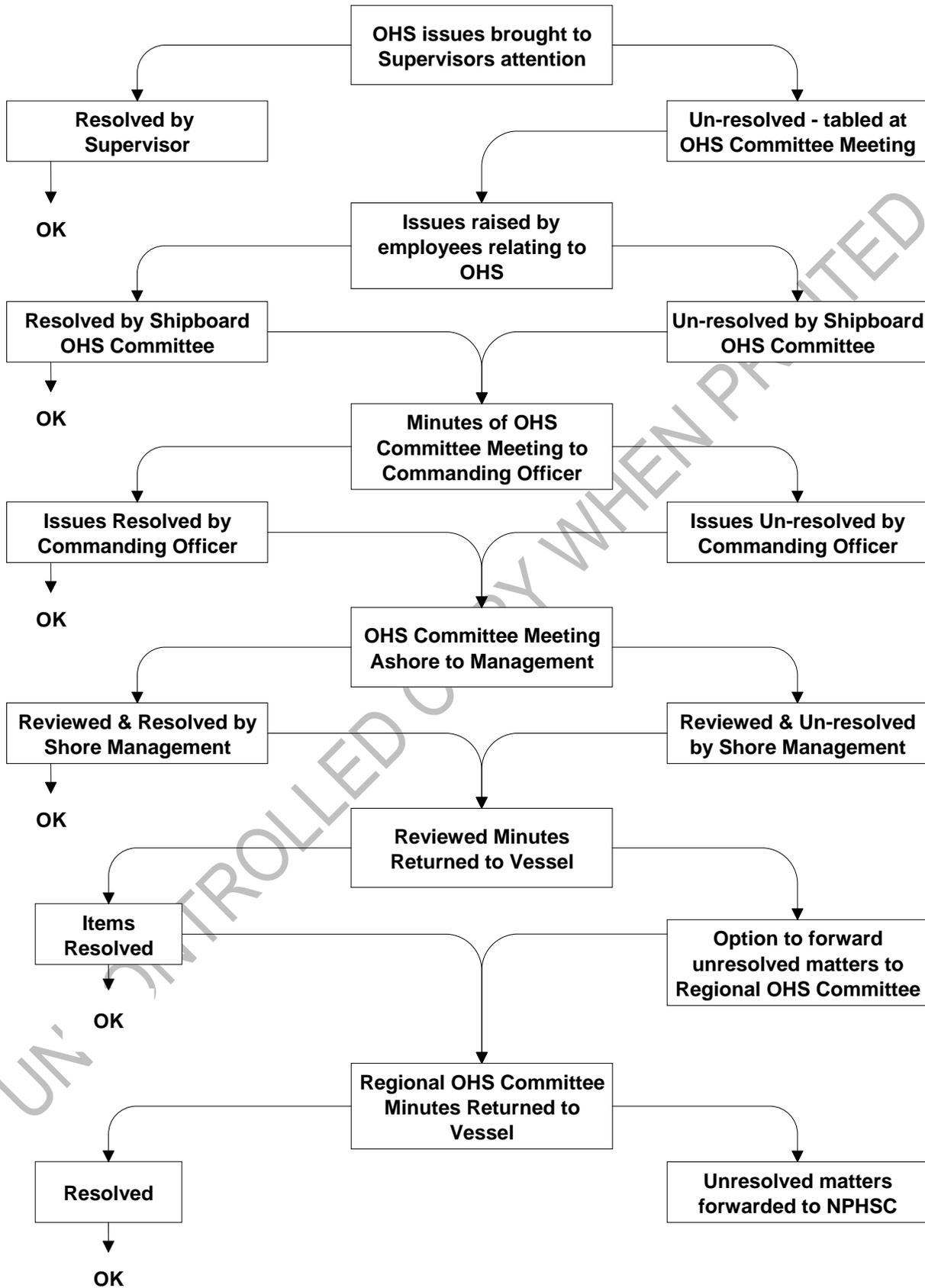
- A review of the availability of training courses and recommendations regarding attendance.
 - Formal identification of the need for additional shipboard work instructions or the need for amendments to existing instructions.
- h) All unresolved complaints shall be referred to the Superintendent Fleet Safety and Security (SFSS) who will then address the complaint with Regional Management. If unresolved, it is then to be forwarded to the DFO Regional OHS Committee.
- i) All meeting minutes and inspection checklists shall be posted for at least three months. A copy of these minutes shall be forwarded to the S. All reports shall be signed by the Chair and Co-chair.

3.1 TRAINING

- a) All employees serving as members of a shipboard Workplace Health and Safety Committee shall receive the prescribed training in health and safety and be informed of their responsibilities under the *Canada Labour Code, Part II*.

4 DOCUMENTATION

- Minutes of Meetings
- Shipboard OHS Inspection Checklists
- Reports of Hazardous Occurrences and Subsequent Review





Fleet Safety Manual

10.0 - MAINTENANCE OF VESSELS AND EQUIPMENT

1 MAINTENANCE OF THE VESSEL

- a) The Canadian Coast Guard (CCG) Fleet ensures that an integrated national framework for the management and maintenance of the vessel, machinery and equipment is in place through its Vessel Maintenance Management Manual. The manual incorporates the best practices essential to the ongoing operational readiness of the CCG Fleet and meeting our mandated responsibilities.
- b) Systems critical to the operation of the vessel are to be identified and any necessary spare parts are to be carried to assist with the self help capabilities for the vessel
- c) Any operational or maintenance work performed in the workplace either routine or non-routine in nature will have inherent hazards. It is crucial that before any work is started that employees; as a group or individually, take a few minutes to safely review the work to be performed. This review covers the various key steps of a Safety Self-Check.
 - This Safety Self-Check at a minimum shall cover these key points:
 - Identify the hazards
 - Assess the risks associated with each hazard
 - Plan a safe way to carry out the work.
- d) The Safety Self-Check is to be applied equally for site operations or maintenance routines. The hazards and their associated risks and exposures are to be assessed, a safe work plan to carry out the task is to be considered, identifying the Personal Protective Equipment (PPE) needed as necessary and identify responsibilities. It is not intended to have these Safety Self-Checks logged or recorded, the intent is to promote safety awareness so that employees are aware of the hazards, and have considered the risks and safeguards. If questioned an employee working on the site shall be aware of this safety requirement.
- e) Machinery and equipment are maintained on a routine basis and in accordance with manufacturer's recommendations. Where a manufacturer's data for maintenance is considered deficient, the CCG has developed procedures to ensure that the machinery or equipment is maintained to higher standards.

- f) The CCG Fleet ensures that impact analysis and evaluation of changes are undertaken prior to their implementation. CCG Fleet is managed through a formal system of configuration management that generates sufficient, accurate, and valid documentation reflecting the current configuration of as-fitted assets.
- g) Changes to vessels and equipment are approved through a specified Change Configuration Management process. No changes shall be made to vessels without approval through this process.
- h) Reports of hazardous occurrences affecting any system or sub-system are brought to the attention of vessels equipped in a similar manner to allow for changes in operating practice or maintenance practice. When a modification is allowed, the effect is then implemented into the applicable operating procedure.
- i) Policies, processes, procedures and guidelines have been developed for the management of vessel maintenance and the reporting of any non-conformities as a result of routine inspections.

2 MAINTENANCE OF THE VESSELS EQUIPMENT

- a) Where lifting gear is fitted onboard the vessel a procedure shall be established to ensure that the gear remains ready for use and that all associated lifting appliances are inspected.
- b) Every vessel shall ensure that fitted safety equipment is maintained in accordance to manufacturers requirements, CCG Policy or best practices and remains in a ready state at all times while the vessel is in operation.



Fleet Safety Manual

10.A.1 - IDENTIFICATION OF CRITICAL SYSTEMS

1 PURPOSE

- a) To identify shipboard equipment and technical systems, the sudden operational failure of which, may result in a hazardous situation to the vessel, to the crew, to another vessel, or to the environment.
- b) To ensure that the inspection, testing, and maintenance of these systems and equipment are integrated into the vessels operational maintenance routine thus ensuring critical system reliability.

Note 1: A Critical System is defined as equipment or technical systems, the sudden operational failure of which (when in use) may result in hazardous situations. The equipment referred to in this procedure would be limited to the operation of the vessel itself and not for equipment related to a program tasking.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER IN CONSULTATION WITH THE CHIEF ENGINEER

- a) The Commanding Officer in consultation with the Chief Engineer is to identify, list, record and maintain the critical systems and shall ensure that familiarization for the operation of critical systems aboard their vessel are in place.
- b) The Commanding Officer in consultation with the Chief Engineer shall ensure that the Superintendent, Marine Engineering receives a copy of the critical systems list as well as any revisions made to the list.

2.2 SUPERINTENDENT, MARINE ENGINEERING

- a) The Superintendent, Marine Engineering is to ensure, through an ongoing review of vessel reports, that the critical systems are contained in the preventative maintenance program and that the required maintenance is being performed.

3 INSTRUCTION

3.1 GENERAL

- a) Each vessel shall maintain a complete listing of critical systems and associated equipment particular to that vessel. The list shall include a brief description of the equipment, function of equipment, location on vessel, power source (if applicable), and reference to inspection, testing, maintenance records and to applicable manuals and/or drawings.
- b) The type and number of critical systems varies depending on vessel type, operation, and redundancy of fitted equipment. Though some systems will be common to all vessels, the list shall include, at minimum, the following:
- Propulsion – including:
 - Propulsion system and controls
 - Emergency shut-down systems
 - Fuel oil supply system
 - Alarm and monitoring systems
 - Power Generation – including:
 - Emergency generating systems
 - Generating systems and control
 - Emergency shut-down systems
 - Fuel oil supply system
 - Alarm and monitoring systems
 - Steering – including:
 - Steering systems and control
 - Emergency steering system
 - Alarm Systems
 - Navigation Systems – including:
 - Magnetic Compass
 - Gyro Compass
 - Navigation Radar
 - Electronic Navigation Receivers
 - Depth Sounding Equipment
 - Communication Transceivers
 - Alarm and monitoring Systems

- Emergency Equipment – including:
 - Fire pumps
 - Fire detection and alarm systems
 - Fixed Firefighting System
 - Watertight integrity systems
 - Launching davits
 - Lifeboats
 - Internal communication systems
 - Emergency Transmitter (GMDSS)
 - Alarm and monitoring systems
 - Emergency lighting
- Anchoring and mooring systems and associated control
- Pollution prevention equipment.
- Bilge and ballast systems
- Lifting gear
- Security equipment

4 DOCUMENTATION

- Critical Systems List
- Inspection and Testing Records
- Preventative Maintenance Records
- Asset Management System (AMS)



Fleet Safety Manual

10.A.2 - MAINTENANCE AND REFITS

1 PURPOSE

- a) To ensure that all vessels are properly maintained thus ensuring safe, reliable, efficient operation and the prevention of environmental damage.
- b) The Canadian Coast Guard (CCG) Fleet ensures that through its [Vessel Maintenance Management Manual \(VMMM\)](#); that an integrated national framework is in place which identifies the responsibilities of individuals and requirements associated with maintenance of CCG vessels and their associated equipment.

2 RESPONSIBILITIES

2.1 DIRECTOR, INTEGRATED TECHNICAL SERVICES AND THE REGIONAL DIRECTOR, OPERATIONAL SERVICES

- a) The Director, Integrated Technical Services and the Regional Director, Operational Services are to provide adequate resources and support to maintain the vessels.

2.2 CHIEF ENGINEER

- a) The Chief Engineer is responsible to the Commanding Officer to ensure that the vessel's hull, machinery, and equipment are maintained in conformity with the relevant rules, and regulations.
- b) The Chief Engineer is responsible for carrying out routine maintenance and inspections as well as providing the Asset Management System (AMS) End of Shift report, outlining maintenance completed and highlighting nonconformities or deficiencies that have been found. These End of Shift reports are to be submitted to the Superintendent, Marine Engineering.
- c) To regularly communicate maintenance activities carried out aboard.
- d) The Chief Engineer shall ensure that appropriate instructions are issued and followed for all maintenance tasks included in the vessels maintenance system.
- e) The Chief Engineer coordinates the preparation of the vessel's defect list incorporating defects reported by the other departments including electronic navigation and communication equipment. This list is to be maintained up to date and be suitable for review at regular intervals as required.

2.3 TECHNICIANS

- a) Technicians performing maintenance on electronic navigation and communication equipment are responsible to ensure that shipboard maintenance records are maintained current.

2.4 SUPERINTENDENT, MARINE ENGINEERING

- a) The Superintendent, Marine Engineering, is to review the vessel's AMS End of Shift reports and take such action as is necessary. Copies of the reports are then to be sent to the Manager, Hull, Mechanical and Electrical with comments or suggestions appended.

2.5 MANAGER, HULL, MECHANICAL AND ELECTRICAL

- a) The Manager, Hull, Mechanical and Electrical, shall review the vessel's AMS End of Shift reports received from the region specifically to identify any trends in common or Class related items. Subsequent to this review, the Manager, Hull, Mechanical and Electrical, shall then provide information on proposed corrective action or shall provide recommendations for maintenance to the appropriate Superintendent, Marine Engineering. Any proposed corrective action or recommendation which would require modification to fitted systems or the replacement of equipment or systems shall be sent to the Class Manager, Vessels.

2.6 CLASS MANAGER, VESSELS

- a) The Class Manager, Vessels, shall obtain resources to assist regions in implementing corrective actions or recommendations that require modification to fitted systems or the replacement of equipment or systems. This will necessitate informing the Fleet Directorate and working with Fleet to obtain the necessary approvals and funding required.

3 INSTRUCTION**3.1 GENERAL**

- a) Maintenance onboard vessels shall be performed in accordance to manufacturer's instructions, CCG Policies and procedures and where no procedures exist, best practices.
- b) All tools used in the maintenance process shall be accurate to the extent of the preciseness required for the specific task at hand. Test and torque equipment used on any critical system shall be calibrated and confirmed accurate. Equipment that can not be field calibrated shall be sent to a certified test facility in accordance with manufacturer's recommended schedule for calibration. Shipboard calibration of mounted instrumentation should be carried out periodically using calibrated test equipment for comparison.
- c) The Commanding Officer, Chief Engineer, including any Department Heads, shall ensure that maintenance instructions are available to staff in their area of responsibility. These instructions, and all relevant references, shall be integrated into the vessel's maintenance system.

- d) Maintenance is to be carried out on a continuous basis in consideration of operational requirements.
- e) Changes to vessel configurations shall follow the established procedure for Change Configuration Request Management process.
- f) The Chief Engineer shall use the defect list, continuous survey report and established maintenance system items, in the preparation of the vessel's refit and or the self-maintenance lists.

3.2 ELECTRONIC DEFECTS

- a) In the case of the electronic navigational equipment, telecommunications equipment, and the electronic equipment room, the Chief Engineer shall send the complete defect list to the Superintendent of Electronics and Informatics, or their designate, with a copy to the Superintendent of Marine Engineering. Defects shall be given the priority status required and technicians will be dispatched from the nearest available service location.
- b) Maintenance of electronic navigation and communication equipment shall not be conducted without the knowledge the Chief Engineer.
- c) Electronic items shall be divided as follows to ensure that priority items are addressed promptly.
 - Priority Three Safety and Regulatory
 - Priority Two Operational
 - Priority One Recreational

Note 1: Priority 3 is top priority

3.3 CONTRACTING

- a) When contracting work on Fleet vessels, the person issuing the contract, work order or work instructions is responsible to ensure that the contractor fully meets the requirements of the Safety Management System.

4 DOCUMENTATION

- Vessel Maintenance Management Manual
- Site Specific Work Instructions and Checklists
- Maintenance Records for Electronic, Navigation and Communication Equipment.
- Maintenance Records
- Defect Lists
- Continuous Survey Report
- CCG Vessels Refit Management Procedures Manual



Fleet Safety Manual

10.A.3 - LAY-UP AND RETURN TO SERVICE

1 PURPOSE

- a) To ensure that Canadian Coast Guard (CCG) vessels are laid up in such a manner as to prevent injuries to the crew, damage to the vessel, pollution of the environment and that sufficient security measures are in place for timely notification to the appropriate responsible person in the event of a breach of security or a system malfunction.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer is responsible to ensure that the vessel is properly prepared for lay-up and where practicable, return to service.
- b) The lay-up-plan shall be prepared and submitted for approval prior to the vessel entering the lay-up period. Suitable instruction/direction shall be given to the onboard lay-up crew and for the reactivation of the vessel after lay-up as per the approved lay-up plan.
- c) At least one month prior to the scheduled lay-up, a pre-lay-up meeting shall be scheduled and include all personnel involved in the lay-up planning process. At a minimum, the following personnel shall attend: Commanding Officer, all Shipboard Department Heads, the Marine Superintendent and the Superintendent, Marine Engineering or delegate.

2.2 REGIONAL DIRECTOR, FLEET

- a) The Regional Director, Fleet is responsible to ensure that contingency and reactivation plans are developed and distributed and that adequate security arrangements are in place for the vessel during lay-up.

3 INSTRUCTION

3.1 GENERAL

- a) A specific plan shall be created for each occasion where the vessel is to be laid-up. This plan shall include extracts from the developed contingency plans identified under Procedure 8.A.1 and be applicable to the vessel for the location and period of lay-up.

- Small vessels shall develop a vessel specific checklist, taking into account, various equipment and items onboard to ensure proper lay-up and return to service precautions are applied.
- b) Security arrangements shall be organized bearing in mind the type and length of lay-up. Arrangements shall be made in consultation between the Commanding Officer and Regional Director, Fleet, as appropriate. Note also the requirement to safeguard security communications equipment (Sectera I) located aboard the vessel.
- c) The Commanding Officer shall be advised in writing of the scheduled lay-up date, and type of lay-up (hot, warm, cold) in sufficient time to allow for proper procedures to be carried out.
- d) An inspection of the vessel, its machinery and equipment shall be completed and any defects noted. A copy of this listing shall be provided and all personnel shall be made aware of any changes that have been made to the vessel in preparation for or during the lay-up period.

3.2 VESSEL COLD LAY-UP

- a) Where a vessel enters a cold lay-up period, all cold weather precautions shall be adhered to including draining of the domestic water supply and any wet sprinkler systems shall also be drained.
- b) Before a vessel enters into cold lay-up, where practicable, Hazardous Material onboard shall be removed and disposed of.
- c) A specific list shall be created identifying type and location of all Hazardous Material remaining onboard during the lay-up period. This list shall be maintained of the bridge of the vessel and a copy sent to the NHQ Vessel Disposal Officer.

3.3 SITE SPECIFIC WORK INSTRUCTIONS

- a) Vessels shall create Site Specific Work Instructions on the lay-up and return to service processes. These shall include at a minimum the following:
 - Vessel Lay-Up - Hot, Warm or Cold
 - Return to service
 - Equipment, Weapons and Secure Communications

4 DOCUMENTATION

- Regional Contingency and Reactivation Plan
- Vessel Maintenance Management Manual
- Operation-specific checklist
- Lay-up Inspection and Defect Report
- Report of Maintenance Completed During the Lay-up



Fleet Safety Manual

10.A.4 - DRY-DOCKING

1 PURPOSE

- a) To ensure that Canadian Coast Guard (CCG) vessels are consistently and systematically dry-docked in a manner that ensures the health and safety of individuals and the security of the vessel and that steps are taken to prevent damage to the vessel and assets and prevention of pollution to the environment.

2 RESPONSIBILITIES

2.1 SUPERINTENDENT, MARINE ENGINEERING/PROJECT OFFICER/CHIEF ENGINEER

- a) The Superintendent, Marine Engineering/Project Officer/Chief Engineer shall ensure that the entity responsible for the work to be conducted and for the safety and security of the vessel and its equipment while at the shipyard is clearly identified and documented.

2.2 SUPERINTENDENT, MARINE ENGINEERING

- a) The Superintendent, Marine Engineering shall produce a specification and ensure that the dry-docking plans are prepared as per the [Vessel Maintenance Management Manual](#).

2.3 PROJECT ENGINEER/CHIEF ENGINEER

- a) The Project Engineer/Chief Engineer shall ensure that the vessel is properly prepared for dry-docking and its return to service.

3 INSTRUCTION

3.1 GENERAL

- a) Site-specific work instructions shall be developed to identify the points to be taken into consideration when proceeding to, while in dry dock, floating the vessel and departing the dry dock.
- b) Ensure that Basic Safety Briefings are provided and all check lists are completed when proceeding to dry dock, while in dry dock, and upon leaving the dry-dock.

4 DOCUMENTATION

- Docking Plan
- Dock Certificate
- Dock Master Certificate
- Vessel Maintenance Management Manual
- Vessel-specific checklists – entering / departing
- Stability calculations

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

10.A.5 - COLD WEATHER PRECAUTIONS

1 PURPOSE

- a) To ensure precautionary measures are taken to prevent injury to the crew, damage to the vessel, systems or equipment due to cold weather.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER AND CHIEF ENGINEER

- a) The Commanding Officer and Chief Engineer are responsible to ensure that precautionary measures are taken to prevent damage to vessel, systems or equipment during cold weather.

2.2 COMMANDING OFFICER

- a) The Commanding Officer is to ensure that personnel are provided with appropriate Personnel Protective Equipment (PPE) when working outside in cold weather.

3 INSTRUCTION

3.1 GENERAL

- a) Vessel's shall create Site Specific Work Instructions detailing the methods and procedures to be used to winterize vessel's boats and barges, the vessel's fire-fighting system, and the recirculation methods to be used for the sea water cooling system or other equipment as necessary.
- b) All cold weather precautions taken with respect to the vessel's machinery are to be documented.
- c) Particular attention should be paid to all air vents and especially, to those connected to seawater cooling systems, fuel or ballast tanks or any tanks in use to ensure there is no ice built up around them which prevents air exchange when the tank level is adjusted.

4 DOCUMENTATION

- Site Specific Work Instructions
- Log Book Entries / Records of Winterization



Fleet Safety Manual

10.A.6 - PAINT AND OTHER COATINGS

1 PURPOSE

- a) To ensure that the Canadian Coast Guard (CCG) Fleet will use products that comply with Health Canada; Pest Management Regulatory Agency and other standards developed by the Canadian General Standards Board for the application of paint and primers, including hull coatings.
- b) To ensure that steps are taken to mitigate the risk to the health of individuals and protection of the marine environment during surface preparation and the application of paint on CCG vessels.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer is responsible to ensure that the application of paint and coatings on the vessel is conducted in accordance with the instructions provided by the manufacturer and only such products and applications are to be used which will have the least possible effect on the environment.
- b) The Commanding Officer shall ensure that all paint removal operations are assessed for possible polluting acts and that responsible steps are taken to contain the by-products of the paint removal and properly dispose of the waste.

3 INSTRUCTION

3.1 GENERAL

- a) Appropriate Personal Protection Equipment (PPE) shall be worn for all paint removal and application operations. When paint stripping or application operations are being conducted in close proximity to ventilation intakes, consideration shall be given to restrict air flow from these intakes to prevent the spreading of fumes and dust to other parts of the vessel.
- b) Removal of paint and rust will result in the creation of waste material that may be both hazardous to the worker and would be considered a polluting material if allowed to enter the water. Steps shall be taken to mitigate paint and debris from entering the environment.

- c) In large scale paint operations, the vessel may be boomed if appropriate. Where feasible a containing structure shall be used in the area where paint is being removed to contain dust and debris. Paint removal operations should be halted in high wind conditions when it becomes apparent that dust is appearing on the water or is readily apparent outside the containing structure.
- d) Waste generated through paint removal shall be collected frequently. Waste must be collected and the area cleaned at the end of each working period. Waste is to be stored in solid drums and is to be handled and disposed of as a hazardous material.
- e) Paint should be applied using the tools and methods recommended by the paint manufacturer with a view to minimizing the possibility of spills and drips that could enter the water.
- f) Absorbent material is to be kept readily at hand to immediately deal with any spill.

4 DOCUMENTATION

- Paint and Coating Standards
- Manufacturers' specific instructions for application and surface preparation
- Site Specific Work Instructions

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

10.A.7 - CONTRACTOR SAFETY AND SECURITY

1 PURPOSE

- a) To ensure that when maintenance or repair work performed by contractors aboard a Canadian Coast Guard (CCG) vessel or at a CCG Station and the workplace is under the control of CCG that these guidelines shall be followed to maintain the health and safety of all persons onboard, protection of the environment and to ensure the security of the vessel.
- b) To guide CCG employees in regard to their responsibilities in the workplace during the performance of work by contractors.
- c) To ensure that contractors follow Occupational Health and Safety (OHS) procedures in accordance with applicable Federal and Provincial OHS regulations as appropriate
- d) To ensure that maintenance and repair work contracts follow, where applicable, the [Guide on the Safety Responsibilities of DFO in Relation to Contractual Agreements, Partnering & Volunteers.](#)

DEFINITIONS

The definitions and terms that follow are to be used exclusively in the context of this procedure.

Employee

A person employed by an employer.

Employer

A person who employs one or more employees and includes an employers' organization and any person who acts on behalf of an employer.

**Competent Person
Designated Responsible**

A competent person is an individual with specialized knowledge for the task at hand with publicly recognized accreditation in the relevant field, who has been designated by the owner or its worksite representative to accomplish certain tasks.

Due Diligence

Ensuring that all reasonable precautions are taken, under the particular circumstances, to prevent injuries or accidents in the workplace.

| | |
|---|---|
| Escort | <p>A crew member or other appropriate personnel, approved by the Commanding Officer, who is accompanying another person(s) without the appropriate level of security clearance onboard the vessel for tours or for the purpose of maintenance to equipment onboard. in order to ensure the escorted person is engaged only in activities for which they were granted access.</p> <p>An escort shall remain with the person(s) at all times while onboard.</p> |
| Major Safety or Security Infraction | <p>Failure to conform to acceptable standards that could jeopardize the safety or security of all persons and or the vessel/CCG station.</p> |
| Minor Safety or Security Infraction | <p>Failure to conform to acceptable standards that could jeopardize the safety or security of a person aboard a vessel or at a CCG station.</p> |
| Qualified Person | <p>A qualified person is in respect of a specific duty, a person who, because of their knowledge, training and experience, is qualified to perform that duty safely and properly.</p> |
| Quality Assurance | <p>Program for the systemic monitoring and evaluation of the various aspects of a project, service, or facility to ensure that standards of quality are being met.</p> |
| Workplace | <p>Any place where an employee is engaged in work for the employer.</p> |
| Workplace under the control of the CCG | <p>When CCG employees are actively working on the site, the workplace is then considered to be the CCG's responsibility under Part II of the Canada Labour Code. The CCG's obligations in relation to the safety of the workplace under its control still apply when work is being performed by contractors and subcontractors.</p> |
| Workplace NOT under the control of the CCG | <p>When the contractor has custody and control of the vessel and CCG employees are only doing quality assurance (QA) work related to the contract, the worksite (vessel) is NOT considered a workplace under the control of the CCG for the purpose of the Canada Labour Code, Part II</p> |

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer shall ensure that the vessel's crew are aware of CCG's responsibility to safeguard the safety and health of all personnel, including contractors, present at the worksite onboard CCG vessels or at CCG stations as applicable.

- b) The Commanding Officer shall ensure that contractors receive the CCG basic shipboard or shore facilities safety familiarization which shall cover, but is not limited to, knowledge of the following items:
- all contractors follow applicable OHS regulations, in accordance with CCG safety/security/environmental requirements
 - Fire alarm and conduct to follow in case of fire or other emergency situations,
 - Restricted areas spaces,
 - Known risks and hazards encountered at the worksite (asbestos, fire fighting systems, hazardous materials, flammables etc).
 - Shall ensure that daily toolbox safety briefings are conducted with the contractor and that proper communications and work coordination is established with contractor/shipboard personnel.
 - Shall ensure that all infractions are corrected or addressed in a timely manner.

2.2 COMMANDING OFFICER OR THEIR DELEGAT)

- a) The Commanding Officer or their delegate shall stop any unsafe work performed by any individual including a Contractor or their representative; when the activity puts any person, asset or the environment at risk.

2.3 COMMANDING OFFICER AND CONTRACTOR

- a) The Commanding Officer and Contractor are responsible to ensure that Risk Assessments are completed before any work commences aboard any CCG vessel/station - Procedure 7.A.1.
- b) Any crew member who is knowledgeable and possesses the appropriate skill sets is considered qualified to assist in completing the required Risk Assessments.
- c) Contractors or their representative engaged in work associated with real properties; such as buildings, structures and accommodations shall be given a Basic Safety Familiarization. They are not required to complete a risk assessment unless they choose to do so.

2.4 SHIPBOARD OFFICER OR SHORE SIDE MANAGER

- a) The Shipboard Officer or Shore Side Manager: who arranges the services of a contractor to perform work on a CCG vessel shall ensure the contractor is provided with clear definitions of work and appropriate instructions for all shipboard maintenance tasks. They are also to ensure that the contractor follows Occupational Health and Safety (OHS) procedures in accordance with the applicable Federal and Provincial OHS regulations.

2.5 ALL EMPLOYEES INCLUDING CONTRACTOR EMPLOYEES

- a) All employees including contractor employees shall report immediately to their supervisor any circumstance in the workplace that is likely to be hazardous to the health, safety and security of employees or other persons granted access to the workplace by the employer.

- b) All employees including contractor employees witnessing an infraction that could jeopardize the safety and security of the crew and/or vessel shall take all reasonable and necessary precautions including stopping the action immediately to ensure the health and safety of employees and any person likely to be affected by any person's acts or omissions and report immediately to their supervisor.

3 INSTRUCTION

3.1 CONTRACTOR REQUIREMENTS

- a) Before any work is started the contractor shall become familiar with this procedure and others as appropriate to the work being performed. The contractor and their employees shall comply with these procedures or have procedures with the same intent in place which, at the discretion of the Shipboard Officer or Shore Side Manager, meet or exceed those established for the CCG.

3.2 SECURITY

- a) A valid minimum security screening at the Reliability Status level is required for any contractor to be granted unescorted access to a workplace controlled by the CCG regardless of the work they are performing. Prior to letting a contract it is a requirement of the [Policy on Government Security \(PGS\)](#) and *DFO Departmental Policy* that a Security Requirement Check List (SRCL) be completed.

Note 1: It is strongly suggested that the appropriate level of security screening, for all contractors, be indicated on the SRCL. Ensuring that all contractors have the appropriate level of security screening will reduce the necessity for providing escorts for un-cleared contractors.

3.3 ANY PERSON

- a) Any person including contractors that does not have, at minimum, a valid Reliability Status shall be escorted and briefed on the areas they have been granted access and the restricted areas of the vessel or station as applicable.
- b) Under no circumstance shall a person be given access to classified assets or information unless they have a valid SECURITY CLEARANCE (Level 1 Confidential, Level 2 Secret, and Level 3 Top Secret) commensurate to the level of the asset or information being accessed and a clearly demonstrated need to know requirement.

3.4 ANY CONTRACTOR

- a) Any contractor who sails with the vessel is considered to be a supernumerary and as such shall meet the requirements as stipulated in Procedure 6.D.1, i.e. security clearance and medical fitness.

3.5 LIABILITY

- a) When the vessel or station is under the custody and control of the CCG, the CCG is responsible for the safety of the workplace in relation to all persons aboard including contractors and subcontractors. In those circumstances, the CCG shall ensure that the activities of every contractor and subcontractor do not endanger the health and safety of CCG employees or the security of the vessel, or stations as applicable.

- b) When the vessel or station is NOT under the custody and control of the CCG, in order to reduce the risks of liability, the CCG, as vessel owner, should be satisfied that the Contractor has acceptable processes in place to prevent accidents and to reduce the risk of damage to the vessel. If applicable, prior to contract start, the Contractor shall provide the CCG with documentation indicating processes for care and custody of the vessel, the protection of equipment, and the conduct of hazardous activities (e.g., burning and welding, confined space entry, etc).

Note 1: These examples are not limitative and are subject to the specific conditions under which the work is undertaken.

3.6 MINOR SAFETY OR SECURITY INFRACTION

- a) Any CCG employee observing a minor Safety or Security infraction shall report it to their supervisor. The CCG supervisor shall in turn advise the contractor's supervisor.
- b) The Contracting Authority Representative, if applicable, shall be informed of the infraction.
- c) All minor infractions shall be logged in the Deck log book.

3.7 MAJOR SAFETY OR SECURITY INFRACTION

- a) Work shall be stopped immediately.
- b) Any CCG employee observing a major Safety or Security infraction shall report it to their supervisor. The CCG supervisor shall in turn advise the contractor's supervisor.
- c) The Contracting Authority Representative, if applicable, shall be informed of the infraction.
- d) Corrective actions shall be taken before work resumes.
- e) All major infractions shall be logged in the Deck log book.
- f) For any major infraction related to health, safety or security, the responsible CCG supervisor shall report the incident to the Superintendent, Fleet Safety and Security and provide copies of all documentation, (i.e. the investigation report, immediate corrective action taken, measures to prevent reoccurrence etc). in a timely fashion
- g) *CCG Fleet Safety, Security, Quality, and Environmental Requirements and Expectations for Contractors* is an information document intended as a handout to familiarise contractors with the expectations of the CCG.
- h) The Contractors Basic Safety Familiarization is a record which will verify that a basic safety briefing has been given, understood and acknowledged by the contractor. This record shall be completed for all contractors working on CCG vessels or at a CCG site, This record shall be retained at the worksite for a period of two (2) years.

4 DOCUMENTATION

- Log Book entries
- Pre-Job Safety Assessment
- Site-Specific Work Procedure and Checklists
- Records of Safety Briefings



Fleet Safety Manual

10.B.1 - MAINTENANCE OF LIFTING APPLIANCES AND CARGO HANDLING GEAR

1 PURPOSE

- a) To ensure the continued functionality, safety and reliability of the vessel's cargo gear by regular testing and inspection.
- b) To ensure all of the vessel's lifting appliances and associated gear is identified, inspected, tested and maintained in accordance with the [Canada Shipping Act \(CSA\) 2001- Cargo, Fumigation and Tackle Regulations](#).
- c) To ensure that all devices not defined as cargo gear in the [CSA - 2001 Cargo, Fumigation and Tackle Regulations](#) that are aboard the vessel and are capable of lifting (such as lifeboat davits and engine room chain falls), or devices brought aboard the vessel by external parties for the purpose of lifting are subject to regular inspection.

2 RESPONSIBILITIES

2.1 SENIOR DECK OFFICER

- a) The Senior Deck Officer is responsible for ensuring that all cargo gear, lifting machinery, etc. are identified, certified and properly maintained aboard the vessel. The Senior Deck Officer is also responsible to maintain the proper records.

3 INSTRUCTION

3.1 CARGO GEAR

- a) Each vessel shall maintain a register listing each piece of cargo gear showing the date of the last test and the safe working load. This shall include all hoist, chain blocks, rope blocks, straps, eyebolts, shackles, etc. They shall all be marked or tagged with their safe working load.
- b) All cargo handling gear shall have written instructions for the inspections, testing and maintenance of that system.
- c) Any person operating any lifting machinery or power mobile equipment in a working area shall comply with every notice and sign applicable to the operation of the appliance or equipment placed in the working area.

- d) No materials handling equipment shall be used or operated with a load in excess of its safe working load.

3.2 LIFTING APPLIANCES

- a) All lifting appliances shall have a thorough examination annually by a competent person. They shall also be given a load test and thorough examination at least once every five (5) years.
- b) Chains made of malleable cast iron, also chains, rings, hooks, shackles, and swivels made of mild steel, and all pulley blocks shall be thoroughly examined once every twelve (12) months at a minimum.
- c) All wire ropes shall have a test certificate prior to being put into service. Every wire rope in service shall be thoroughly examined annually by a competent person or, every six (6) months if the rope passes over a drum or sheave. A competent person who thoroughly examines a wire rope shall annotate the register accordingly. If there is a broken wire, the wire rope shall be inspected by an expert person on the day of its intended use to determine if it is safe for use.
- d) Before being used and / or any time damage is suspected, the lifting machinery shall be visually inspected by the supervisor of the operations to ensure:
- Free rotation of sheaves
 - Wires free of excessive wear and damage
 - Hooks, shackles, pennants, and swivels free of excessive wear and damage
 - A lubrication routine shall be put in place and recorded; any defects or deficiencies are to be brought to the relevant supervisor's attention.
- e) Equipment not subject to the [CSA 2001- Cargo, Fumigation and Tackle Regulations](#), but used aboard for lifting and maintenance where the load can exceed 455 kg shall be inspected in the same manner as equipment subject to the [CSA 2001- Cargo, Fumigation and Tackle Regulations](#) and shall be entered in the *CCG Register of Lifting Appliances and Cargo Handling Gear*.
- f) Lifeboat and Rescue Boat Davits are subject to inspection and testing under the *Life Saving Equipment Regulations – Procedure 10.B.2*.
- g) All workboat and barge davits not covered in 3.2 (f) above shall be tested by a competent person to 125% of SWL before the davit is used for the first time and after replacement, modification or repair of any stress-bearing part, unless the part is mechanically detachable and has been tested and certified separately from the davit and at least once every five (5) years or in accordance with manufacturers specifications. The davit passes the test when the following conditions have all been met:
- the means provided on all winches to stop and hold the load in position are effective;
 - the mechanical brakes are in good condition, emergency stopping devices fitted on winches are effective; and
 - no defects or signs of permanent deformation are detected

- h) All workboat and barge davits not covered in 3.2 (f) above shall be thoroughly examined by a competent person at least once every year after it is tested. The davit passes examination when the following conditions have all been met:
- certificates have been issued for the loose gear used with the davit;
 - the parts that align and swivel under load are free;
 - the mechanical, electrical, gearing, hydraulic and pneumatic systems are in good working order;
 - parts are not affected by corrosion to the extent that they cannot be opened; and
 - no defects or signs of permanent deformation are detected.
- i) Inspections aboard Canadian Coast Guard (CCG) vessels are to be performed by a competent person. For the purposes of this procedure, a competent person is any person holding a certificate of competency as master, a chief mate, first class engineer or second class engineer or any responsible person having the experience necessary to allow him or her to carry out the work of inspections satisfactorily.

3.3 ACCOMMODATION LADDERS

- a) Thorough examination by a competent person at least once per year.
- b) A record of examination to be provided by the competent person, including measurements taken at intervals not exceeding five (5) years of any corrosion, deformation, or significant wear in structural or moving parts.
- c) This record shall be kept onboard the vessel in the appropriate section of the *CCG Register of Lifting Appliances and Cargo Handling Gear*.

3.4 RECORDS

- a) The *Canadian Coast Guard Register of Lifting Appliances and Cargo Handling Gear* shall be kept and maintained under the Senior Deck Officer's responsibility as per instructions inside the front cover.
- b) T2 or T3 certificates are to be attached to the register under the applicable equipment headings
- c) T4 certificates for all attached equipment currently in use are to be attached to the register under their respective headings and marked with their location.
- d) T4 certificates for gear taken out of use are to be removed from the register or clearly marked REMOVED FROM SERVICE if certificate applies to more than one item
- e) T4 certificates for loose equipment are to be attached to the register and marked e.g. spare 15t hook
- f) T5 certificates for wires are to be marked with the date they were put in service and location.
- g) T5 certificates that apply to more than one wire are to be copied, marked and attached to the register under the applicable heading. Certificates for wires taken out of service are to be removed from the register.
- h) This register shall be retained onboard for five (5) years after the most recent entry.

3.5 GENERAL

- a) When a spool or roll of wire rope is received on board, a T5 certificate shall accompany it. The spool or roll is to be marked with the certificate number.
- b) All cargo gear sent for testing shall be clearly marked before being shipped. When gear is returned from testing, or new gear received on board, the T4 certificate shall be checked to ensure gear can be clearly identified with appropriate certificate.
- c) If gear is transferred to another vessel a copy of the original T4 shall be sent with the shipping notice
- d) The Commanding Officer shall report any alteration in vessel's cargo gear upon production of the register to an inspector
- e) Any defective or suspect equipment shall be removed from use and tagged as such. If this equipment is beyond repair it shall be disposed of in the proper manner.

4 DOCUMENTATION

- Safe Working Load Markings
- Site-Specific Work Instructions and Checklists
- Records of Inspections
- CCG Register of Lifting Appliances and Cargo Gear
- T2, T3, T4, T5 Certificates
- CCG Fleet Guide - Tackle



Fleet Safety Manual

10.B.2 - MAINTENANCE AND INSPECTION OF LIFESAVING EQUIPMENT

1 PURPOSE

- a) To provide information to ensure that the maintenance and inspection of lifesaving equipment will meet the requirements of the [Lifesaving Equipment Regulations of the Canada Shipping Act \(CSA\) 2001](#) and where applicable *the International Convention for the Safety of Life at Sea (SOLAS)*.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer is responsible to ensure that site specific work instructions and manufacturer's instructions cover the inspection and maintenance of the lifesaving equipment supplied to the vessel and that a responsible officer is assigned the task of completing inspections and recording results.

3 INSTRUCTION

3.1 REGULAR INSPECTIONS

- a) The following inspections and tests shall be carried out every week on a Safety Convention vessel and every two (2) weeks on every other vessel;
 - All survival craft, rescue boats and launching appliances shall be inspected visually to ensure that they are ready for use.
 - Engines in lifeboats and rescue boats shall be run in the ahead and astern drive modes for a total period of not less than three (3) minutes. Outboard motors should be run for only as long as the manufacturer indicates is appropriate to run without cooling water.
 - The general alarm shall be tested at various locations each time.
- b) The inspection and tests shall be logged.

3.2 MONTHLY INSPECTIONS

- a) All lifesaving appliances, including lifeboat equipment and emergency communication equipment, shall be inspected monthly using a checklist. The use of a checklist is mandated by *SOLAS Chapter III, Regulation 36.1*.
- b) Immersion suits shall be checked monthly to ensure they are present, properly stowed, tamper proof seals are intact and moisture content of storage space if immersion suits are stored in an acceptable unheated space.
 - The immersion suits are stowed in a dry, heated and vented location and not in an exterior locker or compartment exposed to marine weather. For vessels not equipped to store immersion suits in a heated locker, the locker shall be checked for moisture monthly.
 - Each immersion suit is sealed in their individual stowage bag with a tamper evident seal that would easily break free allowing for uninhibited removal of the suit from the bag when required. If all or partial numbers of immersion suits are kept in a storage locker, then the locker can be secured with a tamper evident seal that would easily break free allowing for uninhibited removal of the suits from the locker when required.
 - Other immersion suits are available for the purpose of fit testing of crew and/or supernumeraries and passengers.
 - Other immersion suits kept for the purpose of training exercises.
 - Speciality sized immersion suits issued to individuals shall be inspected on joining the vessel and regularly thereafter in accordance with this procedure.
 - In the case of immersion suits that are stacked on top of one another for storage, the pile shall be rotated top to bottom monthly to ensure that crush damage does not occur.
- c) Any immersion suits that are either carried on board a Canadian Coast Guard (CCG) vessel and/or maintained at a CCG facility for any other purpose than as an immersion suit i.e. training or fit testing, must be tagged and/or marked so as to readily identify the purpose of the suit so as to avoid any confusion during an abandon ship situation. It is recommended that any non-certified immersion suits also be stowed in a separate location from the other certified immersion suits. These non-certified immersion suits shall not make up part of the inventory maintained on the CCG Vessel as a Transport Canada requirement.
- d) Completed monthly checklists shall be maintained in a file (electronic or hard copy) for a period of at least one year.

3.3 ANNUAL INSPECTIONS

- a) Liferrafts shall be serviced annually, by accredited service technicians, at an accredited service facility. All of the tests/procedures and recommendations by the manufacturer of the Liferaft shall be carried out each time the equipment is serviced.
 - The liferaft service interval may be extended to two years if:
 - the vessel on which the liferaft is carried is not a Safety Convention vessel and operates less than seven (7) months per year
 - fewer than fifteen (15) years have elapsed since the inflatable survival equipment was manufactured
 - the validity period of the most recent hydrostatic test of the gas cylinders of the inflatable survival equipment shall not expire before the next servicing
 - the inflatable survival equipment is stored in a dry location during the months in which the vessel is not in operation
 - The liferaft service interval may be extended up to thirty (30) months if:
 - the vessel on which the liferaft is carried is not a Safety Convention vessel
 - the manufacturer of the liferaft recommends an extended interval between servicing of up to but not more than thirty (30) months
 - the extended interval between servicing provides a level of safety at least equivalent to that provided by annual servicing
- b) All immersion suits shall be thoroughly inspected annually in accordance manufacturers' instructions. Thorough inspections should not be performed more often, this may cause undue wear.

3.4 THIRTY (30) MONTH INSPECTIONS

- a) Lifeboat falls shall be inspected and turned end-for-end every thirty (30) months or may be replaced.
- b) This event shall be logged and/or noted in the *CCG Register of Lifting Gear and Cargo Handling Gear*.

3.5 THREE (3) YEAR INSPECTIONS

- a) Immersion suits shall be returned to a servicing depot for inspection for leaks by air pressure testing. For suits over ten (10) years of age, more frequent testing may be warranted, but in any event all suits must be tested at intervals of not less than three (3) years unless manufacturers' instructions specify a shorter period of time.
- b) Where no manufacturing date of the immersion suit can be determined, the date in which the immersion suit is placed in service shall be considered the manufacturing date.

3.6 FIVE (5) YEAR INSPECTIONS

- a) Lifeboat falls shall be replaced.
- b) This event shall be logged and/or noted in the *CCG Register of Lifting Gear and Cargo Handling Gear*

4 DOCUMENTATION

- Deck Log
- Monthly Checklists
- CCG Register of Lifting Gear and Cargo Handling Gear
- Liferaft Certificates
- Immersion Suit Tags

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

11.0 - DOCUMENTATION

1 DOCUMENTATION RELATED TO THE SAFETY MANAGEMENT SYSTEM

- a) The Canadian Coast Guard (CCG) Fleet has established procedures to issue documents and data that relate to the Safety Management Systems (SMS) both ashore and afloat. Any changes to controlled documentation shall be identified in the document. Records of all SMS activities shall be kept on vessels or ashore as defined in the procedures.
- b) The CCG Fleet shall have immediate access to the statutory rules, regulations, and guidelines that are relevant to Canadian Coast Guard ship operations.

2 DOCUMENT CONTROL

2.1 SUPERINTENDENT FLEET SAFETY AND SECURITY (SFSS)

- a) The SFSS shall be made aware of the issue of controlled documentation to vessels and relevant departments ashore. Obsolete documents shall be promptly removed.
- b) The SFSS shall review all amendments to the SMS prior to approval and issue.

2.2 COMMANDING OFFICER/SITE MANAGER

- a) The Commanding Officer/Site Manager supervises the issue of controlled documentation on board/ashore and coordinates the removal of obsolete documentation with the Superintendent Fleet Safety and Security (SFSS).

3 VESSEL DATA

- a) The CCG Fleet has developed procedures to safeguard the maintenance of certain essential shipboard data. These procedures are:
 - 7.A.6 Vessel Manoeuvring Data
 - 7.A.8 Stability
 - 11.A.3 Vessel Certificates
 - 11.A.4 Maintenance of Vessel Logs



Fleet Safety Manual

11.A.1 - DOCUMENT CONTROL – INTERNAL

1 PURPOSE

- a) To ensure that internal documents generated by the Safety Management System (SMS) for the maintenance of the SMS are available at all relevant locations, changes to documents are reviewed and approved by authorized personnel, are assigned a document control number and that obsolete documents are promptly removed.

2 RESPONSIBILITIES

2.1 REGIONAL DIRECTOR, FLEET OR INTEGRATED TECHNICAL SERVICES

- a) Regional Director, Fleet or Integrated Technical Services, as appropriate, are responsible to ensure that all sites reporting to them maintain controlled internal SMS documents in accordance with this procedure.

2.2 COMMANDING OFFICER/SITE MANAGER

- a) Commanding Officer/Site Manager is responsible to ensure that all controlled documents relating to the ships or shore site SMS is current, that all revisions are completed and revisions are noted in the changeover notes.
- b) The Commanding Officer/Site Manager or their delegate shall ensure that all personnel affected by any changes to the SMS are made aware of them.

2.3 SUPERINTENDENT FLEET SAFETY AND SECURITY (SFSS)

- a) The SFSS is responsible for:
 - ensuring that relevant controlled documents are available on vessels and shore sites and that document revisions are distributed promptly
 - control, issue and assignment of document control numbers for all regional controlled documents.
 - maintain the Regional master SMS library.

2.4 DIRECTOR, FLEET SAFETY AND SECURITY (DFSS)

- a) The DFSS is responsible to:
 - ensure that relevant controlled documents are available at Headquarters and distributed to SFSS and that documented revisions are distributed promptly.
 - control, issue and for assignment of document control numbers for all national controlled documentation;
 - maintain the National master SMS library;.

3 INSTRUCTION

3.1 SMS CONTROLLED DOCUMENTS

- a) SMS controlled documents are listed in the list of Controlled Publications.
- b) The Fleet Safety Manual (FSM) shall be available on all vessels and at shore sites in either hardcopy or electronic format.
- c) All SMS controlled documents, with the exception of the Ship Security Plan, shall be held in a location accessible to all personnel. In addition, the Contingency Plan Manual(s) shall be kept in the best location(s) for intended usage.

3.2 DOCUMENT APPROVALS

- a) **All National Procedures based on Policy** – shall be approved by the Commissioner. These procedures end in .0 and are the first procedure within each section of the FSM.
- b) **All other National Procedures** – shall be approved by the Director General, Fleet.
- c) **Regional Procedures** – shall be approved by the Assistant Commissioner. Regional specific procedures should only be promulgated where the National Procedure does not adequately and specifically address the unique regional requirement.
- d) **Site Specific Work Instructions / Checklist** – shall be approved by the Regional Director, Fleet / Integrated Services, as applicable.

3.3 ISSUE AND DISTRIBUTION

- a) Prior to SMS controlled document distribution, the DFSS or SFSS as applicable, shall ensure that each document has received approval, has been assigned a document control number, including revision number, and is logged into the applicable document control register.
- b) SFSS shall forward controlled copies of any regionally issued procedure to the DFSS for incorporation in the master copy of the FSM.

3.4 DOCUMENT IDENTIFICATION

- a) All CONTROLLED copies of National and Regional Procedures shall be printed on coloured non-white paper. Only controlled copies of documents shall be considered accurate at the work-site
- b) Printouts or photocopies of procedures shall be made on white paper only, clearly labelled, stamped or marked in a contrasting colour UNCONTROLLED COPY.
- c) If printed from the CCG Fleet Intranet site, the documents will already bear the watermark UNCONTROLLED COPY WHEN PRINTED.

3.5 DOCUMENT INVENTORY/CONTROL REGISTERS

- a) Control registers shall be maintained by all Vessel/Shore sites to identify the inventory of SMS controlled documents and their locations. Control registers shall include:
 - the document control number
 - the name of the publication
 - the edition number and last revision date
 - the location and or holder of the document
- b) The DFSS shall maintain a Control Register identifying holders of the FSM.
- c) Each vessel shall maintain an inventory of internally controlled Site Specific procedures, work instructions and checklists.
 - The inventory shall include the location of each controlled satellite binder and any procedures, work instructions or checklists in use around the work site. This inventory shall be verified annually.

3.6 CHECKLISTS

- a) Where the SMS makes use of paper checklists as a formal record of compliance with procedures, all boxes on the checklist must be completed with either a checkmark, the required information, or marked NOT APPLICABLE.

3.7 RETENTION & DISPOSAL OF CONTROLLED DOCUMENTATION

- a) The DFSS shall maintain a copy of the past versions and revisions of the Safety Management System Policy, National Procedures and Headquarter's Work Instructions.
- b) The SFSS shall maintain a copy of the past versions and revisions of regionally-issued procedures and work instructions.

4 DOCUMENTATION

- Register of Manual Holders
- Register of Amendments and Acknowledgments
- Records and Copies of Obsolete Documents
- Controlled Document Register



Fleet Safety Manual

11.A.2 - DOCUMENT CONTROL – EXTERNAL

1 PURPOSE

- a) To identify and ensure documentation of an external origin that is relevant to the Safety Management System (SMS) is available at all relevant locations, that a current list of these documents is maintained and that the documents are controlled and current.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer is responsible to ensure that documentation relating to the vessel's SMS received from external sources is identified, controlled, distributed and current.

2.2 NAVIGATING OFFICER

- a) The Navigating Officer shall be responsible to the Commanding Officer for the maintenance and custody of the Navigational outfits as documented in a Site Specific Work Instruction. In smaller vessels, the Commanding Officer or Coxswain, as applicable, will assume these duties.

2.3 SUPERINTENDENT MARINE ENGINEERING

- a) The Superintendent Marine Engineering is responsible for the maintenance of the set of duplicate ship drawings required in section 3.3 (d) of this procedure.

2.4 DIRECTOR, FLEET SAFETY AND SECURITY (DFSS)

- a) The DFSS is responsible for maintaining a register of external SMS documents located at Headquarters.

3 INSTRUCTION

3.1 GENERAL

- a) Each vessel and shore site shall be responsible for maintaining an inventory of external SMS documentation. Subject to operational status, this inventory shall be verified annually and any discrepancies noted on the inventory list and action taken to correct the discrepancy.
- b) Each publication that is subject to regular update and revision shall have updates logged in the document control register. Obsolete documents shall be promptly removed and destroyed.
- c) The external document control register shall be headed with the Name of vessel or shore site, and the date that the list was compiled or revised. Each controlled document shall be listed and described by the following information (as applicable):
 - Name or title of publication,
 - Date of publication,
 - Version number or model number,
 - Publication number,
 - Physical location of document,
 - Date of revisions or modifications.
 - Media type (hard copy, electronic, CD/DVD, microfiche, etc)
- d) Annex C - List of Controlled Publications lists the publications and documents that should be carried on board fleet vessels and shore sites as appropriate. The List is not all inclusive.

3.2 CHARTS AND NAVIGATION PUBLICATIONS

- a) Vessels shall carry relevant charts and publications for the area of operation. The Regional Operations Center (ROC) shall give adequate notice of operations outside the operational areas to allow the vessel time to obtain all newly required charts and publications.
- b) The guidelines and instructions contained in the *Hydrographic Supplies Handbook* shall be followed for:
 - Reporting hydrographic information
 - Ordering hydrographic supplies & action on receipt
 - Publication of new charts and editions
 - Correction of charts
 - Correction of publications
 - Notice to Mariners

- c) Vessels are cautioned that the Hydrographic Services Office (HSO) does not guarantee that CCG Vessels will be supplied with corrected charts. Charts may be supplied in the condition that they are received from the supplier.
- d) Upon receipt of new charts or charts returned after validation from HSO, adequate time shall be given by the applicable Marine Superintendent to ensure that a responsible person is assigned to bring all folios and publications up to date including all temporary and preliminary corrections for the charts.
- e) The charts must be corrected in compliance with instructions given in the *Hydrographic Supplies Handbook*.
- f) Corrected charts shall be available in the navigation area of the vessel. On vessels or shore sites where charts are kept for reference or for use in small craft but are not corrected and maintained in accordance with this procedure, these charts will be clearly labelled as CAUTION – CHART NOT CORRECTED TO NOTICE TO MARINERS.
- g) A file shall be maintained on the Bridge for Notices to Shipping. The Navigating Officer or Coxswain, as applicable, upon receipt of each Notice to Shipping, shall determine which chart is affected and shall write on the chart the notice number and a brief description of the notice.
- h) All Electronic Charting System (ECS) displays shall be labelled NOT TO BE USED AS SOLE MEANS OF NAVIGATION in a manner easily seen by all personnel using them.

3.3 KEY SHIP DRAWINGS

- a) The vessels drawings shall be maintained so as to reflect the current as-fitted condition of the vessel. Where sketch changes are made to existing drawings to reflect changes made to the constructed or previous condition, these changes shall be dated and initialled and should be replaced by a properly drafted representation as soon as possible thereafter.
- b) The list of required drawings located in Annex C – Guidance Documents, represents the drawings to be maintained for each vessel to satisfy Convention, Code or regulation.
- c) Copies of these drawings may be held ashore but should be marked UNCONTROLLED unless a system of issue, receipt, and acknowledgement is in place
- d) For all vessels, duplicate CONTROLLED copies of some of these drawings must be maintained ashore. These drawings are:
 - Main Plans
 - General Arrangement
 - Capacity Plan
 - Hydrostatic Curves

- Construction Detail
 - Midship Section
 - Scantling Plan
 - Decks
 - Shell Expansion
 - Transverse Bulkheads
 - Rudder and Rudder Stock
 - Cargo Hatch Covers, when applicable
- Bilge, Ballast and Cargo Piping Diagrams

3.4 AWARENESS VIDEOS

- a) Annex C – Guidance Documents contains a list of awareness videos that are provided by the CCG for the purposes of familiarization. These are controlled documents and shall be maintained on each vessel and station.
- b) When new videos that are not on the list are received, they shall be entered into this list by hand in the blank spaces provided until the next amendment of the FSM arrives.
- c) Each video shall arrive with an accompanying letter stating which familiarizations it shall be added to.

4 DOCUMENTATION

- National and Regional Registers of External Documentation
- Site-Specific Inventory of External Documentation
- Site Specific Work Instructions
- Notice to Shipping Register
- Familiarization Records
- Awareness Videos



Fleet Safety Manual

11.A.3 - VESSEL CERTIFICATES

1 PURPOSE

- a) To ensure that regulatory certificates that must be held aboard vessels are properly recorded and maintained.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICER

- a) The Commanding Officer is responsible to ensure that regulatory certificates required aboard their vessel are valid for the class of voyage and are posted as required.
- b) shall coordinate with the Regional Director, Fleet and the Director, Integrated Technical Services, to ensure that expiring certificates are renewed in a timely manner.

3 INSTRUCTION

3.1 GENERAL

- a) Regulatory Certificates that shall be held aboard CCG vessels are listed in Annex C – Guidance Documents. This list is not all encompassing but provides posting information for common certificates carried.
- b) Vessels shall maintain a register of vessel certificates held, showing the date of issue, the expiry date and when applicable, the endorsements date. All regulatory certificates for the vessel are to be entered into the register.
- c) Upon initial issue of a certificate, or a renewal notice to a certificate, a copy of the certificate or the notice is to be sent to the Regional Director, Fleet or their delegate. Only REGULATORY/STATUTORY CERTIFICATES listed in the register need to be sent ashore.
 - Vessels shall inform the Regional Director, Fleet of any changes of the status or validity of regulatory certificates (extension, new expiration date, SI-7, etc.). Any issues regarding vessels certificates shall be indicated on the Certificate Register cover which accompanies the Change of Command Document. This register shall indicate any impacts or decisions which could impact vessel readiness. A sample is provided in Annex D – Forms and may be modified for actual certificates carried.

4 DOCUMENTATION

- Register of Vessel Certificates
- Posted Certificates in Accordance with Regulation

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

11.A.4 - MAINTENANCE OF VESSEL LOGS

1 PURPOSE

- a) To ensure that all vessel logbooks are completed and maintained according to common standard and that records are maintained to meet all regulatory requirements.

2 RESPONSIBILITIES

2.1 COMMANDING OFFICERS

- a) The Commanding Officers are responsible for ensuring that the Ship's Book and the Deck and Radio Logs are completed as per this procedure.

2.2 CHIEF ENGINEERS

- a) Chief Engineers are responsible for ensuring that Engine/Machinery Logs and Oil Record Books are completed as per this procedure.

2.3 REGIONAL MARINE SUPERINTENDENTS

- a) Regional Marine Superintendents are responsible for ensuring preservation of logs forwarded to them in compliance with this procedure.

3 INSTRUCTION

3.1 GENERAL

- a) All entries shall be neat, legible and made in ink. Under no circumstances shall entries be erased. Any mistakes shall be crossed out with a single line and initialled by the person who made the original entry.
- b) All Logs shall be maintained using 24-hour system, each day beginning at 0000 and ending at 2400.

3.2 DECK LOG

- a) Normally vessels will use the Canadian Coast Guard (CCG) *Deck Log DFO/2009–1594*, however where this is not practical due to the vessels size and/or operation another suitable format may be used. Alternate formats will be approved by the Marine Superintendent and indicated in Regional Procedures.
- b) Sufficient entries shall be made in the log to ensure that the vessels voyage can be recreated. The person in charge of the watch shall initial entries. The Commanding Officer shall inspect and sign for each day of entries.
- c) The Marine Superintendent will issue direction for completion of logbooks in special circumstances such as prolonged lay-up.

3.3 ENTRIES – GENERAL

- a) Where the vessel uses checklists to effect recurring activities, an entry to the effect that the checklist was completed, can replace the detailed information referred to in this procedure.
- b) The checklists must be approved as Site Specific Work Instructions and the checklist templates are to be maintained on board for presentation if required to support the log entry.

3.4 ENTRIES IN THE LOG SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

- a) Employment of the vessels company
- b) Closing and opening of watertight doors
- c) Times and details of accidents, births and deaths on board
- d) Notation of damage to or loss of any important articles or fixtures
- e) Any occasion of touching ground, colliding with vessel or any other fixed or floating object, including the time of accident, the names of deck and engineering officers and other bridge personnel on watch. The name and port of registry of any other vessel involved shall also be recorded.
- f) Any information regarding damage to fishing gear.
- g) Description of the weather, wind, sea, and corrected barometer and any unusual phenomenon as follows:
 - For watchkeeping vessels, where practical every two (2) hours but in any case at the completion of each watch and when there is any unusual occurrence or circumstance.
 - For non watchkeeping vessels every two (2) hours where practical but as a minimum upon departure and arrival and when there is any unusual occurrence or circumstance.
- h) Any change or suspected change in the advertised position or characteristics of an aid to navigation.
- i) Full particulars of any contravention or suspected contravention of the [Canada Shipping Act \(CSA\) 2001 - Regulations for the Prevention of Pollution from Ships and for Dangerous Chemicals](#) and any actions taken.

- j) Names and descriptions of any vessels, lighters, barges or small craft alongside including time of arrival and departure.
- k) Any damage caused by vessels alongside.
- l) Times of commencing and ceasing to load or discharge.
- m) Time a vessel or object is taken in tow and the time when towing ceases.
- n) Times of departure and return of vessels boats and/or helicopters.
- o) Details of the number and type of vessels boarded for Fisheries Enforcement and/or Management and, in addition, where charges are laid the Commercial Fishing Vessel (CFV) number (or other identifying information in the case of vessels other than CFVs) type of violation and the name of the issuing officer. Where the violation involves the location of the violating vessel (in regards to boundaries etc.), the position, as well as the method of deriving the position shall be recorded.
- p) Record of checks on position finding equipment and any errors found.
- q) Any work carried out on board by non-crew members including company name.
- r) Confirmation of time checks between bridge and engine room
- s) Any other entry that is required by regulation.

3.5 ENTRIES - WHEN PROCEEDING TO OR ON ARRIVAL FROM SEA

- a) Times of weighing or slipping and proceeding.
- b) Times of anchoring or mooring the vessel, giving the depth of water, amount of cable veered and position, including the method used for fixing.
- c) Times of securing alongside any wharf.
- d) The drafts of vessel fore and aft prior to sailing and upon arrival.
- e) Times of embarking and disembarking pilots.
- f) Details of any tugs or other vessels used for assisting the vessel, for any reason, including the times of securing to and letting go.
- g) Times of completion of checks to bridge equipment.
- h) Times related to the use of engines including transfer of control, notification and cancellation of standby, and finished with engines. Where detailed information on engine manoeuvres is required they may be entered in a separate Bridge Notebook.

3.6 ENTRIES – WHEN AT SEA

- a) Meeting or finding at anchor any vessel whose presence or movement is of concern or interest.
- b) Every occurrence connected with the navigation or pilotage of the vessel including approaching and/or entering restricted visibility and actions taken.
- c) All discovered or suspected dangers that if unreported could pose a hazard to own or other unsuspecting vessels.
- d) Results of observations made to determine the vessels position.

- e) The behaviour of the vessel in heavy weather
- f) Times of commencing and completing as well as details of Search and Rescue work, including the names of vessels assisted.
- g) Particulars of any cargo lost overboard or jettisoned
- h) Times of commencement of icing and amount

3.7 NOTE BOOKS

- a) In circumstances where there is insufficient space available in the deck log to record details of an event, a separate notebook shall be maintained. Examples of types of notebooks are Search and Rescue work, Enforcement activities, engine manoeuvres, helicopter log etc. Reference to the notebooks shall be made in the deck log.

3.8 ENGINE ROOM LOG BOOK

- a) Due to the differences in machinery on each vessel, a vessel type specific log may be used provided that the Log is approved by the Superintendent of Marine Engineering.
 - Entries in the log shall include but not be limited to the following:
 - Request for and transfer of machinery control between the engine room and bridge.
 - Bridge requests for standby status or additional machinery.
 - Start and stop times for propulsion and auxiliary machinery.
 - Machinery out of service for maintenance or repair and reasons.
 - Defects noted which may affect vessels safety or limit performance
 - Details of transfers of fuel, ballast, bilge water or oil
 - Vessel fuelling
 - Incidents involving collision, grounding, drills, fire, injury to personnel, or damage to equipment.
 - Confirmation of time checks between bridge and engine room
 - Work carried out on equipment such as maintenance or adjustment which may affect operational performance
 - Periodic records of machinery operating data such as temperatures, pressures, hours

3.9 OIL RECORD BOOK

- a) All vessels over 400 GRT shall maintain Oil Record Books in the format approved by Transport Canada. Entries shall be made in compliance with [Arctic Waters Pollution Prevention Regulations](#) and [Regulations for the Prevention of Pollution from Ships and for Dangerous Chemicals](#), and the instructions included with the record book. Each entry in the Oil Record Book is to be clearly written for the operation, properly coded and is to be signed by the officer in charge of the particular operation. One transfer operation can cover more than one line. Each page of the book is to be signed by the Commanding Officer. No blank lines are to be left between entries.

3.10 RADIO LOGS

- b) In accordance with CSA 2001 and the provision of [Section 41 of the Ship Station \(Radio\) Technical Regulations, 1999](#), a Radio Log shall be carried on board vessels with compulsory fitted marine radio installations. Instructions found in the beginning of the [Radio Log \(TP 13926\)](#) are to be followed.
- Entries in the Radio Log shall include but not be limited to the following:
 - A summary of distress, urgency and safety radio communications
 - Important incidents relating to radio service
 - Where appropriate, the position of the vessel once a day
 - A summary of the condition of the radio equipment including back-up power condition
 - Daily, weekly, and monthly tests are to be recorded in the Radio Log as detailed in Annex A of the Radio Log.

3.11 COAST GUARD SHIP'S BOOK

- a) The CCG Ship's Book is used to record engagements, discharges, promotions, and appointments aboard CCG vessels.
- b) The Ship's Book provides a valuable record of sea-time served and the capacity in which the seafarer was employed. The Ship's Book shall be completed according to the detailed instructions contained inside the Book.

3.12 MAINTENANCE AND RETENTION OF LOGS

- a) Logs shall be carefully preserved and maintained so that they are presentable at all times for inspection or for legal purposes. Books transferred from the vessel to shore offices for archiving or retention shall be sent under signed receipt cover. The receipts are to be held in the vessel's files for production as required. The retention schedule established for the preservation of information recorded as part of this procedure is set out in Annex D - Forms.

4 DOCUMENTATION

- Ship's Book
- Deck Log Book
- Engineer Room Log Book
- Oil Record Book
- Radio Log Book –TP 13926E
- Record of Receipts for Transferred Books



Fleet Safety Manual

11.B.1 - PROCEDURE APPROVAL AND CHANGE PROCESS

1 PURPOSE

- a) To ensure that there is a systematic process to effect change to national and regional procedures contained in the Fleet Safety Manual (FSM) and to ensure that there is a similar process to effect change to Site Specific Work Instructions.
- b) To ensure that there is a documented method of submitting suggestions for change to the Safety Management System (SMS) and a method by which these suggested changes are reviewed and evaluated.

2 RESPONSIBILITIES

2.1 COMMISSIONER OF THE CANADIAN COAST GUARD (CCG)

- a) The Commissioner of the Canadian Coast Guard (CCG) is responsible for the approval of all FSM National Policies (identified in this manual by the numbering convention #.0).

2.2 ASSISTANT COMMISSIONER, CCG

- a) The Assistant Commissioner, CCG is responsible for the approval of Regional Procedures written to augment the national procedures within the FSM.

2.3 DIRECTOR GENERAL, FLEET

- a) The Director General, Fleet is responsible for the approval of all National FSM Procedures.

2.4 REGIONAL DIRECTOR, FLEET, AND REGIONAL DIRECTOR, INTEGRATED TECHNICAL SERVICES

- a) The Regional Director, Fleet, and Regional Director, Integrated Technical Services are responsible for the approval of site specific work instructions and checklists that fall under their authority.

2.5 ALL CCG PERSONNEL

- a) All CCG personnel are invited to make suggestions for the improvement of the SMS used within the CCG.

2.6 COMMANDING OFFICERS

- a) Commanding Officers are to receive suggestions made by their crews and are to submit these suggestions to the Designated Person Ashore. Commanding Officers may provide written comments to the Superintendent Fleet Safety and Security (SFSS) on the viability of the suggestion but shall provide a copy of any such comments made to the individual who initiated the suggestion.

2.7 SHORE SUPERINTENDENTS

- a) Shore Superintendents are to receive suggestions from their employees and are to submit these suggestions to the SFSS. Shore Superintendents may provide written comments to the SFSS on the viability of the suggestion and shall provide a copy of any such comments made to the individual who initiated the suggestion.

2.8 COMMANDING OFFICERS OR SHORE SUPERINTENDENTS

- a) Commanding Officers or Shore Superintendents, as appropriate, are to maintain contact with the SFSS to track the evaluation of the suggestion and to report on progress to the person submitting the suggestion.

2.9 DIRECTOR/SUPERINTENDENT FLEET SAFETY AND SECURITY

- a) The Director/Superintendent Fleet Safety and Security shall maintain a register of suggestions for change received for procedures under their custody. The register shall indicate what actions have been taken to review the suggestions.

3 INSTRUCTION

3.1 CHANGE

- a) Changes to the FSM can originate from:
 - Suggestions made by any person
 - Non-Conformance Reports
 - Recommendations from Occupational Safety and Health Committees
 - Recommendations from Union Management Committees
 - Recommendations from regional management reviews
 - Recommendations from the National Safety Management System Review Committee
 - Recommendations following a review of the FSM as directed through a Functional Review.
 - Unilateral action by the Director General, Fleet with respect to national procedures
 - Unilateral action by the Assistant Commissioner, CCG with respect to regional procedures
 - Unilateral action by the Regional Director, Fleet or the Regional Director, Integrated Technical Services with respect to Site Specific Work Instructions or checklists

- b) Nothing in this procedure constrains those with approval responsibilities from making any immediate change to Policies/Procedures under their responsibility that they deem necessary to address any unsafe or undesired situation that may exist or could be created through lack of management direction. They have the authority to veto any change presented to them for approval following a national/regional review process.
- c) Where a change will be made unilaterally by the Director General, Fleet; an Assistant Commissioner, CCG; a Regional Director, Fleet or Regional Director, Integrated Technical Services, the rationale for the change must be communicated when the change is implemented.

3.2 SUGGESTIONS

- a) The SMS relies on a process of Continuous Improvement; all personnel may identify the need or potential to create a new procedure, work instruction, checklist, or make a suggestion to change to an existing one.
- b) Suggestions for improvement of the SMS shall be made in writing. The use of the Suggestion for Change form (Annex D – Forms) ensures that suggestions are tracked and shall serve as a record of action taken.
- c) Upon receipt of a suggestion, the SFSS shall determine if the suggestion has national or regional implications. Suggestions that are regional shall be tracked using a sequential numbering system generated within the regions while suggestions that are national in scope shall be given a tracking number (Regions request HQ number). Suggestions which are national in scope are transmitted to the Director Fleet Safety and Security. All suggestions for change shall be acknowledged and the appropriate Director/Superintendent Fleet Safety and Security shall notify for verification of receipt.
- d) Suggestions for change that impact only the immediate worksite, Site Specific Work Instructions, do not need to be received on a formal Suggestion for Change form. Verbal communication followed by some form of supporting documentation/email outlining site management approval/recommendation for change would be accepted.

3.3 FLEET SAFETY MANUAL POLICY/PROCEDURE APPROVAL

- a) The approval for FSM Policies/Procedures will be undertaken in three hierarchical levels.
 - SMS Policies (Identified in the Manual as #.0) must be given or refused by the Commissioner.
 - FSM National Procedures must be given or refused by the Director General, Fleet.
 - Regional Procedures must be given or refused by the Assistant Commissioner, CCG.
- b) All suggestions for change to any Policy/Procedure shall be reviewed by the senior management and operational managers under the area of responsibility. Procedures under review shall carry a tracking sheet which captures comments and the approvals by the various individuals prior to being presented for formal approval.
- c) Approval for a SMS Policy/Procedure must be given or refused within two (2) months following the review process. When procedures are approved they are to appear in the next cyclical revision of the FSM.

3.4 SITE SPECIFIC WORK INSTRUCTIONS APPROVAL

- a) Changes to Site Specific Work Instructions (SSWI) are to be internally approved by the on site management team prior to sending to the SFSS for routing to the appropriate Regional Director for approval signature. On Layday vessels SSWI's are to be approved by both crews before being sent ashore.
- b) When a new SSWI is created or that there is a change as a result of an NCR, Incident investigation, as a direct result to a change to a piece of equipment or to correct any unsafe or undesired situation that may exist, the instruction shall be created, modified, updated or corrected as necessary and be implemented immediately as a draft pending formal approval providing that it has been approved by the on site management team.
 - Draft procedures used at the worksite are to be printed on a unique coloured paper identifying them as an internally approved draft pending approval.
 - Draft SSWI's shall not remain in place for periods greater than ninety (90) days while the various levels of approval are sought.
 - Draft SSWI's shall be prepared in the same format as regular SSWI's.
- c) Suggested changes to SSWI's submitted by the Commanding Officer or the site Occupational Safety and Health Committee to the Regional Director, Fleet or the Regional Director, Integrated Technical Services for approval; shall be accepted or declined within sixty (60) days of receipt.
- d) Commanding Officer Standing Orders become part of the SSWI's. These instructions are approved for use by the C/O ('s) onboard the vessel. The Regional Director, Fleet, as the vessel owners representative, approves these orders in an administrative capacity ensuring continuity with CCG policies and procedures.
- e) Where any officer with authority refuses to implement a change recommended by an appropriate committee, body, or Commanding Officer, the decision must be communicated in writing and must be supported by a written explanation. The veto decision must then be attached to the applicable minutes of the committee or body where the proposal was tabled, discussed, and transmitted for approval.

4 DOCUMENTATION

- Completed Suggestion Forms
- Director/Superintendent Fleet Safety and Security Register of Suggestions
- Agenda of the regional management review
- Copies of documentation supporting veto's



Fleet Safety Manual

11.C.1 - SAILING ORDERS

1 PURPOSE

- a) To ensure that orders for the dispatch of Canadian Coast Guard (CCG) vessels are issued clearly and consistently with due regard for the health and safety of the crew, the safety and security of the vessel and the protection of the environment.

2 RESPONSIBILITIES

2.1 SUPERINTENDENT, REGIONAL OPERATIONS CENTRE (ROC)

- a) The Superintendent ROC shall issue Sailing Orders to vessels that are consistent with this procedure and the iFleet program.
- b) The Superintendent ROC shall ensure that all Regional vessels and helicopters are accounted for following the rollup of position reports. Where a vessel or helicopter is considered overdue they shall take appropriate actions to ascertain the status of vessel or helicopter whose reports are overdue. This includes vessels transferred from one region to the control of another.
- c) The ROC is responsible to provide such assistance to a Commanding Officer as may be requested to ensure the safety and security of the vessel.

2.2 COMMANDING OFFICER

- a) The Commanding Officer has the responsibility in matters of safety, security and pollution prevention to use the Commanding Officer's overriding authority to take whatever action the Commanding Officer considers to be in the best interests of the health, safety and security of passengers, the crew, the vessel, and for the protection of the marine environment.

3 INSTRUCTION

3.1 GENERAL

- a) ROCs shall develop, site-specific work instructions detailing the regional requirements for promulgation of sailing orders through iFleet.

- b) The Sailing Order shall give general direction to the Commanding Officer of the work to be performed by the vessel in a given area and in a given period. The work shall be described in such terms so as to leave no doubt in the mind of the recipient as to what work must be done.
- c) The Sailing Order shall not require the Commanding Officer to sail at an exact hour or arrive at an exact hour but may require departures or arrivals on specified dates, or the dates for expected rendezvous.

3.2 MANDATORY STATEMENTS

- a) Sailing Orders shall always contain the Commanding Officer's responsibility statement, "The Commanding Officer has the overriding authority to take whatever action the Commanding Officer considers to be in the best interests of the safety of passengers, safety of the crew, safety of the vessel, and the protection of the marine environment."
- b) Sailing Orders shall always contain the following statement, "With the exception of activities performed to fulfill the vessel's sailing/tasking orders the Commanding Officer shall take steps to ensure that all sites, whether Heritage sites, public sites or private sites, visited during the vessels operations are left in the same or improved condition that they were found."

3.3 PREPARATION OF SAILING ORDERS

- a) When developing and preparing sailing orders for CCG vessels, the Superintendent ROC, in consultation with the vessel Commanding Officer, as appropriate shall manage the risks associated with the vessel operation.
- b) Where individual program-related contingent taskings are foreseen in the work program for the vessel, the Order shall specify the name of the individual authorized to make the tasking and the conditions that apply to that authority.

3.4 ISSUE OF SAILING ORDERS

- a) iFleet, is the approved CCG program for issuing and accepting sailing orders. The iFleet program refers to taskings as jobs, jobs shall be considered synonymous with taskings.
- b) Sailing Orders shall always be delivered to the vessel through iFleet. If connectivity with iFleet is not possible, sailing orders shall be sent via e-mail or voice transmission or facsimile, provided that confirmation of receipt by the vessel is immediate. In all instances, at the earliest opportunity, the vessels shall interface with iFleet to update the system and document acknowledgements and the completion of sailing orders.
- c) The ROC and Joint Rescue Coordination Centers (JRCCs), are the only centres with the authority to task a vessel. SAR taskings shall take precedence over a Sailing Order. Any tasking requested by external bodies, shall be confirmed by the Commanding Officer with the ROC before complying.
- d) The Superintendent ROC may countermand any tasking, this action may be verbal but shall be followed up in writing.

3.5 RECEIPT OF SAILING ORDERS

- a) The Commanding Officer shall acknowledge receipt of Sailing Orders through the iFleet program and shall resolve all questions arising from the Orders with the ROC.
- b) The Commanding Officer shall upon completion of the assignment, report through iFleet, as detailed in the Sailing Order, all completed work, outstanding work remaining, plus any concerns or areas of improvement that may be beneficial to the Program Superintendent.
- c) The information contained in the Sailing Order shall be transcribed or excerpted for posting on bulletin boards throughout the vessel for the information of the vessel's complement. Any areas of the Sailing Order that are classified as PROTECTED are to be removed or masked before posting.

3.6 POSITION REPORTING

- a) ROCs shall develop site-specific work instructions that detail vessel reporting requirements. Such instructions shall normally specify reports at the start and end of each day. The instruction shall detail action to be taken in the event that a vessel fails to report at the required time.
- b) All patrolling vessels shall send a morning and evening position report to the ROC. Regions shall establish the appropriate time lines for receiving the morning and evening reports. Where more frequent or specific information reports are required, they shall be included in the Sailing Order.
- c) Morning and evening position reports shall use the following format:
 - CCGS Vessel Name
 - Date/Time/Position/Course/Speed (Vessel Status)
 - Any defects affecting availability or capability of vessel
 - Operation/Tasking - Present and intended movements over the next 24 hours
 - Weather Conditions - Impacts to program/tasking delivery
- d) The ROC shall, as soon as possible after receiving the reports, provide a regional roll-up of the reports to the respective JRCC and provide vessel information to Headquarters.

3.7 FAILURE TO REPORT

- a) Where any vessel or helicopter under the operational assignment or operational control of the Region, fails to report and can not be contacted within a two (2) hour period of the expected reporting time, the Superintendent ROC shall activate the CCG vessel/aircraft response section of the Fleet Emergency Management Plan.

3.8 CROSS REGIONAL CONTROL

- a) [Handover Procedures for CCG Operations](#): This document establishes protocol's which shall be referenced and followed whenever there is a vessel transfer between regions.
- When a vessel is transferred to another region, the vessels' home region (ROC) shall issue a Sailing Order advising that they have transferred operational control to the assignment region. All technical, administrative, and personnel control shall be retained by the home region. The assignment region shall issue all subsequent Sailing Orders to the vessel until such time as the vessel returns to its home region. Upon the vessel's return to its home region, the assignment region shall issue a Sailing Order returning operational control to the home region.

4 DOCUMENTATION

- A Sailing Orders
- Site Specific Work Instructions
- Handover Procedures for CCG Operations

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

12.0 - FLEET VERIFICATION, REVIEW, AND EVALUATION

1 AUDITS

- a) The Canadian Coast Guard (CCG) Fleet carries out a program of comprehensive audits, both ashore and aboard vessels, to verify that health, safety, security and pollution prevention activities comply with the Safety Management System (SMS).
- b) Audits by external auditors are carried out for initial issue, periodic examination and renewal of Documents of Compliance and Safety Management Certificates on a five year schedule. External audits do not relieve the CCG of the responsibility of conducting annual internal audits.
- c) Internal audits of areas involved in the SMS are programmed at intervals not exceeding twelve (12) months from the certification date. The audits are performed against the Fleet Safety Manual (FSM) procedures and are conducted by trained auditors.
- d) Auditors are independent of areas audited and results of audits are brought to the attention of personnel having responsibility for a department or vessel.
- e) All non-conformities and observations arising from the audits are reviewed and followed to verify that effective corrective action has been employed.

2 SAFETY MANAGEMENT SYSTEM REVIEW

2.1 GENERAL

- a) The CCG Fleet carries out, as a minimum on an annual basis, review meetings to evaluate the efficiency of the SMS and to ensure that the optimal level of management resources are brought to bear to address previously unresolved deficiencies.
- b) The review meeting shall address at a minimum:
 - Analysis of accidents, hazardous occurrences, and non-conformities.
 - Certification and competency requirements, exemptions requested and/or granted.
 - Internal and External audit findings.
 - Overall efficiency of the SMS and to make recommendations for changes to procedures.

- Organizational changes.
- Identification of new plans, instructions, or procedures.
- Effectiveness of training methods.
- Changes in relevant legislation, conventions, etc.
- Ship Security Plans.

2.2 INCIDENT INVESTIGATION REPORTS

- a) All Incident Investigation Reports (IIR) and non-conformities are reviewed by the Superintendent Fleet Safety and Security and senior management. The results of such reviews may be used to:
- Initiate general corrective action to other fleet units.
 - Initiate amendments to the SMS to prevent recurrence.

2.3 FORMAL FUNCTIONAL REVIEW OF THE SMS

- a) Formal functional reviews of the SMS are to be held at regular intervals. These reviews may be held in conjunction with other meetings but at a minimum are to be held once every two (2) years. The review should ensure that over a five (5) year period the entire FSM has been thoroughly reviewed.

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

12.A.1 - AUDITS

1 PURPOSE

1.1 GENERAL

- a) To ensure that audits are scheduled and conducted as a means to measure the performance of the Canadian Coast Guard (CCG) Safety Management System (SMS) and that audit results are effectively described and communicated which result in corrective action being taken in order to continually improve the system.

1.2 SCOPE

- a) Audits may cover any of the subject areas contained in the within the CCG SMS; CCG has a broad program related to health, safety, maintenance, security, and pollution prevention.
- b) Internal audits must review the corrective action taken to address any non-conformities or incident occurrences that were reported since the previous audit. Where corrective action is discovered not to have been fully completed in accordance with the terms upon which the non-conformity or hazardous occurrence was closed, a non-conformity will be raised against *Section 9.2 of the ISM Code - The Company shall establish procedures for the implementation of corrective action*. In addition, the original non-conformity shall be re-issued under a new number cross-referenced to the previous item. In the case of a incident occurrence, where applicable, a non-conformity shall be created related to the system fault that had been established as a root cause in the incident investigation.
- c) The International Maritime Organization (IMO) has recommended that to reduce impact on vessel operations and to reduce audit fatigue, other audits or inspections of vessels should be coordinated with the internal and external audits that are required to satisfy the ISM Code. Persons from other agencies, sectors, branches, or groups may be included in the audit team assembled for internal audits conducted under this procedure to satisfy their need for vessel information. Where an audit will employ multi-tasking, this information will be communicated in the audit announcement letter.

1.3 TARGETS

- a) To address issues arising from non-conformances, Incident investigations, or trend analysis, audits may be targeted to gather a specific body of information. Targets may also be put in place to satisfy the needs of other agencies while attempting to comply with 1.2 (b) above. Targets shall be communicated to the Commanding Officer of the vessel, or the person responsible for the shore site, in advance of the audit in the audit announcement letter. The results from the target questions shall be reported on in the Audit Report following the audit.

2 RESPONSIBILITIES

2.1 COMMISSIONER, ASSISTANT COMMISSIONER AND COMMANDING OFFICER

- a) The Commissioner, Assistant Commissioner and the Commanding Officer are responsible to ensure that annual audits are conducted as scheduled both aboard and ashore and that SMS certificates are endorsed when necessary.

2.2 MANAGERS

- a) All Managers are responsible to ensure that they are aware of audit results and take corrective action.

2.3 SUPERINTENDENT FLEET SAFETY AND SECURITY (SFSS)

- a) The SFSS is responsible to schedule Regional audits, both internal and external, and to follow-up on audit results to ensure that all non-conformities are corrected.

2.4 SFSS, OR THE DIRECTOR FLEET SAFETY AND SECURITY (DFSS)

- a) The SFSS, or the DFSS for headquarters-based employees, shall maintain qualification records of employees permitted to lead internal audits.

3 INSTRUCTION

3.1 GENERAL

- a) A schedule of all safety audits, both internal and external, shall be established for a period of not less than one year, and circulated to all areas where an audit is to occur. This schedule shall indicate the type of audit to be conducted, initial, periodic or renewal and also whether internal or external party is involved.
 - As part of the schedule, each region shall provide the DFSS with the periodic range and the expiry date for the Safety Management Certificates held by the vessels for the region. This schedule shall be updated as required.
 - SMS audits on vessels over 125 GRT shall be audited annually with an internal CCG audit. Additional audits shall be performed by a classification society twice in every five (5) year period. Once as an initial audit followed by a periodic verification audit between years two (2) and three (3) of the certificate period.

- SMS audits on vessels under 125 GRT and those vessels based out of Hay River, NWT shall be audited on an annual basis. During the years where an external or classification society audit is required, this audit shall be considered to meet the requirements of the internal audit. Additional audits may be performed at the regions discretion during the years where an external or classification society audit is required.
- b) Only unbiased persons, having received formal training in SMS auditing, and having observed or participated in at least three audits in the previous three years shall Lead Internal Audits.
 - The CCG Internal Lead Auditors Course is accepted as formal training for auditors. This course shall only be taught by qualified auditors with a combination of at least 10 large vessels, small vessel, office internal and external audits.
- c) An auditor from a classification society shall conduct external audits on vessels larger than 125 GRT. A lead auditor independent of the region to be audited shall be selected by Headquarters Fleet Safety branch to conduct certification audits on vessels smaller than 125 GRT on behalf of the Commissioner of the CCG. When practical, External audits and Internal Certification audits shall be accompanied by a regional Fleet Safety representative.
- d) The area to be audited shall receive written notice at least ten working days in advance outlining the scope, time frame, and resources required to complete the audit.
- e) The following steps must be taken to complete the audit:
 - A pre-audit meeting shall be held at the beginning of the audit. Attendees, at a minimum, shall include the audit team and audit area representatives. The Lead Auditor shall chair the meeting and review the scope, approach, anticipated time frame as well as scheduling a post audit meeting;
 - A post audit meeting with, at minimum, the departmental representatives' attendees from the pre-audit meeting. At this meeting the Lead Auditor shall review the findings and negotiate the timelines for corrective actions that may be required, taking into account the guidelines contained in sections 3.3 (a) to 3.3 (c) of Procedure 9.A.1.
 - Within fourteen (14) working days of the completion of the audit an audit report is to be completed and forwarded to the vessel or department representative with a copy to the Regional Director, Fleet and the SFSS.
 - As soon as possible following an audit of a vessel or site there shall be a meeting of all personnel at the facility to provide information related to the audit findings and any corrective action being undertaken or planned. A copy of the audit report shall be filed with the Occupational Safety and Health Committee for the vessel or the worksite.
- f) The SFSS shall maintain audit documentation and records by vessel, by site, and by audit number.

4 DOCUMENTATION

- Audit Schedule
- Lead Auditor Qualification/Certification Records
- Audit Reports
- Audit Records
- Records of Corrective Action

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

12.A.2 - SAFETY MANAGEMENT SYSTEM REVIEW

1 PURPOSE

- a) To ensure that periodic reviews of the Safety Management System (SMS) are conducted to assess and improve system efficiency in general and timeliness of corrective action in particular.

2 RESPONSIBILITIES

2.1 REVIEWS OF THE SAFETY MANAGEMENT SYSTEM

- a) Reviews of the SMS will be undertaken in three hierarchical levels as shown below in descending levels of seniority.

2.2 COMMISSIONER OF THE COAST GUARD (CCG)

- a) The Commissioner of the Coast Guard (CCG) shall lead reviews of the system that will assess overall compliance and efficiency of the system as a whole. This review shall include items referred by a regional review. This review shall be held on an annual basis, or more often as the Commissioner shall direct.

Note 1: For the purpose of continuity, the headquarters of the CCG shall act as a region (conduct CCG headquarters semi-annual reviews) for the purpose of reviewing headquarters-related issues; thereby ensuring continuity and follow-up on the Corrective Action Plans that have been submitted after the issuance of non-conformities to CCG headquarters.

2.3 ASSISTANT COMMISSIONER

- a) The Assistant Commissioner shall lead reviews of the system concerning issues of general importance to the region or items that have been specifically referred to the region by a vessel. These reviews shall be held semi-annually.

2.4 COMMANDING OFFICER

- a) The Commanding Officer shall lead reviews of the system concerning issues of specific relevance to their vessel.
 - This also will assist the Commanding Officer in meeting their obligations under Procedure 5.0, Section 1.1 (k) so that in a period of twenty-four (24) months, the on-board contingency plans and Site Specific Work instructions / procedures / checklists and, on an annual basis, security plans, have been completely reviewed and amended as required. When new policies and procedures are released, it is expected that these will be immediately reviewed against shipboard procedures to ensure compliance.
 - On dual crewed vessels; reviews shall be held on an annual basis. These reviews will be alternated between the crews from year to year so that each Commanding Officer shall have completed a review within a twenty-four (24) month period. Each review shall be separated by a minimum of eight (8) months and a maximum of fourteen (14) months to occur within a twenty-four (24) month period
 - On single crewed vessels, the Commanding Officer shall lead a review within a twenty-four (24) month period.

3 INSTRUCTION

3.1 MEMBERSHIP OF THE REVIEWS

- a) Membership of the reviews, at a minimum, shall require the attendance and participation of the persons named in the following sections. Additional persons may be invited as permanent members or as participants at the absolute discretion of the Chairperson.

3.2 VESSEL REVIEWS

- a) The Commanding Officer – Chairperson
- b) The Head of Department for each vessel department
- c) The senior crew member in each vessel department

3.3 REGIONAL REVIEWS

- a) The Assistant Commissioner – Chairperson
- b) The Regional Director, Fleet
- c) The Regional Director, Integrated Technical Services
- d) A serving Commanding Officer selected from vessels assigned to the region
- e) A serving Chief Engineer selected from vessels assigned to the region

- f) A serving Senior Crew Member selected from vessels assigned to the region
- g) The Superintendent, Fleet Safety & Security

Note 1: To ensure equal participation from the small vessel fleet (vessels <125GRT), at least one of the vessel selectees above must be serving aboard a vessel of less than 125GRT.

3.4 HEADQUARTERS REVIEWS

- a) The Commissioner of the CCG
- b) Deputy Commissioners of the CCG
- c) The Director General, Fleet
- d) The Director General, Integrated Technical Services
- e) The Director, Fleet Safety & Security

3.5 NATIONAL REVIEWS

- a) The Commissioner of the CCG – Chairperson
- b) Deputy Commissioners of the CCG
- c) From each region – The Assistant Commissioner
- d) The Director General, Fleet
- e) The Director General, Integrated Technical Services
- f) The Executive Director, Canadian Coast Guard College
- g) From each region – The Regional Director, Fleet
- h) From each region – The Superintendent, Fleet Safety and Security
- i) A serving Commanding Officer selected by rotation (East to West) from a regional review
- j) A serving Chief Engineer selected by rotation (West to East) from a regional review.
- k) A serving Senior Crew Member selected by rotation (from a region not selected to provide a Commanding Officer or a Chief Engineer) from a regional review
- l) The Director, Fleet Safety & Security

Note 1: To ensure equal participation from the small vessel fleet (vessels <125GRT), at least one of the vessel selectees above must be serving aboard a vessel of less than 125GRT. On occasions where the mandated regional rotation does not provide a member from the small vessel fleet, a small vessel member from a regional review committee not in the current rotation selection will be requested.

3.6 REVIEWS - GENERAL

- a) A review shall cover the following items at a level of detail appropriate to the scope of the review – vessel, regional, national:
- Report on the number and type of incidents. Highlight trends where relevant.
 - Formal investigations and noteworthy occurrences linked to procedures.
 - Certification and competency requirements exemptions requested and/or granted.
 - Internal and external audit findings.
 - Non-conformities reports (NCR's) related to audit focus areas, Safety Management System (SMS) reviews conducted and review of Ship Security Plans (SSP's).
 - Organizational Changes.
 - Identification of new plans, instructions, or procedures.
 - Report on safety and security training delivered
 - Changes in relevant legislation, conventions, etc.
 - Suggestions for change
- b) The SMS review shall ensure that corrective action that has been taken is appropriate and effective. When a senior level review deems that corrective action taken by a junior level review has not fully addressed the root cause of the accident, hazardous occurrence, or non-conformity, the senior level may direct additional action or additional investigation.
- c) Special SMS review meetings shall be held as required to address serious failures of the System as soon as they occur. The SMS review at the senior level shall develop trends of accidents, hazardous occurrences, and non-conformities over a five (5) year window and shall consider this information when reviewing or proposing policy or procedural changes to the SMS.
- d) The SMS review committee shall analyse trends of accidents, hazardous occurrences, and non-conformities over a five (5) year window and shall consider this information when reviewing or proposing policy or procedural changes to the SMS.
- e) For audit purposes, minutes of reviews shall be distributed to the CCG Fleet for information.
- f) For clarity, minutes of vessel reviews shall be posted aboard the vessel and copies circulated within the Region to the Assistant Commissioner through the SFSS.
- g) Minutes of regional reviews shall be circulated to all vessels and units in the region, to the Commissioner and the Director, Fleet Safety and Security.
- h) Minutes of the national reviews shall be translated by the DFSS and circulated to the SFSS's in all regions for reproduction and distribution to all vessels and units.

3.7 FUNCTIONAL REVIEW OF THE SMS

- a) The Director General Fleet shall ensure that procedures within the Fleet Safety Manual are periodically reviewed to ensure that they continue to be current and relevant to vessel operations. At a minimum, a Functional Review shall occur once every two (2) years where entire sections of the manual are reviewed and updated.
- b) This Functional Review may be held in conjunction with other national meetings as appropriate. Participants shall include, at a minimum, the SFSS and seagoing management personnel and other shore management representatives as deemed necessary for the intended scope of the review.

4 DOCUMENTATION

- Safety Management System Review Committee Agenda(s)
- Safety Management System Review Committee Minutes
- Suggestions for Change as a result of a Functional Review

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

13.0 - CERTIFICATION AND VERIFICATION

1 SAFETY

1.1 GENERAL

- a) A Statement of Compliance, in the form and manner approved by the Classification Society, issued to the Canadian Coast Guard (CCG) for the operation of its Fleet shall be held at the Headquarters of the CCG. Accompanying the Statement of Compliance will be the record of Endorsements for Annual Verification.
- A copy of the Statement of Compliance and the Endorsements for Annual Verification shall be available in each CCG Region and aboard each CCG vessel above 125 GRT
 - The Statement of Compliance is renewed following satisfactory findings as a result of the annual audit process. One regional office and Headquarters shall be audited on an annual basis.
- b) A Safety Management Certificate shall be held aboard the vessel to which the Certificate was issued. Accompanying the Certificate will be the Endorsement for Periodical and Additional Verifications. Copies of this certificate shall be held with the SFSS.
- c) Safety Management Certificates shall be endorsed during an intermediate verification, between the second and third anniversary date of the Certificate issue date, and must be fully renewed at the fifth anniversary date of the Certificate issue date.
- d) All vessels of the CCG, in excess of 125 GRT, are required to meet the requirements of the [Safety Management Regulations of the Canada Shipping Act \(CSA\) 2001](#) (*The ISM Code*) and display the appropriate certification attesting to compliance.
- e) All vessels of the CCG, in excess of 15 GRT but less than 125 GRT, are required to meet the requirements of the CCG Safety Management System (SMS). The Commissioner of the CCG shall issue certification attesting compliance.

Note 1: For clarity, the [Small Vessel Regulations of the CSA 2001](#) define only those vessels below 15 GRT to be small vessels. For vessels that have not been measured for tonnage, the *Regulations* provide for a determination of tonnage according to length overall. A vessel in excess of twelve (12) meters in length (39 feet 4½ inches) is deemed to be in excess of 15 GRT.

Note 2: Transport Canada has advised that a boat or a barge carried aboard a vessel as part of the vessel's equipment operates under the mother ship's registration and does not require a unique registration. Therefore, vessel boats over 15 GRT will not require SMS compliance certification.

1.2 INTERIM SAFETY MANAGEMENT CERTIFICATE:

- a) Interim certificates will be issued to new vessels upon delivery or when the company takes on the responsibility for the operation of a vessel that is new to the company. Such an Interim Safety Management Certificate (SMC) shall be issued for a period not to exceed six (6) months; provided that provisions of *Section 14.4 of the ISM Code* have been met as follows:
- The vessel has a valid statutory status
 - the Statement of Compliance is relevant to the vessel concerned.
 - the Safety Management System (SMS) provided by the Company for the vessel includes key elements of this code and have been assessed during the audit for issuance of the Statement of Compliance.
 - the Company has planned the internal audit of the vessel within three (3) months.
 - the Master and Officers are familiar with the SMS and planned arrangements for its implementation.
 - instructions, which have been identified as being essential, are provided prior to sailing, and
 - relevant information on the SMS has been given in a working language or languages understood by the vessel's personnel.
 - the vessels maintenance, housekeeping etc. is at an acceptable standard by a Top Down Tour of the vessel.
- b) Certification Process for new vessels 125 GRT or above.
- An interim certification audit; to ascertain the compliance of the vessel with the provisions mentioned above, shall be conducted before the vessel is issued a sailing order – by the Classification Society under contract to the CCG.
 - Within three (3) months of operations a Full Internal Audit is to be conducted by CCG Regionally.
 - Prior to the expiration of the Interim Certificate an additional External Certification Audit will be carried out in order to issue a SMC to the vessel.
- c) Certification Process for new Vessel's below 125 GRT.
- An interim certification audit; to ascertain the compliance of the vessel with the provisions mentioned above, shall be conducted before the vessel is issued a sailing order – by the Regional Fleet Safety and Security Office.
 - Within three (3) months of operation a Full Internal Audit is to be conducted by CCG Regionally.
 - Prior to the expiration of the Interim Certificate an Internal Certification Audit will be carried out in order to issue a SMC to the vessel.

1.3 OPTIONAL MODIFIED CERTIFICATION PROCESS FOR SAR STATION MODE VESSELS

- a) For those instances when the rotation of SAR station mode vessels could result in some vessels not being present during SAR station audits and therefore unable to maintain vessel certification the Regional, Director Fleet can identify a SAR station mode vessels (not exceeding 125 GRT) to be part of the of the Modified Certification Process.
- b) All related SMS documentation and maintenance records pertaining to the SAR station mode vessels identified under this process, shall be supplied by the SFSS so it can be audited during the annual regional office audit conducted by representatives selected by National Headquarters Fleet Safety and Security Branch.
- c) The following small vessel certification, as a minimum, shall be sampled during the Regional Office Audit:
 - Transport Canada Maritime Safety Inspection Certificate (TCMS)
 - Record of Safety Equipment Certificate
 - Fire Detection and Extinguishing Certificate
 - Liferaft Inspection Certificate
 - Radio Inspection Certificate
- d) Maintenance routines for these vessels shall be sighted during the Regional Office Audit.
- e) A HQ issued SMS Certificate (five (5) year validity) will be issued to the Region with the identified small vessels endorsed by this modified process.
- f) The original SMS Certificate shall be endorsed annually during each Regional Office Audit. In this process the fifth audit shall be considered as a re-certification audit.

2 SECURITY

2.1 GENERAL

- a) All vessels of the CCG are required to follow the [Policy on Government Security](#) (PGS). Vessels of greater than 100 GRT are required to hold vessel specific Ship Security Plans (SSP) written to reflect the requirements of the PGS.
- b) Security elements shall be audited as part of the internal audit program established for the vessel.

- c) To validate the SSP once every five (5) years, the SFSS is to confirm that the following provisions for the vessel are in compliance and to transmit verification of this information to HQ.
- There are no outstanding Security NCR for the vessel
 - That the Ship Security Assessment (SSA) documentation (SSA Questionnaire, SSA Risk Assessment Table and SSA Gap Table) and the SSP documentation has been reviewed/verified
 - That documentation is easily accessible, is marked PROTECTED B and properly stored
 - That all security drawings are up-to-date and attached to the SSP
 - That all modifications to any of the documents have been detailed on an amendment form (copy filed) and submitted to the SFSS for approval
 - That security documents have been updated with approved amendments
 - That replaced documentation (including CDs) have been removed and destroyed to be in compliance with the DFO Corporate Policy
 - That amendments are properly recorded on the Record of Amendment form, dated and signed
 - That completed security forms are logged and filed appropriately.

3 DOCUMENTATION

- Record of Security Training
- Record of Security Drills & Exercises
- Record of Ship MARSEC Level Changes
- Gangway Logs



Fleet Safety Manual

ANNEX A - ABBREVIATIONS, GLOSSARY AND BIBLIOGRAPHY

1 ABBREVIATIONS

| | |
|--------------|---|
| ACV | Air Cushioned Vessels |
| AMS | Asset Management System |
| BOSRC | Basics of Oil Spill Response Course |
| CCG | Canadian Coast Guard |
| CFV | Commercial Fishing vessel |
| CGFB | Coast Guard Fleet Bulletin |
| CGFC | Coast Guard Fleet Circular |
| CGFO | Coast Guard Fleet Orders |
| CGTB | Coast Guard Technical Bulletin |
| CO | Commanding Officer |
| COHS | Canada Occupational Health and Safety Regulations |
| CSA | Canada Shipping Act |
| CSO | Company Security Officer |
| DFO | Department of Fisheries and Oceans |
| DFSS | Director Fleet Safety and Security |
| DND | Department of National Defence |

| | |
|------------------|--|
| DPA | Designated Person Ashore |
| DSC | Digital Selective Calling |
| ER | Environmental Response |
| FHR | Federal Halocarbon Regulations |
| FMO | Federal Monitoring Officer |
| FRC | Fast Rescue Craft |
| FSSM | Fleet Safety and Security Manual |
| GMDSS | Global Maritime Distress and Safety System |
| GRT | gross registered ton |
| HSO | Hydrographic Service Office |
| HVAC | Heat, Ventilation, Air Conditioning |
| IAMSAR | International Aeronautical and Maritime Search and Rescue Manual |
| IMO | International Maritime Organization |
| ISM Code | International Management Code for the Safe Operation of Ships and for Pollution Prevention |
| ISPS Code | International Ship and Port Facility Security Code |
| JRCC | Joint Rescue Coordination Centre |
| LCM | landing craft, mechanized |
| MARSEC | Maritime Security |
| MED | Marine Emergency Duties |
| MEDEVAC | medical evacuation |

| | |
|----------------|---|
| MOHS | Maritime Occupational Health and Safety Regulations |
| MRSC | Maritime Rescue Sub-Centre |
| MSDS | Material Safety Data Sheets |
| MSROC | Marine Spill Response Operations Course |
| NCC | National Co-ordination Centre |
| NCR | Non-conformity report |
| NOTSHIP | Notice to Shipping |
| NDPA | National Designated Person Ashore |
| OIC | Officer in Charge |
| OJT | On the Job Training |
| OSC | On-Scene Commander (Environmental Response) On-Scene Coordinator (Search and Rescue) |
| OHS | Occupational Health and Safety |
| PFD | Personal Floatation Device |
| PPE | Personal Protective Equipment |
| R1 | The entire vessel is designated a restricted area requiring appropriate security measures |
| R2 | Specific areas of the vessel, due to their criticality, the nature of the equipment, resources and /or the presence of protected or controlled materials have more stringent access requirements, controls and are secured and/or monitored at levels higher than R1 areas to prevent unauthorized access. Such areas will be appropriately signed to notify they are further restricted. |
| RDPA | Regional Designated Person Ashore |

| | |
|-------------------------------|--|
| RHIB | Rigid Hull Inflatable Boat |
| RHIOT | Rigid Hull Inflatable Operator Training |
| ROC | Regional Operations Centre |
| SAR | Search and Rescue |
| SCBA | Self Contained Breathing Apparatus |
| SCUBA | Self Contained Underwater Breathing Apparatus |
| SFSS | Superintendent Fleet Safety and Security |
| SIC-## | Ship Inspection Certificate |
| SOLAS (CONVENTION) | Safety of Life at Sea Convention |
| SOPEP | Ship Oil Pollution Emergency Plan |
| SSMS | Safety and Security Management System |
| SSO | Ship Security Officer |
| SSP | Ship Security Plan |
| STCW | Seafarers' Training, Certification and Watchkeeping Code |
| SVOP | Small Vessel Operator Proficiency Training |
| SWL | Safe Working Load |
| TB | Treasury Board |
| VOC | volatile organic compounds |
| WCB | Workers Compensation Board |
| WHMIS | Workplace Hazardous Materials Information System |

2 GLOSSARY – DEFINITIONS

| | |
|---|--|
| <i>Accommodation Ladder</i> | <p>a means of access to and egress from a vessel that includes platforms on different levels with ladders between the platforms and that</p> <p>(a) is suspended by a supporting structure of chains or steel wire ropes from its lowest suspension point;</p> <p>(b) is hinged at its top; and</p> <p>(c) can be moved so that the lowest platform is accessible from shore. (<i>échelle de coupée</i>)</p> |
| <i>Activity Logs</i> | <p>Electronic or hard copy records that may be completed and maintained to note or to log unusual non-routine activities or any other thing that the person feels would be beneficial to the relief person.</p> |
| <i>Administration</i> | <p>The Marine Safety Directorate of the Department of Transport of the Government of Canada</p> |
| <i>Airborne emissions</i> | <p>Are result of combustion and may contain Nitrogen Oxides (NO_x), Sulphur oxides (SO_x), Carbon Dioxide (CO₂) and Volatile Organic Compounds (VOC) that are the most harmful as they contribute to smog, acid rain and the green house effect.</p> |
| <i>Aircraft</i> | <p>Includes any craft operated or chartered by the CCG that is licensed under the Aeronautics Act.</p> |
| <i>Appropriate Authority – Certification</i> | <p>Transport Canada Marine Safety and Inspection Directorate when dealing with certificates issued by that office. CCG Technical & Operational Services Training Section when dealing with certificates issued by the CCG.</p> |
| <i>Asbestos</i> | <p>Is comprised of fibrous magnesium silicate minerals of which minute particles can be inhaled by persons coming in contact with the material. Exposure to asbestos particles may cause damage to the human respiratory system and it is classified as a carcinogenic substance.</p> |
| <i>Audit</i> | <p>A comprehensive, systematic assessment of performance to established criteria.</p> |
| <i>Bilge Water</i> | <p>Includes all water in machinery spaces and other water containing an oil mixture.</p> |

| | |
|---|--|
| Biomedical Waste General | Biomedical waste - general – items contaminated with blood or body fluids such as bloody gauze, tampons and gloves from the ship's clinic or from the application of First Aid. |
| Biomedical Waste Contaminated Sharps | Materials that can puncture, penetrate or cut the skin and have come into contact with a body fluid or micro-organism such as syringes, lancets and broken laboratory glass. |
| Biomedical Waste Sharps Container | All sharps containers shall have a lid, which cannot be removed once permanently closed. Containers shall be located in a secure and convenient location onboard. The container must be colour-coded and marked as per Annex A of FSM 7.E.6. |
| Bunkering | Means: the loading of oil or an oily mixture onto a vessel from a loading facility or from another ship, or the unloading of oil or an oily mixture from a vessel onto an unloading facility or onto another ship. |
| Canadian Maritime Documents | For the purposes of the Fleet Safety Manual, Canadian Maritime Documents are licences, permits, certificates or other documents issued by Transport Canada or the CCG Guard to verify that the person to which it was issued has met the requirements of the document. These include a Certificate of Competency and/or a Continued Proficiency Endorsement issued by Transport Canada (TC) or the CCG, a Marine Emergency Duties Certificate issued by TC, a Public Service Health Assessment Certificate issued by Health Canada, and / or a Seafarer's Medical Certificate issued by TC |
| Cargo | Freight, goods, materials or supplies carried on board for the operation of the vessel or for the carrying out of an operational assignment. |
| Cargo Gear | Means any gear or appliance used in the all or any part of the work of loading, unloading, moving or handling cargo, vessel's stores, vessel and cargo fittings, etc. |
| Cargo Handling | Refers to the Loading / Unloading, Stowage and Securing of material. |
| Changeover Notes | Refers to the written information that is compiled and left behind which aids in the exchange of pertinent operational information between changing crewmembers. |

| | |
|-----------------------------------|--|
| Checklist | A term, synonymous with “work instruction”, which provides for a systematic guide to completing a task. |
| Chief Engineer | Refers to any individual appointed in charge of the machinery spaces on a CCG vessel. The term “Chief Engineer” is synonymous with “Engineer” of small units that do not carry more than one engineer. |
| Chief Officer | Refers to any individual appointed in charge of the deck department on a CCG vessel. The term “Chief Officer” is synonymous with “senior deck officer” on smaller units. |
| Coast Guard Fleet | The Owner of the vessel, or the managing owner designated in law, who has assumed responsibility for the operation of the vessel. |
| Coast Guard Fleet Bulletin | CCG Fleet Bulletins (CGFB's) are utilized to distribute <i>guidance information</i> in an expeditious manner with respect to health and safety related issues. They are issued as a follow-up, to increase awareness, of matters brought forward by the marine industry, new regulations, incidents, TSB recommendations, internal investigation, etc. |
| Coast Guard Fleet Circular | CCG Fleet Circulars (CGFC) are authority documents that <i>direct specific action, conduct or procedures</i> relevant to the safety, security, operations and/or management of the Fleet. They may be issued pending modifications to the FSM or CGFO's; to indicate the mandatory features of a policy (i.e. TBS guidelines), how a policy ought to be interpreted and applied or provide guidelines that apply in exceptional circumstances. |
| Coast Guard Fleet Orders | CCG Fleet Orders (CGFO's) are authority documents that govern operations and management of the fleet other than safety and security. |
| Coast Guard Ship | Includes any vessel, boat, or hovercraft operated by the CCG. |

| | |
|--|---|
| Coast Guard Technical Bulletin | CCG Technical Bulletins (CGTB's) are used to communicate urgent, time sensitive technical information regarding health, safety and/or the environment which are related to systems and/or equipment. They include updated information and/or requirements for the physical operation, maintenance and repair of the related system(s) and/or equipment. They also provide necessary technical direction to achieve implementation of the new requirement(s), repair(s), maintenance, alteration(s), inspection(s), etc. CGTB's have a limited lifetime and if necessary the other related "long standing" technical documentation will be amended, within a reasonable time, to include the necessary information and/or direction. CGTB take precedence over other related technical documentation until CGTB expires or is cancelled. |
| Cold Layup | Vessel and its systems are in a non-operational status. Systems have been winterized or suspended. Vessel is unmanned and is fitted with remote alarm systems. |
| Commanding Officer | Refers to any individual appointed to exercise command of a CCG vessel. The term "Commanding Officer" is synonymous with "Officers-in-Charge" of small vessels. |
| Commanding Officers Delegate | The person designated by the Commanding Officer to supervise cargo operations, oversee diving operations and safety. |
| Competent Person Designated Responsible | A competent person is an individual with specialized knowledge for the task at hand with publicly recognized accreditation in the relevant field, whom has been designated by the owner or its worksite representative to accomplish certain tasks. |
| Competency Profile | Refers to the human capacity of the vessel in terms of numbers, education, and experience. The profile forms part of the operational readiness status of the vessel and has equal importance with power potential, hull state, fuel state, or equipment defect state. |
| Confined Space | Means a storage tank, ballast tank, pump room, coffer dam or other enclosure, other than a hold, not designed or intended for human occupancy, except for the purpose of performing work, that has poor ventilation, in which there may be an oxygen deficient atmosphere, or in which there may be an airborne hazardous substance. |
| Controls | Means main engine and thruster controls (telegraphs). |

| | |
|--|---|
| <i>Core Competency</i> | The minimum amount of skills, certification or license required relating to a specified job or function. |
| <i>Coxswain</i> | A person appointed with the responsibility for the operation of a small craft, safe navigation, safety and security of the vessel, crew and passengers. |
| <i>Critical Systems</i> | Are defined as equipment or technical systems, the sudden operational failure of which (when in use) may result in hazardous situations. (Refer to the list in the procedure's section). |
| <i>Deck Watch</i> | Means that part of the vessel's crew that is required for the purpose of attending to the navigation and/or security of a vessel. |
| <i>Defect</i> | The inability of piece of equipment to provide the type of service or result for which it was procured due to inefficient design, sub-standard manufacture, or improper installation. |
| <i>Designated Person Ashore (DPA)</i> | A person, or persons, ashore with direct access to the highest level of management and who has the written responsibility to administer and monitor the Safety Management System (SMS). |
| <i>Disabling Injury</i> | An employment injury or illness that: prevents an employee from reporting to work or from effectively performing all the duties connected with the employees regular work on any day following the day on which the injury or disease occurred, whether or not the day following is a working day for the employee. results in a loss by an employee of a body member or part of a member or in the complete loss of the usefulness of a body member. results in the permanent impairment of a body function of an employee. |
| <i>Diving Regulatory Authority</i> | The authority responsible for the enforcement of regulations for the safety and protection of divers |
| <i>Diving Supervisor</i> | The person having overall responsibility for the diving aspects of the operation including the health and safety of all diving personnel. |
| <i>Document of Compliance (DOC)</i> | The document issued to the CCG Fleet by, or on behalf of, the Administration that certifies conformity with the Code. |

| | |
|-----------------------------------|---|
| Emergency Drills | Drills which are developed and conducted to cover potential shipboard emergencies. |
| Emergency Repair | Are the actions taken to correct damage or deficiency as a result of an unplanned event such as collision, grounding and/or major equipment failure resulting in the vessel's being removed from service to effect repairs. |
| Experience | Means a defined period of satisfactory service in a particular position as reported in an official document such as the Continuous Certificate of Discharge for Seamen and supported by reference checks, letters of reference or performance appraisals |
| Expert Person | In respect of a specified function, means a person who has the knowledge, training and experience to perform the function safely and properly. |
| External Documentation | Includes but is not limited to hard copy or electronic versions of the following: Government acts and regulations (Canadian and International) Navigation charts and tables Key structural, mechanical and electrical drawings Ship safety bulletins International code of signals Sanitation code for Canada's Food Service Industry Manufacturer's operational & maintenance manuals for critical equipment. Statutory, classification and CCG certificates Stability Data |
| Familiarization | Essential instructions to passengers, new personnel and personnel in new assignments concerning their duties and responsibilities as related to safety, security and protection of the environment. |
| Federal Monitoring Officer | CCG representative who assumes responsibility for monitoring a response to a marine environmental emergency response managed by the polluter. |

| | |
|--|--|
| <i>First Aid</i> | <p>Emergency medical care rendered to injured or ill employees by trained personnel.</p> <p>First Aid may include medical treatment provided onboard the vessel which does not result in subsequent medical attention ashore or the initial treatment of an injured or ill employee prior to being seen by a higher level of medical care.</p> <p>First Aid does not include instances where medical care has been provided onboard a vessel where the treatment includes; suturing, use of specialized equipment and or the use of prescription medicines. This type of care would be provided by the nurse when carried and would be considered a minor injury or greater.</p> |
| <i>Fixed Aids</i> | <p>Work performed on shore based aids and beacons including; maintenance (includes painting), repairing, brushing, construction/demolition of structures, construction of wharves, helicopter pads etc.</p> |
| <i>Floating Aids Operations</i> | <p>Work performed on floating aids to navigational including but not limited to; lifting, placing, repairing, inspection, replacing, position verification, change-over and repositioning.</p> |
| <i>Friable Asbestos</i> | <p>A friable material is one which, when dry, can be crumbled, pulverized or powdered by hand pressure, in the process releasing microscopic particles into the atmosphere.</p> |
| <i>Foreign National</i> | <p>A person who is not a Canadian citizen nor a permanent resident of Canada</p> |
| <i>Grey Water</i> | <p>Is associated with housekeeping activities: it is usually made up of wastewater from kitchens, sinks, showers and laundry. It must not contain sewage or non-biodegradable chemicals.</p> |

Halocarbons

Halocarbons include the following substances:
Tetrachloromethane (carbon tetrachloride)
1,1,1-trichloromethane (methyl chloroform), not including 1,1,2-trichloromethane
Chlorofluorocarbons (CFC), also known as Freons
Bromochlorodifluoromethane (Halon 1211)
Bromotrifluoromethane (Halon 1301)
Dibromotetrafluoroethane (Halon 2402)
Bromofluorocarbons other than those set out above
Hydrobromofluorocarbons (HBFC)
Hydrochlorofluorocarbons (HCFC)
Hydrofluorocarbons (HFC)
Perfluorocarbons (PFC)
Bromochloromethane (Halon 1011)

Hazard

Any source of potential damage, harm or adverse health effects on someone, something or the environment.

Hazardous Occurrence

An accident /illness or a near-miss arising out of, linked with, or occurring in the course of employment that results or has the potential to result in personal injury or damage to property, equipment or pollution to the marine environment.

A breakage or malfunction of any rigging, structure or machinery on a Fleet Unit or belonging to a Fleet Unit or any human error that could have caused serious injury or loss of life, or a serious situation which could have resulted in an accident. Some examples are:

Collision - An impact between two or more vessels under way.

Contact - A lateral/light impact with another object or vessel; touching bottom.

Grounding – To touch bottom and remain stranded.

Ice Damage – Damage to a vessel resulting from contact with ice.

Shipping Accident - An accident to a vessel such as a collision, contact, capsizing, fire, grounding, ice damage, and striking but not including disabling injuries.

Striking- A hard impact with a stationary object or a vessel not under way.

Hotel Services

The storage, preparation, and serving of foodstuffs and the sanitation of food preparation areas, food storage areas, messing areas and the cleanliness and sanitation of living accommodation aboard CCG vessels or at CCG stations.

| | |
|---------------------------------------|--|
| Hot Layup | Vessel is non-operational, but systems remain in operation (i.e. heat, sanitary, refrigeration). Security functions and system checks are carried out. There is a very short time frame for commissioning to operational status. |
| Hotwork | Means work that creates a source of ignition or a temperature sufficiently high to ignite a flammable gas mixture or to cause combustion of the item(s) involved in the process. This includes any work requiring the use of welding, burning or soldering equipment, drilling, grinding, chipping or any other work where flame is used or sparks are produced. |
| Hyperbaric Chamber | A pressure vessel and associated equipment designed for the purpose of subjecting humans to greater than atmospheric pressures for the treatment of decompression sickness. |
| Illegal Psychoactive Substance | Means psychoactive substances where the unauthorized possession of such substances is contrary to the laws of Canada. |
| Impairment | Means any condition caused by the consumption or ingestion of any psychoactive substance that interferes with normal motor skills or the conduct of a person. |
| License | Means an official document issued by a competent authority that indicates that the holder has achieved a minimum level of knowledge and ability to perform the duties of the position named in the document. |
| Lifting Machinery and Gear | Any machinery or cargo gear used in hoisting or lowering. |
| Logistics Officer | Refers to any individual appointed in charge of the Logistics Department on a CCG vessel. The Logistics Officer is responsible to the Commanding Officer for "Hotel Services". |
| Maintenance | Is the daily work arising from the vessel's maintenance system; which is undertaken and accomplished by the vessel's crew, while the vessel remains operational. |
| Maintenance System | Is, regardless of format, the collection of all the maintenance procedures and records for the vessel, its machinery and equipment. |

| | |
|--|---|
| Major Non-Conformity | Means an identifiable deviation which poses a serious threat to personnel, safety of the vessel, or a serious risk to the environment and requires immediate correction. In addition, the lack of effective and systematic implementation of a requirement of the ISM Code is considered a major non-conformity. |
| Manager | A person who has charge of a workplace. |
| Manoeuvring data | Is information, gained through trials, about various characteristics of the vessel's' reaction to changing helm and engine load conditions. They will generally include information about stopping distance, rate of turn, diameter of turning circles, times to change speeds, squat under varying load conditions and may include information gained through experience such as, amount of wake created at various speeds, amount of bank suction, etc. |
| Marine Environmental Emergency | An incident, accident or hazardous occurrence that has adversely affected or has the potential to adversely affect the marine environment. |
| Marine Pilot | A licensed, or certificated, person who is not normally part of the vessels crew, and who acts in an advisory capacity to guide them into and out of harbours, berthing, or through straits and potential accident areas, using their knowledge of local winds, tides, currents, and hazards to navigation. |
| Marine Sewage Treatment Equipment | Includes all shipboard equipment designed to collect and treat sewage. |
| Material Handling Equipment | Means all or any part of the work of moving or handling material that is performed on board a vessel or loading and unloading a vessel. |
| Measuring and Test Equipment | Includes (but is not limited to): electrical measuring equipment pressure testing equipment gas analyzers sextants liquid level measuring equipment torque measuring tools dimensional measuring equipment |

| | |
|--|---|
| <i>Mechanical Failure or Deficiency</i> | The failure of any mechanical system due to: failure to follow prescribed maintenance routines; a lack of timely maintenance when indicated by analysis; improper care; or improper use. |
| <i>Medical Evacuation (MEDEVAC)</i> | A medical evacuation (MEDEVAC) is an emergency extraction arranged through a Joint Rescue Coordination Centre or an extraction following a diversion of the vessel from its planned voyage to obtain immediate medical assistance. Attendance at an emergency clinic to obtain treatment for cuts, sprains, fevers or aches while the vessel is in port does not constitute a medical evacuation. |
| <i>Minor Injury</i> | An employment injury or an occupational disease for which first aid or medical treatment at a hospital, medical clinic, ships nurse or Physician's office is provided other than a disabling injury. <i>Canada Marine Occupational Safety and Health Regulations, Part 21, Paragraph 274.</i> |
| <i>Minor Non-conformity</i> | An isolated incident of non-conformance with the Safety Management System or documented procedure which will not have a direct consequential effect upon the system. |
| <i>Navigational Aids Processes</i> | Means all or any part of the work of loading, unloading, moving or handling of; cargo (includes buoys and related equipment), oil pollution clean up equipment, vessel's stores, vessel and cargo fittings, performed. |
| <i>New Assignment</i> | Includes transfer to another vessel, a change of job, or a promotion. |
| <i>New Personnel</i> | Includes employees new to the vessel, or worksite, supernumerary personnel and employees recently appointed. |
| <i>Non-Conformity</i> | Means an observed situation where objective evidence indicates the non-fulfillment of a specified requirement. A deviation from the requirements specified in the Safety Management System (SMS), or an error, or any identified lack of a plan or instruction for a key shipboard operation which could endanger the safety of people, the vessel, its cargo, or the environment. |
| <i>Observation</i> | Comments or observations of the SMS that are generated by internal or external audits with a view to the continuous improvement of the system. They are not to be considered as non-conformities. |

| | |
|--|--|
| Officer-in-Charge | For the purpose of the Fleet Safety Manual, this term is synonymous with “Commanding Officer” (the person who is delegated the responsibility for safe navigation, safety and security of the vessel, crew and passengers). |
| Oil | Means oil of any kind or in any form and includes petroleum, fuel oil, sludge, oil refuse and oil mixed with waste. |
| Organization | International Maritime Organization |
| Overriding Operational Conditions | Should be construed to mean only essential shipboard work which cannot be delayed for environmental or safety reasons or which could not reasonably have been anticipated at the commencement of the voyage. |
| Ozone Depletion | Is the term applied to the diminishing of the Earth’s protective ozone layer due to chemicals containing either chlorine or bromine (Freon, Halon). These industrial chemicals, called Ozone Depleting Substances are used in refrigerators, air conditioners, foams, cleaning solvents, fire extinguishing equipment. |
| Passenger | Applies to all persons carried on board the vessel other than the Commanding Officer, Officers, Crew, Supernumeraries and Pilots. |
| Psychoactive Substances | Any substances that affect the way a person acts, feels, or thinks through the substance acting on the central nervous system when swallowed, inhaled, ingested, injected, or permitted by any other means to enter the body. They include, but are not limited to: stimulants (e.g. cocaine); depressants (e.g. alcohol); hallucinogens (e.g. marijuana); narcotics and analgesics (e.g. codeine); sedative-hypnotics (e.g. alcohol); and inhalants and solvents. These can include both prescription and non-prescription drugs. |
| Qualified Person | A qualified person is in respect of a special duty, a person who, because of their knowledge, training and experience, is qualified to perform that duty safely and properly. |
| Refit | Is a period where the vessel is taken out of service so that planned work based on those items from the defect list can be carried out. |

| | |
|---|--|
| Risk | The probability or threat of: damage, injury, liability, loss or other negative occurrence that is caused by an external or internal vulnerability that may be neutralized through preemptive action. A risk has a cause and, if it is realized, a consequence. |
| Safety Management Certificate (SMC) | The certificate issue by, or on behalf of, the Administration to a vessel to certify conformity with the ISM Code. |
| Safety & Security Management System (SSMS) | The written and documented policy, procedures and instructions, responsibilities and authorities, lines of communication between vessel and shore, and audit systems that have been created to ensure the CCG Fleet's conformity with the Code. |
| Sailing Order | An official communication to the Commanding Officer of a vessel from the Superintendent of the Operations Centre which directs the movement and employment of the vessel in a specific geographic area, for a specific employment, within a specific time. |
| Scientific Processes | Means all or any part of the work of: loading, unloading, moving or handling of scientific equipment; the setting and recovery of sampling nets, rosettes, or sediment grabs; the obtaining or handling of biologic material; or the conduct of laboratory experiments. |
| Scientific Program Operations | This may be loosely defined as Fleet's involvement in a wide range of scientific operations. The list includes, but is not limited to; Research of Fish Stocks, Fish Habitat, Climatic Water conditions, Conductivity, Density, Bottom and Core sampling, Remote sensing, Hydrographic Research, Geology, Sea Lamprey Control. |
| Sea-Bay | Tank installed within the hull that can be isolated from the sea. The sea-bay is normally protected by a strainer and is used to supply various sea-water pumps. |
| Sea Chest | Underwater compartment within the shell plating through which sea water is drawn in for the sea-bay and/ or various sea-water pumps. This compartment can't be isolated from the sea. The intake between the vessel's side and a sea valve. |
| Secure | to make fast, to tie up; to stop work, to go off duty; to make safe against adverse contingencies. |

| | |
|------------------------------|--|
| Security Sweep | Groups of two or more trained persons moving throughout the vessel in a pre-planned route visually verifying: That no suspicious packages are onboard That no security equipment has been tampered with That all doors that are required to be locked or otherwise secured are in fact still locked or otherwise secure That no signs of forced entry exist on any locked space That all persons encountered have been cleared to be onboard. |
| SECTERA I | Secured Communication Equipment. |
| Senior Management | That group of management personnel who establish policy governing the operation of the entire organization or its major segments. |
| Sewage | Encompasses human excreta, water and waste from toilets and other receptacles where such waste is collected or stored. It includes the sludge and residue from marine sewage treatment equipment, but does not include the effluent from an approved system if it complies with CSA Regulations #26 Great Lakes Sewage Pollution Prevention Regulations. |
| Sewage Holding Tank | A tank used to collect and store sewage before its ultimate disposal. |
| Ship Security Officer | Person responsible for security aboard a vessel (SSO). |
| Significant Near Miss | An undesired event, which in different circumstances could have resulted in harm to people, has or could have had an impact on the operational status of the vessel, damage to property and/or loss to a process. |
| Small Craft | Includes all craft not requiring certified operators and which are operated from a CCG Fleet vessel, station or base and includes but is not limited to: Fast Rescue Craft (FRC), Workboats, Self Propelled Barges, Hydrographic Launches and Utility Craft. |

| | |
|----------------------------------|---|
| Solid Waste | Wood – debris, sawdust, crates, boxes, Metal – scrap metal, filings, steel wool, cable conduits, razor blades, food and drink containers, aerosol and paint cans, Glass – fibreglass, electric light bulbs, food and drink bottles, Plastics – sheeting, bags, bottles, packaging and lost or discarded lines, Textiles – fabric, rope, clothing, rags and mops, Paper – cardboard, stationery, paper towels, wrapping, waxed paper, packing paper, and Other – food scraps (animal and vegetable), cigarette butts, paint chips, Incinerator ash (sludge and hydrocarbons). |
| Steering | Includes automatic steering equipment where fitted, manual steering, and emergency steering systems. |
| Supernumerary | All persons aboard a Coast Guard Ship, who are not part of the ship's complement and who are aboard on the business of the ship fulfilling the mandate of the CCG. |
| Supervisor, Small Vessels | Title is synonymous with different titles used in various regions for individuals who fulfill the same duties as stated in the National Model Work Description for this position. |
| Tank Transfer | Means transferring from one tank to another within the vessel. |
| Tasking | A specific piece of work to be done within the parameters provided by a Sailing Order. |
| Technical Training | A structured transfer of knowledge relating to a particular art, science or trade having to do with the mechanical part of an art or science. |
| Training | Transfer of knowledge through drill(s), practice or On the Job experience(s). |
| Training Course | A structured, formalized program of learning usually consisting of classroom and or developed skill set resulting in a certificate, diploma or degree upon successful completion. |
| Unbiased Person | A person, by lack of vested interest or external pressure, who can render an objective observation or decision usually outside the direct line of authority or chain of command. |

- Unsatisfactory Condition** Is defined as technical problems, breakdown or deficiencies with systems or equipment that do not meet the definition of a Hazardous Occurrences but may affect the safe operation of the machinery or the safe / efficient delivery of the program and where the sharing of the information related to the condition may improve the overall safety / efficiency of the operation.
- Warm Layup** Vessel is non-operational, but some systems may remain in operation (i.e. heat, sanitary, refrigeration, ventilation). Security functions and system checks are carried out.
- Work Aloft** Means any work or activity performed: from an unguarded structure more than 2.4m above the nearest permanent safe level; above any moving parts of machinery that could cause injury to a person upon contact; above an open hold; from a temporary structure more than 6m above a permanent safe level; or, from a ladder at a height of more than 2.4m above the nearest permanent safe level where, because of the nature of the work or activity, the person cannot use one hand to hold on to the ladder.
- Work Instruction** A term, synonymous with “checklist”, which provides for a systematic guide to completing a task.

UNCONTROLLED COPY - NOT FOR PRINTING

3 BIBLIOGRAPHY – REFERENCE

3.1 GENERAL

Publications listed in this bibliography are maintained in Departmental reference libraries and at some shore sites. Where a publication is required by a specific procedure or instruction to be maintained aboard a vessel or at a site, that publication is specifically identified in the procedure affected.

Arctic Waters Pollution Prevention Act
Arctic Waters Oil Transfer Guidelines (TP10783)
Annual Aviation Facility Checklist
Canadian General Standards Board
Canada Health Act - Potable Water Regulations for Common Carriers
Canada Labour Code, Part II — Marine Occupational Safety and Health Regulations
Canada Labour Code, Part II — Occupational Health and Safety Regulations
Canada Labour Code, Part II — Occupational Health and Safety Regulations, Part XVIII
 Diving Operations
Canada Shipping Act 2001
Canada Shipping Act 2001 — Fire and Boat Drill Regulations
Canada Shipping Act 2001 — Collision Regulations
Canada Shipping Act 2001 — Crew Accommodation Regulations
Canada Shipping Act 2001 — Marine Personnel Regulations
Canada Shipping Act 2001 — Eastern Canada Vessel Traffic Services Zones Regulations
Canada Shipping Act 2001 — Fire Detection and Extinguishing Regulations
Canada Shipping Act 2001 — Home-Trade, Inland and Minor Waters Voyages
 Regulations
Canada Shipping Act 2001 — Load Line Regulations
Canada Shipping Act 2001 — Safe Working Practices Regulations
Canada Shipping Act 2001 — Ship Station Technical Regulations
Canada Shipping Act 2001 — Shipping Casualty Reporting Regulations
Canada Shipping Act 2001 — Small Vessel Regulations
Canada Shipping Act 2001 — Steering Appliance and Equipment Regulations
Canada Shipping Act 2001 — Cargo, Fumigation and Tackle Regulations
Canada Shipping Act 2001 — Vessel Traffic Services Zones Regulations
Canadian Coast Guard Configuration Management Manual (under development)
Canadian Coast Guard Drug, Alcohol and Psychoactive Substances Policy
Canadian Coast Guard Environmental Policy
Canadian Coast Guard Marine Navigational Aids Directives
Canadian Coast Guard Safety Policy
Canadian Coast Guard Training Standard for Ships' Officers and Crew (DFO/5730)
Canadian Coast Guard Ships' OJT Manual (DFO 5559)
Canadian Environmental Quality Guidelines
Canadian Environmental Protection Act
Canal Regulations
CCG National Firearms Policy
CCG Fleet Logistics Standard (DFO 5758)
CCG Fleet Logistics Standard (400.00.7 — Approved Scale of Pharmaceuticals, Medical Supplies and Related Items)
CCG Paint and Coating Standards (18-080-000-SG-003 DFO/5847)

CCG Standard — Welding Health & Safety Technical Program (DFO/5672)
CCG Standard — Welding of Aluminium & Aluminium Alloys (18-080-000-SG-003
Formerly DFO/5782)
CCG Standard — Welding of Ferrous Materials (18-080-000-SG-001) DFO/5781
CCG Fleet Bulletins
CCG Fleet Circulars
CCG Fleet Technical Bulletins
CCG Vessels Refit Procedures Manual (CT-010-000-MP-MR-001)
Coast Guard Fleet Orders (CGFO) 207 — SAR Equipment on board CCG Ships
Coast Guard Fleet Orders (CGFO) 212 — Observe, Record and Report
Coast Guard Fleet Orders (CGFO) 218 — Helicopter Safety Equipment
Coast Guard Fleet Orders (CGFO) 450 — Hotel Services
Coast Guard Fleet Orders (CGFO) 452 — Officers and Crew Accommodation-CCG
Vessels
Coast Guard Fleet Orders (CGFO) 454 — Passengers Aboard Ships
Coast Guard Fleet Orders (CGFO) 505 — Technical Training, Scholarships, and
Correspondence Courses for Fleet Personnel
Coast Guard Fleet Orders (CGFO) 530 — Qualifications Required of CCG Ship's Officer's
Positions
Coast Guard Guide to Noise Control in New Construction Vessels (Draft)
Competency Standards for Diving Operations (Z.275.4-97)
Controlled Drugs and Substances Act — Narcotic Control Regulations
Criminal Code of Canada
DFO Health and Safety Manual
DFO Laboratory Safety Manual (DFO/5790)
DFO OHS Awareness Guide for Managers and Supervisors
DFO OHS Awareness Handbook for Employees
Environmental Code of Practice for Elimination of Fluorocarbons Emissions from
Refrigeration and Air-Conditioning Systems
Environmental Code of Practice for Halocarbons
Fatigue Management — A Guide for CG Managers, Officers and Crew
Federal Halocarbon Regulations 2003
Firearms Act
Fisheries Act — Fish Habitat and Pollution Prevention Regulations
Fleet Circular 8-2006 — Accepted Protective Headwear
Food and Drugs Act
Food Code — US Public Health Service
Food Safety Code Of Practice For Canada's Foodservice Industry (2007 Edition)
Global Maritime Distress and Safety System (GMDSS)
Great Lakes Sewage Pollution Prevention Regulations
Guidelines for Reporting Incidents Involving Dangerous Goods, Harmful Substances,
and/or Marine Pollutants (TP9834E)
Health Canada's Occupational Health Assessment Guide (Annex A)
Human Resources and Social Development Canada
Hydrographic Supplies Handbook (A-GN-H01-00/AG-001)
Ice Navigation in Canadian Waters (TP504)
International Aeronautical Maritime Search and Rescue Manual (IAMSAR – Volume IV)
International Association of Classification Societies
International Chamber of Shipping Bridge Procedures Guide
International Code for the Security of Ships and Port Facilities (ISPS)
International Convention on Standards of Training, Certification, and Watchkeeping for
Seafarers, 1978, as amended in 1995 (STCW95)

International Convention for the Prevention of Pollution from Ships
International Convention for the Safety of Lives at Sea (SOLAS)
International Convention for the Safety of Lives at Sea (SOLAS) — Life Saving Equipment (Chapter III Regulation 20)
International Maritime Dangerous Goods Code
International Maritime Organization (IMO)
International Medical Guide for Ships - World Health Organization
International Labour Organization for Seafarers
International Regulations for Preventing Collisions at Sea with Canadian Modifications
International Safety and Environmental Protection Rules and Regulations
International Safety Management Code (ISM)
International Maritime Dangerous Goods Code
International Maritime Organization (IMO) (Resolution # A.980(21) Nov, 25 99)
ISO 9000 Standards
Marine Spills Contingency Plan (National and Regional Chapters)
Material Safety Data Sheets (MSDS)
Marine Aids Directive (2.2400)
Marine Certification Regulations
Marine Transportation Security Regulations (Section 209)
National Search and Rescue Manual (DFO 5449)
Notice to Shipping
Occupational Safety Code for Diving Operations (CAN/CSA-Z275.2-11)
Ontario Rigging Manual or similar with hand signals
Operational Guidelines for SAR Units (TP11637)
Operational Standards for Personnel Security Screening
Pest Control Products Act
Seagoing Personnel Management Manual
Pilotage Act
Public Service Standards for Seagoing Occupations
Refrigerant Code of Practice
Regional Hazardous Materials Management Plan
Safe Serve Videos
Sailing Directions
Sanitation Directive — Chapter 218 — Treasury Board Manual — Occupational Safety and Health
SAR Training Standards (TP 9224)
Ship Safety Bulletin 15/91: Entry into enclosed spaces
Ship Safety Bulletin 10/98: Recommendations for Entering Enclosed Spaces
Ship Safety Bulletin 4/94: Entry into confined spaces
Ship Safety Bulletin 9/96 Ships operating in winter conditions
Shipboard Helicopter Information and Procedures Manual (DFO/5282)
Ship Station Technical Regulations (Section 41 — 1999)
Scuba Diving Regulations
Surface Supply Diving Regulations
Training Program in Marine First Aid and Marine Medical Care (TP13008)
Transport Canada Flight Operations Manual
Transport Canada Marine Safety
Transportation Safety Board Regulations
Transport Canada Seafarer's Medical

Transportation of Dangerous Goods Regulations
Treasury Board Occupational Health Evaluation Standard (TB STD 3-13)
Treasury Board Standard — Committees and Representatives Directive
Vessel Maintenance Management Manual (30-013-000-MA-MP-001)
Voluntary Guidelines For The Control Of Ballast Water Discharges From Ships
Proceeding To The St. Lawrence River And Great Lakes (TP 13617)
Workplace Hazardous Material Information System (WHMIS)

UNCONTROLLED COPY WHEN PRINTED



Fleet Safety Manual

Annex B ALPHABETICAL INDEX

| | | | |
|--|------|--------|-----------|
| Abandon Ship | 8.0 | 8.A.2 | |
| Abbreviations | | | (Annex A) |
| Accidents, Reports and Analysis, Policy | 9.0 | | |
| Alongside Emergency, Shipboard Contingency | 8.0 | 8.A.2 | |
| Amplifying Report, Hazardous Occurrences and Injuries | 9.0 | 9.B.1 | |
| Anchoring | 7.0 | 7.A.4 | |
| Approaching an Anchorage | 7.0 | 7.A.4 | |
| Approaching Confined Waters | 7.0 | 7.A.4 | |
| Approaching or Navigating In or Near Restricted Visibility | 7.0 | 7.A.4 | |
| Approval & Change Process, Procedures | 11.0 | 11.B.1 | |
| Arrival | 7.0 | 7.A.5 | |
| Asbestos Material, Handling & Controlling | 7.0 | 7.A.10 | |
| Assessing Risk | 7.0 | 7.A.1 | |
| Assignments, Vessel's Personnel | 6.0 | 6.A.1 | |
| Atmosphere Testing, Enclosed Spaces | 7.0 | 7.B.3 | |
| Audits | 12.0 | 12.A.1 | |
| Authorized Representative, CCG | 3.0 | | |
| Awareness Videos | | | (Annex C) |
| Ballast Water, Discharge | 7.0 | 7.E.4 | |
| Bibliography | | | (Annex A) |
| Bilge Water | 7.0 | 7.E.2 | |
| Black & Grey Water, Handling and Discharge | 7.0 | 7.E.3 | |
| Boat and Fire Drills | 8.0 | 8.A.2 | |
| Bridge Operations, General | 7.0 | 7.A.4 | |
| Bridge, Access To | 7.0 | 7.A.4 | |
| Bridge, Fitness for Duty | 7.0 | 7.A.3 | |
| Bridge, Organization | 7.0 | 7.A.4 | |
| Cargo Handling Gear & Lifting Appliances, Maintenance of | 10.0 | 10.B.1 | |
| CCG, Authorized Representative | 3.0 | | |
| CCG, Managing Owner | 3.0 | | |
| CCG Diver, Training Program | 7.0 | 7.B.1 | |
| CCG Diver, Training Records | 7.0 | 7.B.1 | |
| Certificates Held By Coast Guard Vessels | 11.0 | 11.A.3 | (Annex C) |
| Certificates, Vessel | 11.0 | 11.A.3 | |
| Certification and Verification, Policy | 13.0 | | |
| Change of Command Forms | 7.0 | 7.A.2 | (Annex D) |
| Changeover Notes | 7.0 | 7.A.2 | |
| Charts and Navigation Publications, External Documentation | 11.0 | 11.A.2 | |
| Checklist, Abandon Ship | 8.0 | 8.A.2 | |

ANNEX B
ALPHABETICAL INDEX

| | | | |
|--|------|--------|-----------|
| Checklist, Cargo Shifting | 8.0 | 8.A.2 | |
| Checklist, Collision With Another Vessel | 8.0 | 8.A.2 | |
| Checklist, Collision With Fixed Object | 8.0 | 8.A.2 | |
| Checklist, Diving Operations | 7.0 | 7.B.1 | |
| Checklist, Electrical Power Failure | 8.0 | 8.A.2 | |
| Checklist, Fire On Board | 8.0 | 8.A.2 | |
| Checklist, Flooding | 8.0 | 8.A.2 | |
| Checklist, Grounding | 8.0 | 8.A.2 | |
| Checklist, Helicopter Accident | 8.0 | 8.A.2 | |
| Checklist, Loss of Bridge Control | 8.0 | 8.A.2 | |
| Checklist, Main Propulsion Failure | 8.0 | 8.A.2 | |
| Checklist, Man Overboard, Immediate Discovery | 8.0 | 8.A.2 | |
| Checklist, Man Overboard, Unknown Point of Time | 8.0 | 8.A.2 | |
| Checklist, Personnel Injury and Illness | 8.0 | 8.A.2 | |
| Checklist, Piracy or Hostage Taking | 8.0 | 8.A.2 | |
| Checklist, Pollution | 8.0 | 8.A.2 | |
| Checklist, Vessel Safety Familiarization | 6.0 | 6.B.1 | |
| Checklist, Steering Gear Failure | 8.0 | 8.A.2 | |
| Checklist, Structural Failure | 8.0 | 8.A.2 | |
| Chief Engineer, Maintenance and Refits | 10.0 | 10.A.3 | |
| Cleaning and Sanitization Control Log | 7.0 | 7.A.11 | |
| Cleaning and Sanitization Schedule | 7.0 | 7.A.11 | |
| Coast Guard Lifeboat Shift Change Report | 7.0 | 7.A.2 | |
| Coast Guard Vessel Certificates | 11.0 | 11.A.3 | |
| Cold Lay-up | 10.0 | 10.A.4 | |
| Cold Weather Precautions | 10.0 | 10.A.6 | |
| Solid Waste, Handling & Discharge | 7.0 | 7.E.6 | |
| Commanding Officer - Responsibility and Authority, Indemnity | 5.0 | 5.0 | |
| Commanding Officers, General Directions, Shipboard Contingency | 8.0 | 8.A.1 | |
| Communications Schedule, Smallcraft | 7.0 | 7.C.2 | |
| Communications, Emergency, Shipboard Contingency | 8.0 | 8.A.1 | |
| Compact Glass and Light Metal Waste | 7.0 | 7.E.6 | |
| Company Security Officers | 4.0 | | |
| Competency of Operators of Pleasure Craft Regulations | 7.0 | 7.C.2 | |
| Competency Requirements for Vessels | 6.0 | 6.A.1 | |
| Confined Waters, Navigation In | 7.0 | 7.A.4 | |
| Contact Numbers, Designated Person Ashore | 4.0 | | |
| Contingency Plans, General | 8.0 | | |
| Contingency Plans, Shipboard, General | 8.0 | 8.A.1 | |
| Contingency Plans, Shore Based / Vessel based | 8.0 | 8.A.1 | |
| Contracting, Maintenance of | 10.0 | 10.A.3 | |
| Contractor Safety and Security | 10.0 | 10.A.3 | |
| Controlled Documents, Internal Identification | 11.0 | 11.A.1 | (Annex C) |
| Controlled Documents, External Identification | 11.0 | 11.A.2 | (Annex C) |
| Crew Briefing, Smallcraft | 7.0 | 7.C.2 | |
| Crew Changes / Change of Command | 7.0 | 7.A.2 | |
| Crew List | 7.0 | 7.A.2 | |
| Critical Systems, Policy | 10.0 | | |
| Cross Regional Control | 11.0 | 11.C.1 | |
| Damage Control (SAR) | 7.0 | 7.D.1 | |

| | | | |
|---|------|--------|-----------|
| Data, Manoeuvring | 7.0 | 7.A.6 | |
| Data, Stability | 7.0 | 7.A.8 | |
| Deck Log | 11.0 | 11.A.4 | |
| Deck Operations, General | 7.0 | | |
| Deck Scuppers | 7.0 | 7.A.7 | |
| Definitions | | | (Annex A) |
| Departing an Anchorage | 7.0 | 7.A.4 | |
| Departing Locks | 7.0 | 7.A.4 | |
| Department Heads, Refit | 10.0 | 10.A.3 | |
| Departure | 7.0 | 7.A.5 | |
| Description of Vessels | 1.0 | | |
| Designated Person Ashore | 4.0 | | |
| Designated Person Ashore, Contact Numbers | 4.0 | | |
| DFO Safety Management Objectives | 1.0 | | |
| Deviation from Sailing Orders | 11.0 | 11.C.1 | |
| Director, Engineering Services | 3.0 | | |
| Director, Fleet Planning | 3.0 | | |
| Director, Fleet Safety and Security | 3.0 | | |
| Director General, Integrated Technical Services | 3.0 | | |
| Director, General Fleet | 3.0 | | |
| Director, Integrated Logistics Support | 3.0 | | |
| Director, Integrated Technical Services | 3.0 | | |
| Director, Operational Support | 3.0 | | |
| Director, Marine Personnel Management | 3.0 | | |
| Director, Service Quality | 3.0 | | |
| Discharge, Ozone-depleting Substances | 7.0 | 7.E.8 | |
| Disinfection, Potable Water | 7.0 | 7.A.12 | |
| Disposal and Retention, Controlled Documentation | 11.0 | 11.A.1 | |
| Dispose, Waste | 7.0 | 7.E.6 | |
| Distribution of Sailing Orders | 11.0 | 11.C.1 | |
| Diving Operations | 7.0 | 7.B.1 | |
| Document Control, External | 11.0 | 11.A.2 | |
| Document Control, Internal | 11.0 | 11.A.1 | |
| Document Control Register | 11.0 | 11.A.1 | |
| Document Numbering Convention | 11.0 | 11.A.1 | |
| Documentation, Disposal and Retention, Controlled | 11.0 | 11.A.1 | |
| Documentation Filing Systems | 11.0 | 11.A.1 | |
| Documentation Inventory | 11.0 | 11.A.1 | |
| Documentation, Policy | 11.0 | | |
| Documentation, Revision Lists | 11.0 | 11.A.1 | |
| Draught, Maintenance of Watertight Integrity | 7.0 | 7.A.7 | |
| Drawings, Key Ship | 11.0 | 11.A.2 | (Annex C) |
| Drug, Alcohol and Psychoactive Substances Policy | 2.0 | | |
| Dry-docking | 10.0 | 10.A.5 | |
| Dynamically Support Craft | 7.0 | 7.C.1 | |
| Emergency Alongside, Shipboard Contingency | 8.0 | 8.A.2 | |
| Emergency, Enclosed Spaces | 7.0 | 7.B.3 | |
| Emergency Exercises, Shore | 8.0 | 8.A.2 | |
| Emergency Preparedness | 8.0 | | |
| Emergency Reporting, Shipboard Contingency | 8.0 | 8.A.1 | |
| Emergency Situations | 8.0 | | |

ANNEX B
ALPHABETICAL INDEX

| | | |
|---|------|------------------|
| Employee Assistance Program | 2.0 | |
| Enclosed Spaces | 7.0 | 7.B.3 |
| Enforcement Boarding Operations | 7.0 | 7.D.6 |
| Engineroom Log Book | 11.0 | 11.A.4 (Annex C) |
| Engineroom Watchkeeping | 7.0 | 7.A.9 |
| Entering Confined Waters | 7.0 | 7.A.4 |
| Entering Dry-dock | 10.0 | 10.A.5 |
| Entering Locks | 7.0 | 7.A.4 |
| Entries, Deck Log | 11.0 | 11.A.4 (Annex C) |
| Entries, Engineroom Log | 11.0 | 11.A.4 (Annex C) |
| Entry, Confined Spaces | 7.0 | 7.B.3 |
| Equipment Maintenance, Hotwork | 7.0 | 7.B.4 |
| Environmental Stewardship | 7.0 | 7.E.7 |
| Exemption to Certification Requirements, Vessel's Personnel | 6.0 | 6.A.1 |
| External Document Control | 11.0 | 11.A.2 (Annex C) |
| Eye Protection, Smallcraft | 7.0 | 7.C.2 |
| Fall Protection | 7.0 | 7.B.2 |
| Familiarization on Joining | 6.0 | 6.B.1 |
| Familiarization, Safety Management System | 6.0 | |
| Familiarization, Shore-sites | 6.0 | 6.B.1 |
| Familiarization, Smallcraft | 7.0 | 7.C.2 |
| Filing Systems, Documentation | 11.0 | 11.A.1 |
| Fire Detection Systems | 8.0 | 8.B.2 |
| Fire Patrols | 8.0 | 8.B.2 |
| Fire Prevention | 8.0 | 8.B.2 |
| Firearms | 7.0 | 7.D.6 |
| Firearms Training | 7.0 | 7.D.6 |
| Firefighting (SAR) | 7.0 | 7.D.1 |
| First Aid and Medical Services Aboard Ships | 8.0 | 8.B.3 |
| First Aid Attendants | 8.0 | 8.B.3 |
| First Aid, Injuries | 9.0 | 9.B.1 |
| First Aid Supplies and Equipment | 8.0 | 8.B.3 |
| Fisheries Management and Enforcement Operations | 7.0 | 7.D.6 |
| Fisheries Officer-in-Charge | 7.0 | 7.D.6 |
| Fitness | 7.0 | 7.A.3 |
| Fixed Aids | 7.0 | 7.D.2 |
| Fixed Wing Aircraft | 7.0 | 7.C.3 |
| Floatation, Smallcraft | 7.0 | 7.C.2 |
| Floating Aids | 7.0 | 7.D.2 |
| Food Safety and Sanitization, Training | 7.0 | 7.A.11 |
| Food Waste, Shred | 7.0 | 7.E.6 |
| Footwear, Smallcraft | 7.0 | 7.C.2 |
| Foreign National, Security Screening | 6.0 | 8.B.1 (Annex D) |
| Form, Security Incident | 9.0 | 9.B.1 (Annex D) |
| Formal Investigations | 9.0 | 9.B.2 |
| Formal Investigation Reports | 9.0 | 9.B.2 |
| Formal Investigations, Terms of Reference | 9.0 | 9.B.2 |
| FSMS, Suggestion Form | 11.0 | 11.B.1 (Annex D) |
| Fuel Consumption Guides | 7.0 | 7.E.7 |
| Fuel, Oil, and Waste Oil Products, Handling of | 7.0 | 7.E.1 |

| | | |
|--|------|------------------|
| Functional Requirements of ISM, ISPS Code | 2.0 | |
| Galley Operations | 7.0 | 7.A.11 |
| Galley, Standing Orders | 7.0 | 7.A.11 |
| Galley, Work Instructions | 7.0 | 7.A.11 |
| General, Contingency Plans | 8.0 | |
| General Operations | 7.0 | |
| General, Shipboard Contingency Plans | 8.0 | 8.A.2 |
| General Statement of Risk, Supernumerary Personnel | 6.0 | 6.D.1 (Annex D) |
| Glossary | 1.0 | |
| Grey Water, Black Water Handling and Discharge | 7.0 | 7.E.3 |
| Halocarbon, Use of | 7.0 | 7.E.8 |
| Halocarbon, Service Logs | 7.0 | 7.E.8 |
| Hazardous Materials, Handling, Storage, and Disposal | 7.0 | 7.E.5 |
| Hazardous Occurrences and Disabling Injuries | 9.0 | 9.B.1 |
| Hazardous Occurrences and Injuries Investigations | 9.0 | 9.B.2 |
| Hazardous Occurrences and Injuries, Reports | 9.0 | 9.B.1 |
| Hazardous Occurrences, Reports and Analysis, Policy | 9.0 | |
| Health Inspections, Accommodations | 7.0 | 7.A.11 |
| Hearing Protection, Smallcraft | 7.0 | 7.C.2 |
| Helicopters | 7.0 | 7.C.3 |
| Home-Trade Voyages Limits | 11.0 | 11.B.1 (Annex D) |
| Hot Lay-up | 10.0 | 10.A.4 |
| Hotel Services | 7.0 | 7.A.11 |
| Hotwork | 7.0 | 7.B.4 |
| Hotwork Permit | 7.0 | 7.B.4 (Annex D) |
| Hovercraft Operations | 7.0 | 7.C.1 |
| Icebreaking Operations | 7.0 | 7.D.5 |
| Identification, Controlled Documentation | 11.0 | 11.A.1 |
| Identification, Uncontrolled Documentation | 11.0 | 11.A.1 |
| Immersion Suits | 10.0 | 10.B.2 |
| Incinerate Waste | 7.0 | 7.E.6 |
| Index | | (Annex B) |
| Infestations, Galley | 7.0 | 7.A.11 |
| Injuries, First Aid | 9.0 | 9.B.1 |
| Injuries, Minor | 9.0 | 9.B.1 |
| Inland Waters Voyages Limits | 11.0 | 11.A.3 |
| Inside Locks | 7.0 | 7.A.4 |
| International Medical Guide for Ships | 8.0 | 8.B.3 |
| Inventory, Halocarbons Systems | 7.0 | 7.E.8 |
| Inventory, Documentation | 11.0 | 11.A.1 |
| Investigations, Formal | 9.0 | 9.B.2 |
| ISM Code, Functional Requirement | 2.0 | |
| Issue of Sailing Orders | 11.0 | 11.C.1 |
| Key Ship Drawings | 11.0 | 11.A.2 (Annex C) |
| Kill Switches, Smallcraft | 7.0 | 7.C.2 |
| Known Risk, Enforcement | 7.0 | 7.D.6 |
| Launch, Recovery, Trailering, Smallcraft | 7.0 | 7.C.2 |
| Lay-up | 10.0 | 10.A.4 |
| Lifesaving Equipment Inspections | 10.0 | 10.B.2 |
| Lifting Appliances and Cargo Handling Gear, Maintenance of | 10.0 | 10.B.1 |
| List, Critical Systems | 10.0 | 10.A.1 |

ANNEX B
ALPHABETICAL INDEX

| | | | |
|--|------|--------|-----------|
| Lockout and Tagout | 7.0 | 7.B.5 | |
| Locks, Entering and Departing | 7.0 | 7.A.4 | |
| Logging, Smallcraft | 7.0 | 7.C.2 | |
| Logs, Maintenance of | 11.0 | 11.A.4 | |
| Logs, Retention | 11.0 | 11.A.4 | (Annex C) |
| Lookouts | 7.0 | 7.A.4 | |
| Maintenance & Inspections, Lifesaving Equipment | 10.0 | 10.B.2 | |
| Maintenance and Refits | 10.0 | 10.A.3 | |
| Maintenance of, Contracting | 10.0 | 10.A.8 | |
| Maintenance & Inspection of Cargo Handling & Lifting Machinery | 10.0 | 10.B.1 | |
| Maintenance of the Vessel and Equipment, Policy | 10.0 | | |
| Maintenance of, Vessel Logs | 11.0 | 11.A.4 | |
| Maintenance Records, Policy | 10.0 | | |
| Maintenance Reporting | 10.0 | 10.A.2 | |
| Maintenance Procedures, Policy | 10.0 | | |
| Maintenance, Watertight Integrity | 7.0 | 7.A.7 | |
| Management, type of | 1.0 | | |
| Managing Owner CCG | 3.0 | | |
| Manoeuvring Data | 7.0 | 7.A.6 | |
| Manuals, Internal | 11.0 | 11.A.1 | |
| Manuals, Internal, Approval | 11.0 | 11.A.1 | |
| Manuals, Internal, Issue and Distribution | 11.0 | 11.A.1 | |
| Marine Environment Emergency Operations | 7.0 | 7.A.4 | |
| Marine Aids to Navigation Operations | 7.0 | 7.D.2 | |
| Marine Superintendent | 3.0 | | |
| MARSEC Security Levels | 8.0 | 8.B.1 | |
| Medevac | 6.0 | 6.A.2 | |
| Medical Fitness for Seagoing Personnel | 6.0 | 6.A.2 | |
| Medical Fitness for Supernumerary Personnel | 6.0 | 6.D.1 | (Annex D) |
| Medication | 6.0 | 6.A.2 | |
| Minors | 6.0 | 6.D.1 | |
| Minor Injuries | 9.0 | 9.B.1 | |
| Minor Waters Voyages Limits | 11.0 | 11.A.3 | |
| Muster Lists | 8.0 | 8.A.1 | |
| Navigation Publications and Charts, External Documentation | 11.0 | 11.A.2 | |
| Night Orders, Commanding Officer | 5.0 | | |
| Non-Conformities & Observations, Reports | 9.0 | 9.A.1 | |
| Non-Conformities, Reports and Analysis, Policy | 9.0 | | |
| Note Books | 11.0 | 11.A.4 | (Annex C) |
| Objectives, DFO Safety Management | 1.0 | | |
| Objectives, ISM Code | 1.0 | | |
| Occupational Health and Safety Committees, Shipboard | 9.0 | 9.C.1 | |
| Occupational Health and Safety Committee, Shipboard, Policy | 9.0 | | |
| Officer-of-the-Watch, Lookouts | 7.0 | 7.A.4 | |
| Offices, location | 1.0 | | |
| Oil Record Book | 11.0 | 11.A.4 | (Annex C) |
| Oily Water, Handling and Discharge | 7.0 | 7.E.2 | |
| Operation Planning and Preparation, Small Craft | 7.0 | 7.C.2 | |
| Operational Control of Vessel, Changes In Region | 11.0 | 11.C.1 | |
| Organization Chart, Vessel-Based | 3.0 | | |

| | | |
|---|------|------------------|
| Organization Chart, Shore-Based | 3.0 | |
| OSH Checklist Examples | 9.0 | 9.C.1 |
| Ozone-depleting substances, Controlling | 7.0 | 7.E.8 |
| Paint | 10.0 | 10.A.7 |
| Passage Planning | 7.0 | 7.A.4 |
| Performing Hotwork | 7.0 | 7.B.4 |
| Permit, Enclosed Space Entry | 7.0 | 7.B.3 |
| Permit, Hotwork Authorization | 7.0 | 7.B.4 |
| Personnel Safety, Hotwork | 7.0 | 7.B.4 |
| Piracy | 8.0 | |
| Policy Statement, Safety, Security and Environment | 2.0 | |
| Position Reporting | 11.0 | 11.C.1 |
| Post Hotwork | 7.0 | 7.B.4 |
| Post Operation Checks, Smallcraft | 7.0 | 7.C.2 |
| Potable Water Quality | 7.0 | 7.A.12 |
| Potable Water Tank Inspections | 7.0 | 7.A.12 |
| PPE, Smallcraft | 7.0 | 7.C.2 |
| Pre-Arrival | 7.0 | 7.A.5 |
| Precautions, Unsafe Atmosphere | 7.0 | 7.B.3 |
| Pre-Departure | 7.0 | 7.A.5 |
| Pre-Departure Checklist, Smallcraft | 7.0 | 7.C.2 |
| Preliminary Report, Hazardous Occurrences and Injuries | 9.0 | 9.B.1 |
| Preparation of Sailing Orders | 11.0 | 11.C.1 |
| Preparations for Entering Locks | 7.0 | 7.A.4 |
| Procedure Approval and Change Process | 11.0 | 11.B.1 |
| Program Operations, General | 7.0 | |
| Protection of, Shore Parties | 7.0 | 7.D.2 |
| Protective Headwear, Smallcraft | 7.0 | 7.C.2 |
| Public Address System, Fire | 8.0 | 8.B.2 |
| Public Safety Dives | 7.0 | 7.B.1 |
| Pump Overboard, Grey Water | 7.0 | 7.E.3 |
| Radio Log | 11.0 | 11.A.4 (Annex C) |
| Receipt of Sailing Orders | 11.0 | 11.C.1 |
| Records, First Aid | 8.0 | 8.B.3 |
| Records, Maintenance, Policy | 10.0 | |
| Records, Shipboard Contingency | 8.0 | 8.A.1 |
| Records, Tackle | 10.0 | 10.B.1 |
| Refits and Maintenance | 10.0 | 10.A.3 |
| Refrigeration Systems, Maintenance | 7.0 | 7.E.8 |
| Regional Director, Coast Guard | 3.0 | |
| Register, Vessel Certificates | 11.0 | 11.A.3 (Annex C) |
| Registers, Control of Documents | 11.0 | 11.A.1 |
| Report, Amplifying, Hazardous Occurrences and Injuries | 9.0 | 9.B.1 |
| Report, Non-Conformity or Observation | 9.0 | 9.A.1 (Annex D) |
| Report, Preliminary, Hazardous Occurrences and Injuries | 9.0 | 9.B.1 |
| Report, Written, Hazardous Occurrences and Injuries | 9.0 | 9.B.1 |
| Reporting, Emergency, Shipboard Contingency | 8.0 | 8.A.1 |
| Reporting, Halocarbon Release | 7.0 | 7.E.8 |
| Reports, Formal Investigations | 9.0 | 9.B.2 |
| Rescue Specialists | 8.0 | 8.B.3 |
| Resources and Personnel | 6.0 | |

ANNEX B
ALPHABETICAL INDEX

| | | | |
|--|------|----------|-----------|
| Restricted Visibility, Navigation in | 7.0 | 7.A.4 | |
| Retention and Disposal, Controlled Documentation | 11.0 | 11.A.1 | |
| Retention of Logs | 11.0 | 11.A.4 | (Annex C) |
| Return to Service, Vessel | 10.0 | 10.A.4 | |
| Review, Safety and Security Management System | 12.0 | 12.A.2 | |
| Review, Verification, and Evaluation, Policy | 12.0 | | |
| Revision List, Documentation | 11.0 | 11.A.1 | |
| Safety, Environmental Emergency Response | 7.0 | 7.D.4 | |
| Safety Management System Familiarization | 6.0 | | |
| Safety Management System, Reports, Non-Conformities & Observations | 9.0 | 9.A.1 | |
| Safety of Navigation | 7.0 | 7.A.4 | |
| Safety and Security Management System Review | 12.0 | 12.A.2 | |
| Safety and Security Management System Review, Policy | 12.0 | | |
| Safety Systems, Critical, Identification | 10.0 | 10.A.1 | |
| Sailing Orders | 11.0 | 7.11.C.1 | |
| Science Operations | 7.0 | 7.D.3 | |
| Scientific Plan / Itinerary | 7.0 | 7.D.3 | |
| Search and Rescue | 7.0 | 7.D.1 | |
| Search and Rescue Operations | 7.0 | 7.D.1 | |
| Secure Communications, Lay-up | 7.0 | 10.A.4 | |
| Security Assessment | 13.0 | | |
| Security at Sea or In Port | 8.0 | 8.B.1 | |
| Security Clearance Supernumerary Personnel | 6.0 | 6.D.1 | (Annex D) |
| Security Drills and Exercises | 8.0 | 8.B.1 | |
| Security During Maintenance | 8.0 | 8.B.1 | |
| Security During Non-Operational Periods | 8.0 | 8.B.1 | |
| Security Incident, Form | 9.0 | 9.B.1 | (Annex D) |
| Security of the Vessel | 8.0 | 8.B.1 | |
| Sewage, Storing | 7.0 | 7.E.3 | |
| Vessel Based / Shore Based, Contingency Plans | 8.0 | 8.A.1 | |
| Ship Drawings, Key | 11.0 | 11.A.2 | |
| Ship Security Plan | 8.0 | 8.B.1 | |
| Shipboard – Shore-based Exercises | 8.0 | 8.A.2 | |
| Shipboard – Shore-based Contingency Plans | 8.0 | 8.A.1 | |
| Shipboard Operations, Development of Plans for | 7.0 | | |
| Ship's Book | 11.0 | 11.A.4 | (Annex C) |
| Crew Complement | 6.0 | 6.A.1 | |
| Vessels, Description of | 1.0 | | |
| Shore Based / Vessel Based, Contingency Plans | 8.0 | 8.A.1 | |
| Shore Based, Personnel, Safety Management System Training | 6.0 | 6.C.1 | |
| Shore Based / Vessel Based , Emergency Exercises | 8.0 | 8.A.2 | |
| Significant Near Misses | 9.0 | 9.B.1 | |
| Smallcraft, Crewing | 7.0 | 7.C.2 | |
| Smallcraft Operations | 7.0 | 7.C.2 | |
| Soundings, Tank and Voids | 10.0 | 7.A.7 | |
| Stability, 47' Cape Class | 7.0 | 7.A.8 | |
| Stability Data, Maintaining | 7.0 | 7.A.8 | |
| Stability, Maintenance of | 7.0 | 7.A.8 | |
| Standing Orders, Chief Engineer | 7.0 | 7.A.9 | |

| | | | |
|--|------|--------|-----------|
| Standing Orders, Commanding Officer | 5.0 | | |
| Standing Orders, Galley | 7.0 | 7.A.11 | |
| Storing Waste | 7.0 | 7.E.6 | |
| Suggesting Change | 11.0 | 11.B.1 | |
| Suggestion Form, FSMS | 11.0 | 11.B.1 | (Annex D) |
| Superintendent, Marine Engineering | 3.0 | | |
| Superintendent, Operations Centre | 3.0 | | |
| Supernumerary Personnel | 6.0 | 6.D.1 | |
| Supernumerary Personnel, General Statement of Risk | 6.0 | 6.D.1 | (Annex D) |
| Surveys, Statutory and Class, Policy | 10.0 | | |
| Tackle, Maintenance of | 10.0 | 10.B.1 | |
| Tackle, Records of | 10.0 | 10.B.1 | |
| Tagouts and Lockouts | 7.0 | 7.B.5 | |
| Taking Over Watch, Engineeroom | 7.0 | 7.A.9 | |
| Task Review and Risk Assessment, Smallcraft | 7.0 | 7.C.2 | |
| Test Equipment, Calibration of | 10.0 | 10.A.3 | |
| Terms of Reference, Formal Investigations | 9.0 | 9.B.2 | |
| Testing Potable Water | 7.0 | 7.A.12 | |
| Topping Tanks, Fuel and Oil | 7.0 | 7.E.1 | |
| Towing (SAR) | 7.0 | 7.D.1 | |
| Training | 6.0 | 6.C.1 | |
| Training and Education, Conduct of | 6.0 | 6.C.1 | |
| Training and Qualifications, Enforcement | 7.0 | 7.D.6 | |
| Training and Qualifications, Smallcraft | 7.0 | 7.C.2 | |
| Training, Environmental Emergency Response | 7.0 | 7.D.4 | |
| Training Requirements Identification | 6.0 | 6.C.1 | |
| Training, Maintain Auditable Records | 6.0 | 6.C.1 | |
| Towing Operations | 7.0 | 7.C.4 | |
| Towing Operations | 7.0 | 7.C.4 | |
| Turnover of Watch, Engineeroom | 7.0 | 7.A.9 | |
| Uncontrolled Documentation, Identification | 11.0 | 11.A.1 | |
| Underway Operations, Smallcraft | 7.0 | 7.C.2 | |
| Unknown Risk, Enforcement | 7.0 | 7.D.6 | |
| Unsatisfactory Conditions | 9.0 | 9.B.1 | |
| Verification and Certification, Policy | 13.0 | | |
| Verification, Review, & Evaluation, Policy | 12.0 | | |
| Vessel Certificates | 11.0 | 11.A.3 | (Annex C) |
| Vessel Certificate Register | 11.0 | 11.A.3 | (Annex D) |
| Vessel Identification, Enforcement | 7.0 | 7.D.6 | |
| Vessel Logs, Maintenance of | 11.0 | 11.A.4 | (Annex C) |
| Videos Awareness | | | (Annex C) |
| Voyages, Limits of Home-Trade, Inland, and Minor Water | 11.0 | 11.A.3 | |
| Warm Lay-up | 10.0 | 10.A.4 | |
| Waste Oil | 7.0 | 7.E.1 | |
| Waste, Solid, Handling and Discharge | 7.0 | 7.E.6 | |
| Water, Produced Aboard | 7.0 | 7.A.12 | |
| Water, Quality | 7.0 | 7.A.12 | |
| Watch, Conduct of, Engineeroom | 7.0 | 7.A.9 | |
| Watch Schedules | 7.0 | 7.A.3 | |
| Watchkeeping, Engineeroom | 7.0 | 7.A.9 | |
| Watertight Doors | 10.0 | 7.A.7 | |

ANNEX B
ALPHABETICAL INDEX

| | | |
|--|------|--------|
| Watertight Integrity, Maintenance of | 10.0 | 7.A.7 |
| Weapons, Use of | 7.0 | 7.C.5 |
| Weapons, Storage | 7.0 | 7.C.5 |
| Work Aloft | 7.0 | 7.B.2 |
| Work Descriptions, Headquarters Personnel | 3.0 | |
| Work Descriptions, Vessel-Based Personnel | 3.0 | |
| Work Descriptions, Shore-Based Personnel | 3.0 | |
| Work Instructions, Galley | 7.0 | 7.A.11 |
| Work Over the Side | 7.0 | 7.B.2 |
| Written Report, Hazardous Occurrences and Injuries | 9.0 | 9.B.1 |

UNCONTROLLED COPY WHEN PRINTED

FSM GUIDANCE DOCUMENTS - UPDATE REGISTER

Created to ensure the guidance documents are tracked and amended as required.

ANNEX C

| Title | Effective Date <small>mm/yyyy</small> |
|--|--|--|--|--|--|
| 11.A.2 - Awareness Videos to be Added to Crew Familiarizations.doc | | | | | |
| 11.A.2 – Key Ship Drawings | | | | | |
| 11.A.2 - List of Controlled Publications | | | | | |
| 11.A.3 Certificates Held by CCG Vessels | | | | | |
| 11.A.4 – Log and Document Retention | | | | | |

AWARENESS VIDEOS

Note: To be added to crew familiarizations

| Video Name | Version # |
|--|-------------|
| Helicopter Risk Management (TP13632) | Winter 2008 |
| Keep Your Eyes on the Hook! (TP 14334) | Winter 2008 |
| Radio Frequency Safety Awareness | August 2009 |
| MBB BO 105, Passenger Briefing Video (applicable to all models of helicopters) | TC 2011 |

| Video series of Potable Water and accompanying documents | | Version # |
|--|--|-----------|
| 1 | Procedures For Conducting Water Sampling in Federal Facilities | 1.3 |
| 2 | Ultraviolet & Reverse Osmosis for micro-systems | 6.3 |
| 3 | Drinking Water Storage Tanks | 2.3 |
| 4 | Bottled Water Selection & Application in Federal Facilities | 2.3 |
| 5 | Water Wells for Micro-systems | 1.3 |
| 6 | Water Filtration & Ion Exchange for Micro-systems | 1.3 |
| 7 | Disinfection for Micro-systems | 1.3 |
| 8 | Drinking Water Awareness Program | 1.2 |
| 9 | Advice for the Operation of Potable Water Field Test Equipment | 1.1 |
| | Water Quality 101 – Introduction to Potable Water Supply Micro-systems | 1.1 |

11.A.2 – KEY SHIP DRAWINGS

- 1 BILGE AND BALLAST**
 - 1.1 General arrangement and location of bilge, ballast, heeling, trimming and passive roll stabilizing systems, including venting, overflow and sounding arrangements, showing all connected piping, valves, pumps and equipment, emergency systems and cross-connections to other fluid systems.**
- 2 CONTROL AND ALARM SYSTEMS**
 - 2.1 General arrangement of remote control and monitoring systems showing all connected machinery. Details of electric, pneumatic or hydraulic operational control and monitoring systems, and details of emergency operation arrangements for all machinery required for, or which may affect, the operational safety of the ship and safety of personnel on board. Details of remotely controlled fire detection, alarm and extinguishing systems. List of monitor and audio and visual alarm locations and identification of the equipment used and the manufacturer of the equipment. General arrangement of intercommunication systems linking the bridge, accommodation spaces, service spaces, the central control room and machinery spaces, including the emergency situation alarm for engineers.**
- 3 DOCKING PLAN**
- 4 DOMESTIC BOILERS**
 - 4.1 General arrangement and location of permanently installed fuel oil systems including connections to boilers, engines, heat exchangers, incinerators, cooking ranges, cabin hot-air heaters, pumps, purifiers, filters, valves, pressure gauges, piping, filling stations, tanks, tank sounding devices, flame-screened venting and overflow arrangements, drip trays and sludge facilities and oil pollution prevention components.**
- 5 ENGINE**
 - 5.1 General arrangement of the installation of the engine in the ship, showing all connected systems. General arrangement and sectional elevation of the engine, including crankcase doors and means of engine support. Details of the fuel injection system. Details of lubricating-oil, cooling-water and other attached pumping systems. Details of starting arrangements. Details of controls including reversing arrangements. Details of speed-regulating governors and other safety devices. Details of temperature-monitoring devices. Details of crankcase venting, crankcase explosion relief valves and other protection devices. Details of engine turning gear.**

11.A.2 – KEY SHIP DRAWINGS, CONTINUED

- 6 FIRE CONTROL PLAN**
- 6.1** Showing for each deck the sections of the ship enclosed by "A" Class divisions and the sections of the ship enclosed by "B" Class divisions, together with particulars of the fire alarm and fire detecting systems, sprinkler installations and fire extinguishing appliances provided in the ship, the means of entry into and exit from the various compartments and decks, and of the location of fire dampers.
- 7 FIXED FIREFIGHTING SYSTEMS**
- 7.1** Showing pump capacities and types, means for bringing pumps automatically into action, connections to pressure tank and dry valve, sea cocks, control valves, pressure gauges, alarm switches, connections to ship's fire pump, piping systems and location of sprinkler heads.
- 8 FUEL TRANSFER**
- 9 GEARBOX**
- 9.1** General arrangement of the installation of the gearing in the ship, showing all connected systems. General arrangement and sectional elevation of the gearing unit, including means of gearcase support. Details of gearcase, including access openings and venting arrangements. Details of shafting systems, including couplings, clutches, reversing gear where fitted, and balancing and vibration analyses.
- 10 GENERAL ARRANGEMENT**
- 11 LIFE SAVING EQUIPMENT PLAN**
- 11.1** Drawn to scale and shows the location, type and accommodation capacity of the survival craft carried on the ship, and the type of launching devices; the location, type and quantity of emergency equipment; the location of muster stations, their dimensions in square metres and the approach routes to the areas; and the location of embarkation stations, their dimensions in square metres and the approach routes to the areas.
- 12 MANOEUVRING DATA**
- 13 PNEUMATICS**
- 13.1** General arrangement of unfired pressure vessels, compressors, air-driven machinery, valves, piping, moisture traps, reducing valves, safety valves, pressure gauges and drainage arrangements, particularly where susceptible to frost damage.

11.A.2 – KEY SHIP DRAWINGS, CONTINUED

- 14 PROPELLER**
- 14.1** General arrangement of the propeller, including details of fastening arrangement to the shafting systems. Details of hub, hub mechanisms, seals, blade connections, control devices and locations. Details of blade form and degree of controllability of pitch.
- 15 PROPULSION SHAFTING**
- 15.1** General arrangement of the propulsion shafting, the electrical generator shafting and motor shafting in the ship, showing all connected systems. General arrangement and sectional elevation of the shafting systems, detailing attachments to driving and driven members and means of support. For ship propulsion shafting systems, details of intermediate, thrust and screw shafts including liners, in particular protective coating for carbon steel screw shafts with non-continuous liners; intermediate, thrust, stern and "A" bracket bearings; stern bushes and stern glands including their attachments to the ship; shaft lubrication arrangements; and critical speed of rotating assembly including vibration analysis.
- 16 REFRIGERATION**
- 16.1** General arrangement and location of compressors, valves, driers, strainers, oil separators, safety devices, sight glasses, piping, temperature and pressure gauges, alarms, condensers, liquid receivers, evaporation arrangements, refrigerated and air conditioned spaces.
- 17 SHELL EXPANSION**
- 18 SOUNDING & VENT PIPES**
- 19 STABILITY BOOK**
- 20 STEERING SYSTEMS**
- 20.1** General arrangement of the main, and duplicate or auxiliary, steering systems in the ship. General arrangement and sectional elevation of the steering gears, including holding-down arrangements. Specifications indicating maximum designed torque at rudder stock, timing and angle of rudder movements for main and auxiliary steering gears, materials and physical properties of the principal components. Details of pumps, piping and valves subjected to pressure, and securing arrangements. Details of safety and shock-prevention devices. Details of control and monitoring mechanisms including connections to all steering locations.

11.A.2 – KEY SHIP DRAWINGS, CONTINUED

21 TANKS AND PIPING CAPACITY PLAN

21.1 showing capacities and vertical and longitudinal centres of gravity of cargo spaces, tanks, etc.; General arrangement of the tank installation and the system to which it is connected. Details of nature of the fluid to be contained in the tank; tank volume and design fluid head; tank materials, sizes, plate seams and supports; and tank openings, vents and other connections.

22 THROUGH HULL VALVES AND GLANDS

22.1 Details of shipside penetrating shafting and glands, including fin stabilizing components, their locking mechanisms and other connections. Details of sea inlet and discharge valves and strainers and their connections, including those for side thrusters and deck wash systems. For ships required to operate in ice covered waters, details of arrangements to prevent slush ice choking sea-water inlets.

23 WATERTIGHT BOUNDARIES

23.1 General arrangements of door-operating mechanisms showing all connected machinery and their locations in the ship. Details of all components, including pumps, piping and valves subjected to pressure and securing arrangements.

11.A.2 – KEY SHIP DRAWINGS, CONTINUED

24 GMDSS RADIO INSTALLATION

24.1 As installed wiring diagram, radio arrangement as well as antenna drawings should be kept available on board for presentation during radio survey, etc. Antenna drawings should show all antennas seen from fore or aft position, the port or starboard position and from above. This applies to the following antennas; all transmitting antennas including location of antenna tuner; all receiving antennas including GPS antenna; radar antennas; satellite communication antennas; and, location of the float-free EPIRB. The lay-out of the bridge and communication room showing the location of the following equipment: controllers for transmitting distress alarm; VHF radio installations, including any control units; IMF or MF/HF installation, including and control units, telex printers, etc.; satellite communications equipment, including terminals, printers, etc.; watchkeeping receivers for VHF Channel 70, 2178.5kHz, and HF distress channels 4, 6, 8, 12, and 16mHz bands; NAVTEX and EGC receivers; radar transponders and EPIRB's (if located on the navigating bridge); hand-held (two-way) GMDSS VHF transceivers and their chargers; emergency light powered from a reserve source of energy to illuminate mandatory radio equipment; battery charger (for the reserve source of energy) and, fuse box. The wiring diagram should show the following connections: antenna connections; connections to telephone exchange (PABX), fax machine, etc.; connections to the ship's mains, emergency source of energy, and switching systems for all radio and radio navigation equipment; which radio equipment (including emergency light) being connected to each power unit/source; fuses for all radio equipment; uninterruptible power supply (UPS) with all connections and fuses, if installed as power for mandatory radio equipment (Block diagram showing how the UPS operates, showing the fuses and switch-over connections to alternative power supplies, by-pass switch, etc.); any connections (interface connections) between satellite navigator/GPS/GNSS and GMDSS radio equipment; battery chargers for the reserve source of energy; connections to gyro (if applicable); and, types of cables used in the installation.

25 ONE- LINE- ELECTRICAL

25.1 The General layout of the electrical distribution systems on board the vessel.

LIST OF CONTROLLED PUBLICATIONS

NOTE: VESSELS OR SITES TO MAINTAIN COPIES OF OR MUST BE AWARE OF WHERE THEY CAN BE ACCESSED.

(***) Latest Edition dates are as of September 2012. Updates to Annex A will be made semi-annually)

| | | Applicable to Site/Vessel | Latest Edition*** | Available Media Type * | Notes |
|---|--|---------------------------|--------------------------------|------------------------|-------|
| Canadian Coast Guard Documents | | | | | |
| 1 | CCG Fleet Bulletins DFO/5404 -T P11391 | | Current | E, HC ** | |
| 2 | CCG Fleet Circulars DFO/5323 - TP9028 | | Current | E, HC ** | |
| 3 | CCG Fleet Tackle Guide DFO-0005 | | 1 st Ed / May 2008 | E, HC | |
| 4 | CCG Technical Bulletins CT-013-000-EB-TE-001 | | Current | E, HC ** | |
| 5 | Coast Guard Fleet Orders (CGFO's) DFO/5349 - TP5070 | 1986 E | Current | E, HC | |
| 6 | Coast Guard Fleet Logistics Standards (CGFLS) DFO/5758 | | Current | E, HC | |
| 7 | Coast Guard Fleet Safety Manual DFO/5737 | | Current | E, HC ** | |
| 9 | CCG – Integrated Technical Services Publications – Colour-Coding Standard for Piping System 30-000-000-ES-TE-001 | | 2 nd Ed / Dec 2003 | E, HC | |
| 10 | CCG Paint and Coating Standards 18-080-000-SG-003 DFO/5847 | | 2 nd Ed / Jun 2002 | E, HC | |
| 11 | CCG Ship's Crew OJT Manual DFO/5559 | | 1 st Ed / Sept 1998 | E, HC | |
| 12 | CCG Communiqué | | Current | E, HC ** | |
| 13 | CCG Training Standard for Ship's Officers and Crew DFO/5730 | | 4 th Ed / Jul 2008 | E, HC | |
| 15 | CCG Welding Health and Safety Technical Program DFO/5672 | | 2 nd Ed / Sep 1999 | E, HC | |
| 16 | CCG Welding of Aluminium and Aluminium Alloys 18-080-000-SG-002 DFO/5782 | | 3 rd Ed / Jun 2002 | E, HC | |
| 17 | CCG Welding of Ferrous Materials 18-080-000-SG-001 DFO/5781 | | 3 rd Ed / Jun 2002 | E | |
| 18 | Canadian Marine Differential Global Positioning System (DGPS) Broadcast Standard | | Oct 2007 | E | |
| 19 | Shipboard Helicopter Information and Procedures Manual DFO/5282 - TP11475 | | 3rd Ed / Mar 2007 | E, HC ** | |
| 20 | Ship Specific Data for Ships over 100 GRT Ship Security Plan, Risk Assessment Table, Questionnaire, and gap analysis | | Current | | |
| 21 | Vessel Maintenance Management Manual (30-013-000-MA-MP-001) | | 1st Éd / Mar 2010 | E | |
| * (Media Type) – E = Electronic format, HC = Hardcopy ** Indicates that the document is required to be onboard/onsite in hardcopy (Some publications are only available by purchase and can be either E or HC format) | | | | | |

11.A.2 – LIST OF CONTROLLED PUBLICATIONS, CONTINUED

NOTE: VESSELS OR SITES TO MAINTAIN COPIES OF OR MUST BE AWARE OF WHERE THEY CAN BE ACCESSED.

*(*** Latest Edition dates are as of September 2012. Updates to Annex A will be made semi-annually)*

| | | Applicable to Site/Vessel | Latest Edition*** | Available Media Type * | Notes |
|---|--|---------------------------|-------------------------------|------------------------|-------|
| DFO & Other Gov't. Dept. Reference Documents | | | | | |
| 1 | Arctic Waters Oil Transfer Guidelines - (as applicable) TP10783 | | 1997 | E | |
| 2 | Canada Labour Code, - Part II ISBN 0-660-61574-6 | | 01 Jan 2010 | E, HC ** | |
| 3 | Canada Shipping Act 2001 | | June 2011 | E | |
| 5 | DFO Health and Safety Manual | | Sept. 2009 | E | |
| 6 | DFO National Search and Rescue Manual DFO/5449 | | 3 rd Ed./ May 2003 | E, HC | |
| 7 | DFO Occupational Safety and Health Awareness Supervisors Guide | | Mar 2007 | E | |
| 8 | Guidelines for Reporting Incidents Involving Dangerous Goods, Harmful Substances and/or Marine Pollutants TP9834 | | 2009 | E, HC | |
| 9 | Ice Navigation in Canadian Waters - (as applicable) DFO/5054 - TP5064 | | Sep 1999 | E, HC | |
| 10 | International Code of Signals TP2323 / IMO994 | | 2005 | E, HC ** | |
| 11 | TC Ship Safety Bulletins TP3231 | | Current | E, HC | |
| 12 | International Regulations for Preventing Collisions at Sea | | Sep 2008 | E, HC ** | |
| 13 | International Maritime Organization – Standard Marine Communication Phrases IMO IA987E | | Nov 2001 | E, HC | |
| 14 | Ships Electrical Standards TP127 | | 2008 | E, HC ** | |
| 15 | Maritime Occupational Health and Safety Regulations (SOR/2010-120) | | Nov 2011 | E, HC ** | |

* (Media Type) – E = Electronic format, HC = Hardcopy

** Indicates that the document is required to be onboard/onsite in hardcopy

(Some publications are only available by purchase and can be either E or HC format)

11.A.2 – LIST OF CONTROLLED PUBLICATIONS, CONTINUED

NOTE: VESSELS OR SITES TO MAINTAIN COPIES OF OR MUST BE AWARE OF WHERE THEY CAN BE ACCESSED.

(***) Latest Edition dates are as of September 2012. Updates to Annex A will be made semi-annually)

| | | Applicable to Site/Vessel | Latest Edition*** | Available Media Type * | Notes |
|---------------------------|---|---------------------------|----------------------------|------------------------|-------|
| External Documents | | | | | |
| 1 | Code of Safe Practice for Cargo Stowage and Securing (as applicable) IMO 292 | | 2011 | E, HC | |
| 2 | Food Safety Code of Practice for Canada's Foodservice Industry (Canadian Restaurant and Foodservices Association) Note that version 2007 is still acceptable as the 2011 has undergone a few minor administrative updates. | | 2011 | HC ** | |
| 3 | Global Maritime Distress and Safety System - GMDSS (as applicable) IMO-970 | | 2009 | HC ** | |
| 4 | International Convention for the Prevention of Pollution from Ships 1973/78 MARPOL IMO-520 | | 2005 A/ 2006 | E, HC | |
| 5 | International Convention for the Safety of Life at Sea - SOLAS IMO-110 | | 2009 A/ 2010 | E, HC | |
| 6 | STCW 95 (Seafarers' Training, Certification and Watchkeeping) IMO-938 | | 2011 | E, HC | |
| 7 | International Lifesaving Appliance Code - LSA Code IMO-982 | | 2010 | E, HC | |
| 8 | International Maritime Satellite System 1975-76 (as applicable) IMO-930 | | 1976 | E, HC | |
| 9 | International Medical Guide for Ships ISBN (10) 92 4 154231 4 | | 3 rd Ed / 2007 | HC ** | |
| 10 | ITU Manual for use by the Maritime Mobile and Maritime Mobile Satellite Service (as applicable) | | 2011 | HC ** | |
| 11 | ITU List of Ship Stations (as applicable) List V | | 1 st Ed / 2011 | HC ** | |
| 12 | ITU List of Call Signs & Numerical Identities of Stations (as applicable) List VII A | | 24 th Ed / 2009 | HC | |
| 13 | Admiralty List of Radio Signals, Radio Weather Services Oceania and the Americas VOL.3PT.2 - NP283(2) | | 2010/2011 | E, HC ** | |
| 14 | Admiralty List of Radio Signals, Coast Radio Stations Oceania and the Americas VOL.1PT.2 - NP281(2) | | 2010/2011 | HC ** | |
| 15 | IAMSAR MANUAL – VOLUME III (MOBILE FACILITY) VOL 3 2010 cons/ed. | | 2010 | HC ** | |

* (Media Type) – E = Electronic format, HC = Hardcopy

** Indicates that the document is required to be onboard/onsite in hardcopy

(Some publications are only available by purchase and can be either E or HC format)

11.A.2 – LIST OF CONTROLLED PUBLICATIONS, CONTINUED

NOTE: VESSELS OR SITES TO MAINTAIN COPIES OF OR MUST BE AWARE OF WHERE THEY CAN BE ACCESSED.

(* Latest Edition dates are as of September 2012. Updates to Annex A will be made semi-annually)

| | | Applicable to Site/Vessel | Latest Edition*** | Available Media Type * | Notes |
|--------------------------------|--|---------------------------|-------------------|------------------------|-------|
| Charts and Publications | | | | | |
| 1 | Charts - for area of operations and program requirements | | | HC ** | |
| 2 | Notice to Mariners | | | E, HC | |
| 3 | Notice to Mariners - Annual Additions | | | E, HC | |
| 4 | Sailing Directions | | | E, HC | |
| 5 | Tides and Current Tables | | | E, HC | |
| 6 | List of Lights, Buoys and Fog Signals | | | E, HC | |
| 7 | Radio Aids to Marine Navigation | | | E, HC | |
| 8 | Nautical Almanac | | | E, HC | |
| 9 | Norries Tables | | | E, HC | |
| 10 | Canal and Lock procedures - (as applicable) | | | E, HC | |
| 11 | Any local and regional requirements - (as applicable) | | | | |
| Regional Specific Data | | | | | |
| 1 | Specific Regional Procedures - (as applicable) | | | HC ** | |
| 2 | Familiarization Manual for Supernumeraries – (as applicable) | | | E, HC | |
| 3 | Regional Emergency Plans – (as applicable) | | | E, HC | |
| Ship Specific Data | | | | | |
| 1 | Key Ship Drawings - (as per recommended list in FSM 11A02 annex B) | | | | |
| 2 | Operation and Maintenance Manuals for Radio Equipment and Critical Equipment - (as applicable) | | | | |
| 3 | Ship Manoeuvring Data | | | HC ** | |
| 4 | Ship Stability Data Book | | | HC ** | |
| 5 | SOPEP Manual - (as applicable) | | | HC ** | |

* (Media Type) – E = Electronic format, HC = Hardcopy

** Indicates that the document is required to be onboard/onsite in hardcopy
(Some publications are only available by purchase and can be either E or HC format)

CERTIFICATES HELD BY CCG VESSELS

| Title | Form No | Authority | To Be Held By (See Note) | To Be Posted |
|--|-----------------------------------|---|---|---------------------|
| Certificate of Registry | DOT, Ship Registration Form NO. 5 | SOR 81-121 | All registered vessels | no |
| Cargo Ship Safety Construction Certificate | DOT Form S.I.C. - 3 | Safety Convention Certificate Regulations | Safety Convention cargo ships | yes |
| Cargo Ship Safety Equipment Certificate | DOT Form S.I.C. - 4 | Safety Convention Certificate Regulations | Safety Convention cargo ships | yes |
| Inspection Certificate for a Foreign-Going Steamship (other than a Safety Convention Ship) | DOT Form S.I.C. - 15 | Form of Inspection Certificates for Non-Safety Convention Ships Regulations | Non-passenger foreign-going steamships, other than a Safety Convention ship | yes |
| Inspection Certificate for a Home-Trade Steamship, Non-Passenger (other than a Safety Convention Ship) | DOT Form S.I.C. - 17 | Form of Inspection Certificates for Non-Safety Convention Ships Regulations | Non-passenger home-trade steamships | yes |
| Inspection Certificate for Inland Steamship, Non-Passenger | DOT Form S.I.C. - 19 | Form of Inspection Certificates for Non-Safety Convention Ships Regulations | Non-passenger inland steamships | yes |
| Inspection Certificate for a Minor-Waters Steamship, Non-Passenger | DOT Form S.I.C. - 21 | Form of Inspection Certificates for Non-Safety Convention Ships Regulations | Non-passenger minor waters steamships | yes |
| Inspection Certificate for a steamship, Non-Passenger, Not Exceeding 150 tons, registered tonnage | DOT Form S.I.C. - 22 | Form of Inspection Certificates for Non-Safety Convention Ships Regulations | Non-passenger steamships not exceeding 150 tons, registered tonnage | yes |

CERTIFICATES HELD BY COAST GUARD VESSELS

| Title | Form No | Authority | To Be Held By (See Note) | To Be Posted |
|---|---|---|--|---------------------|
| Safety Management Certificate | Ships > 125 GRT - On the form supplied by Classification Society Ships < 125 GRT - On the form prescribed by CCG | International Convention for the Safety of Life at Sea FSM | All vessels | yes |
| Ship Security Certificate | On the form prescribed by CCG | FSM | All vessels in excess of 100 GRT | yes |
| Continuous Synopsis Record | On the form prescribed by CCG | FSM | All vessels in excess of 100 GRT | no |
| Ship Sanitation Inspection Report | Health Canada | WHO International Health Regulation | All Vessels with living accommodations | no |
| Sanitation Inspection Report | | Internal Coast Guard Policy | All stations | no |
| Cargo ship Safety Radiotelegraphy/ Radiotelephony Certificate | DOT Form 82-0607 | Canada Shipping Act, Section 409 | Safety Convention cargo ships | yes |
| Radio Inspection Certificate (Sea) | DOT Form 82-0610 | Ship Station Technical Regulations | Vessels that do not make international voyages | yes |
| Radio Inspection Certificate (Great Lakes) | DOT Form 82-0609 | Ship Station Technical Regulations | Vessels that do not make international voyages | yes |
| Radio Station License | DOC, Form 16-133 (181) | Canada Shipping Act, Sections 403 and 730 | All Vessels equipped with radio | yes |
| International Load Line Certificate | DOT Form L.L.2 | Load line Regulations (Sea) | Generally, every vessel making an international voyage, that is 24m in length or over (see also sub-section 3.4.1) | yes |
| Great Lakes and Inland Waters Load Line Certificate | DOT Form L.L. 3A | Load Line Regulations (Inland) | Generally, every vessel making an inland voyage, that is 24.1m in length or over (see also sub-section 3.4.2) | yes |

CERTIFICATES HELD BY COAST GUARD VESSELS

| Title | Form No | Authority | To Be Held By (See Note) | To Be Posted |
|---|--|---|--|---------------------|
| Canadian Coast Guard Register of Lifting Appliances and Cargo Handling Gear | On the form prescribed by CCG | Cargo, Fumigation and Tackle Regulations | As appropriate | no |
| Ship Sanitation Control Exemption Certificate | On the form prescribed by Health Canada) | WHO International Health Regulation | Vessels making foreign voyages (valid for 6 months) | yes |
| Certificate of Inspection of an Inflatable Life Raft | In the form prescribed by the regulations | Life Saving Equipment Regulations | All Vessels equipped with life rafts | no |
| CCG Crewing Profile | In the form prescribed by CCG | Marine Personnel Regulations | All Vessels above 15GRT | yes (when possible) |
| Canadian Oil Pollution Prevention Certificate | In the form prescribed in the Regulation | Oil Pollution Prevention Regulations, Sec 6(a)(i) | Ships over 400T in Canadian waters | no |
| International Oil Pollution Prevention Certificate | In the form prescribed in the Regulation | Oil Pollution Prevention Regulations, Sec 6(a)(ii) | Ships over 400T in non-Canadian waters | no |
| Arctic Waters Pollution Prevention Certificate | In the form prescribed in the Regulation | Arctic Waters Pollution Prevention Act/Regulations | Any ship that propose to navigate in any zone defined as Arctic Waters | no |
| Fire Suppression Equipment Certificate | Supplied by Fire System Maintenance Contractor | Hull Construction Regulations | By all ships equipped with a fixed fire suppression system or systems to indicate date last verified, tested, and serviced by a licensed contractor. | no |
| Document of Compliance (DOC) | On the form supplied by Classification Society | International Convention for the Safety of Life at Sea FSM | An endorsed copy of the Document of Compliance shall be available in each Region and aboard each Coast Guard ship, in excess of 15 GRT | no |

NOTE: Ships will hold only those certificates required by the *Canada Shipping Act* and the regulations pursuant to the Act.

Galley fixed fire extinguishing system inspection certificates issued by companies under provincial regulations can have expiry dates of 6 months on them. Transport Canada has said that for marine installations, they consider this certificate good for one year from date of inspection.

VOYAGES LIMITS:**UNLIMITED, NEAR COSTAL CLASS 1 & 2 AND SHELTERED WATERS**

Note: Any listing of Schedules refers to those found in the *Canada Shipping Act (2001) - Vessel Certificates Regulations*

UNLIMITED VOYAGE

Means a voyage that is not a sheltered waters voyage, a near coastal voyage, Class 2 or a near coastal voyage, Class 1.

NEAR COASTAL VOYAGE, CLASS 1

Means a voyage:

- a) that is not a sheltered waters voyage or a near coastal voyage, Class 2;
- b) that is between places in Canada, the United States (except Hawaii), Saint Pierre and Miquelon, the West Indies, Mexico, Central America or the northeast coast of South America; and
- c) during which the vessel engaged on the voyage is always:
 - north of latitude 6° N, and
 - within 200 nautical miles from shore or above the continental shelf.

NEAR COASTAL VOYAGE, CLASS 2

Means a voyage:

- a) that is not a sheltered waters voyage; and
- b) during which the vessel engaged on the voyage is always:
 - within 25 nautical miles from shore in waters contiguous to Canada, the United States (except Hawaii) or Saint Pierre and Miquelon, and
 - within 100 nautical miles from a place of refuge.

SHELTERED WATERS VOYAGE

Means a voyage:

- a) that is in Canada on a lake, or a river above tidal waters, where a vessel can never be further than one nautical mile from the closest shore.
- b) that is on the waters listed in column 1 of an item of Schedule 1 during the period specified in column 2 of that item (as listed in); or
- c) that is made by a ferry between two or more points listed in column 1 of an item of Schedule 2 during the period specified in column 2 of that item.

Log and Document Retention Schedule

- **Audit Reports** – Retain onboard for 5 years then can be destroyed.
- **Annual Asbestos Surveys**– Retain onboard for 5 years then can be destroyed.
- **Bunker Delivery Notices** – Retained onboard for 3 years then can be destroyed.
- **Change Over Notes** – Retain onboard for a minimum of 1 year then can be destroyed unless required for historical information/reference.
- **Change of Command** – Fax or scanned copy sent to Marine Superintendent, original retained onboard for 1 year then can be destroyed.
- **Confined Space Entry Permits** – The *Maritime Occupational Health and Safety Regulations* require that these permits be retained aboard for at least two years following the date that they were signed. In the event that conditions changed inside the space or conditions could not be complied with, the Permit must be kept for 10 years.
- **Crew Lists** – Retain onboard for 1 year from patrol date then can be destroyed.
- **Contractors Basic Safety Familiarization** – This record shall be kept for a period of two years then can be destroyed.
- **Deck Logs** - Retain onboard for a minimum period of 1 year from the last entry date. Logs may be retained for reference purposes to a maximum period of 5 years. The logs shall then be sent ashore to the Marine Superintendent for archiving until 10 years from the last entry date. The Marine Superintendent shall then transfer the Deck Logs to the Government Records Branch of Library and National Archives of Canada (LAC) 395 Wellington Street Ottawa, ON K1A 0N4 CANADA.
- **Dive Checklist** – Retain onboard for 1 year then can be destroyed.
- **Dive Record** – Retain for 5 years after the diver ceases to be employed by the employer then can be destroyed.
- **Dive Air Quality Test** – Retain for 5 years after the date of the test then can be destroyed.
- **Drills (contingency, security and debriefs)** – Retain onboard for 3 years then can be destroyed.
- **Engine Logs** – Retain onboard for 2 years after the last entry. Logs shall then be sent ashore to the Superintendent, Marine Engineering for archiving.
- **Fall Protection Records** – Retain for 2 years after the equipment ceases to be used then can be destroyed.
- **Familiarization Checklists** – Retain onboard for 6 months after the employee departs the vessel then can be destroyed.
- **Financial/Budgetary Documents (invoices, MRS reports, logs, etc.)** – Retain onboard for 1 year then can be sent to records for archiving for an additional 6 years.
- **First Aid Books and Patient Care Records** – Retain onboard for 5 years then can be destroyed.

Log and Document Retention Schedule Continued

- **Garbage Record Book** – Retain onboard for 2 years from last entry then can be destroyed.
- **Hazardous Occurrence Incident Report (HOIR)** – Retain onboard for 10 years then can be destroyed.
- **Halocarbon Records, Reports and Notices** – Retain onboard for 5 years from issuance.
- **Hot Work Permits** – Retain onboard for 1 year from date of work performed then can be destroyed.
- **Hotel Services Weekly Inspection Log Entries** – Retain onboard for 2 years then can be destroyed.
- **Lifesaving Equipment Checklists (Monthly)** – Retain onboard for 1 year then can be destroyed.
- **Lock Out / Tag Out Logs** – Retain onboard for 1 year then can be destroyed.
- **Log Abstracts** – Retain onboard for a minimum of 7 years.
- **Maintenance and Survey Records** – Retain onboard for 7 years or archive ashore.
- **Next of Kin Information – PROTECTED** – Retain onboard for 6 months after the employee has departed the vessel then can be destroyed.
- **Non-Conformity Reports and Observations** – Retain onboard for 5 years then can be destroyed.
- **Occupational Safety & Health (OSH) Meeting Minutes** – Retain onboard for 2 years then can be destroyed.
- **Oil Record Books** – Retain onboard for 3 years from the date of the last entry then can be destroyed.
- **Out of Service (OOS) / Lay-Up Documents** – Retain onboard for 5 years after completed then can be destroyed.
- **Potable Water Tests** (quarterly, annual and weekly)– Retain onboard for 5 years then can be destroyed.
- **Pre-Job Safety Assessment and Pre-Operation Risk Assessment** Retain onboard for 6 years then can be destroyed.
- **Radio Logs** – Retain for 1 year from the date of last entry then can be destroyed.
- **Safety Equipment Inspection Records** – Retain onboard for 2 years then can be destroyed.
- **Safety Management Reviews** (shipboard, regional and national)– Retain onboard for 2 years then can be destroyed.
- **Sailing Orders** – Retain onboard for 2 years then can be destroyed.
- **Sanitary Inspection Certificates**– Retain onboard for 2 years then can be destroyed.
- **Search & Rescue (SAR) Incident Reports** – Retain signed copy onboard for 2 years then send ashore for archiving.

Log and Document Retention Schedule Continued

- **Security of Vessel Records, Assessments, Review of Plans** – Retain onboard for 6 years then can be destroyed.
- **Security Assessment and Approved Vessel Security Plan** – Copy to be maintained by Company Security Officer for 2 years after the expiry of the plan then can be destroyed.
- **Ship's Books** – Within 28 days of the end of the calendar year or end of season the book shall be sent to the Marine Superintendent for archival purposes.
- **Supernumerary Information** – Retain for 6 months following the voyage then can be destroyed.
- **Tackle Register** –Records pertaining to cargo handling gear in use must be kept for 10 years older records can be destroyed. Records pertaining to the vessels lifting appliances should be kept aboard for the life of the vessel.
- **Worker's Compensation Forms – Protected Information** – To be filled on the individual personal file and retained onboard for 5 years then sent ashore for archiving.

UNCONTROLLED COPY WHEN PRINTED

Annex D - FORMs REGISTER

Created to ensure the Forms that are amended in the FSM are tracked and updated in line with the manual and on the intranet.
The forms shall also be updated on the Acts/Regulations/Policy DVD's that are periodically sent to all ships.

| Title | Effective Date <i>mm/yyyy</i> |
|---|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 6.D.1 – Supernumerary Personnel General Statement of Risk - Medical Fitness – Security Clearance | | | | | |
| 7.A.2 – Change of Command Form – Station Mode | | | | | |
| 7.A.2 – Change of Command Form | | | | | |
| 7.B.1 – Diving Operations Checklist | | | | | |
| 7.B.3 – Confined Space Entry Permits | | | | | |
| 7.B.4 – Hot-Work Authorization Permit | | | | | |
| 7.B.5 – Lockout Tagout Record Sheet | | | | | |
| 7.B.6 – Electrical Safety Energized Circuit Permit | | | | | |
| 7.E.6 – Garbage Record Log | | | | | |
| 7.E.8 – Halocarbon Notices and Contracting | | | | | |
| 9.A.1 – Non-Conformity Report | | | | | |
| 7.A.1 – Incident Investigation Report (IIR) | | | | | |
| 9.C.1 – Shipboard OHS Inspection Checklist.doc | | | | | |
| 10.A.7 – Contractors Basic Safety Familiarization | | | | | |
| 11.A.3 – Certificates | | | | | |
| 11.B.1 – Safety Management System Suggestion for change | | | | | |
| Pre-Job Safety Assessment (PJSA) | | | | | |

GENERAL STATEMENT OF RISK

This part to be submitted to the Commanding Officer or their designate upon boarding.

By completing the bottom of this form, the undersigned acknowledges that he or she has read the content of this General Statement of Risks and accepts these risks as inherent in taking passage aboard a Canadian Coast Guard (CCG) Ship.

The ship will normally be operated in accordance with the policies and procedures stated in the Fleet Safety Manual (DFO/5737) issued to meet the requirements of the International Management Code for the Safe Operation of Ships and for the Prevention of Pollution (ISM Code). The ISM Code is Chapter IX of the International Maritime Organization's International Convention for the Safety of Life at Sea (SOLAS).

Regardless of the policies and procedures contained in the Fleet Safety Manual, "In matters of safety and pollution prevention, the Commanding Officer has the overriding authority to take whatever action the Commanding Officer considers to be in the best interests of the safety of the passengers, safety of the crew, safety of the ship, and the protection of the marine environment." (*The Coast Guard Fleet Safety Manual DFO/5737 – Procedure #5.0*)

Supernumerary personnel should also take note that the Canada Shipping Act provides that, "*The master or officer in command of a vessel on a voyage is justified in using as much force as he believes, on reasonable grounds, is necessary for the purpose of maintaining good order and discipline on the vessel.*" [SC 2001 c. 26, s.83(3).]

CCG ships are dynamic platforms with violent movements in three axes. Ships with hulls designed for icebreaking duties are even livelier in heavy sea conditions than other ships. For this reason, supernumerary personnel must have a good sense of balance and be extremely aware of the placement of their feet and use of handholds and grab rails when the vessel is working in a sea. Supernumerary personnel must also take care to secure equipment and personal effects to prevent these items from moving or being thrown about while at sea. Failure to do so can result in broken bones, lacerations, abrasions, burns, or, if the person is thrown overboard, drowning.

Persons who suffer from seasickness should be aware that they need to start a course of preventative medication well in advance of joining the ship. The ship's medical chest has limited quantities of motion sickness pills and suppositories but their effect is very limited when started after sickness is encountered. Failure to control seasickness could result in dehydration, confusion, or the loss of situational awareness that could be a contributing factor in falls and inappropriate response to stimuli.

Potable water supplies on short duration voyages are normally supplied from tanks aboard the ship that have been filled with municipal supply. Ships have the ability to desalinate and purify water through a number of engineering systems fitted aboard. Potable water supplies are routinely checked for contamination. However, there is a possibility that desalination efforts may not be able to keep up with demand, the desalination plants will fail, or the supply will become contaminated. This will mean that there is a risk of being placed on rations for potable water, which imposes risk of dehydration. Non-potable water may contain a level of salt or tank minerals, which can irritate the skin.

CCG ships use a common messing system. That means that meals are centrally prepared from a cyclical menu. Cooks, at a minimum, are certified to the Ship's Cook certificate requirements of the Marine Certification Regulations of the Canada Shipping Act. There is a potential for allergic reactions to certain ingredients used in food preparation if the catering staff are not warned in advance of the supernumerary personnel's allergens or dietary needs. Allergic reactions may be manifested in loss of consciousness or swelling restricting breathing or circulation that could result in disability or death.

Many CCG ships are advanced in age and although well maintained and operated by proficient individuals there is always the possibility of mechanical or system failures. This may mean that there will be sudden electrical blackouts or temperature vagaries in the supply of domestic water. Emergency power can be supplied quickly to essential circuits but these circuits are not normally fitted in passenger cabins or laboratory work areas. These situations present a risk to individuals of disorientation, loss of power to personally essential equipment, destruction or deterioration of temperature sensitive samples resulting in contamination and bacterial development, burns, scalds, and falls or knocks.

CCG ships are working ships that may be involved in lifting large weights, ice-breaking, scientific research, search and rescue, fisheries enforcement operations, or aid to other government departments in suppression of criminal activity or surveillance and interception of migrant smugglers. Each of these various tasks carries its own set of risks. Normally supernumerary personnel are not directly involved in these operations. However, in the case of search and rescue, it is possible that supernumerary personnel may be required to assist in caring for survivors. This will expose the supernumerary personnel to unpleasant sights, smells, and sounds, which might include exposure to bodily fluids from victims. There is a risk of exposure to disease.

Work and life aboard a CCG ship will quite often involve the use of small boats operating remotely from the mother ship. While appropriate personal protective equipment will be supplied, there are still possibilities of injury from being struck by suspended loads, falling into the sea, slipping or falling in transfer between the boat and the ship or shore, as well as exposure to sea and weather conditions. This exposes the supernumerary personnel to possible hypothermia, drowning, lacerations, fractures, and other injuries.

CCG ships are required to be self reliant to face emergency situations aboard such as flooding and fire. While the ships are well maintained, well crewed, and contingency plans are in place, there is always a possibility of an untoward event. In these cases, the supernumerary personnel may find themselves assigned to assist the ship's crew in controlling flooding, fighting fire, or assisting in the readying of craft for abandoning ship. In these types of circumstances the supernumerary personnel will be working under direct supervision. There is a danger of being drowned, suffering severe burns, being struck or impaled, or reacting unfavourably to unaccustomed strenuous exertion in a high drama situation.

Medical treatment aboard CCG ships is normally limited to First Aid provided by a holder of a Marine First Aid Certificate. The ship's Rescue Specialists, when carried, may provide more aggressive treatment. However, in either case, medications and equipment carried aboard is extremely limited, is geared primarily to treat injuries as opposed to medical conditions, and is sufficient to stop bleeding, immobilize breaks, or maintain breathing. Personal requirements for prescription medication, or patent medicines, required to treat pre-existing conditions, are the personal responsibility of the individual. Supernumerary personnel with pre-existing medical conditions must ensure: that their condition is stable; that their medication is both established and available; that their condition is known to their on-board supervisor, the First Aid Attendant(s) and/or Rescue Specialist(s), and the Commanding Officer; and, that they have a sufficient supply of their prescribed medication with them for the planned duration of the voyage plus an appropriate additional amount to allow for the possibility of delays. Failure to do so could result in long and short-term complications or death.

In the event of medical emergencies or injuries at sea, the ship will contact medical authorities ashore to obtain advice. The ship may have to divert to the closest port of refuge to evacuate the patient. The time taken to gain port or to evacuate the patient depends on many variables – the distance to be travelled, sea conditions, weather conditions, the seaworthiness of the ship, and the speed of the ship. It is possible that the time taken to evacuate the patient may be measured in days. The condition of the patient may be adversely affected by this time factor.

Even though many CCG ships are helicopter landing capable or may be equipped with a helicopter, the ability of the helicopter to make an immediate evacuation cannot be assumed. The distance off shore, the weather, the sea-state, and the capacity of the helicopter will all have an effect on the time taken to affect an evacuation. The condition of the patient may be adversely affected by this time factor. It should also be noted that evacuation by helicopter where the patient is winched upwards to the helicopter in a stretcher or horse collar is a terrifying experience, especially when combined with rough sea conditions, darkness, and an already heightened apprehension of mortality on the part of the patient.

6.D.1

The CCG will take such steps as are necessary and within its competence to stabilize a patient for transportation to the shore for transfer to a shore medical facility. Charges for transportation by ambulance services and charges for medical care at the shore medical facility are the responsibility of the patient. For this reason, it is advisable that supernumerary personnel take appropriate steps, especially when the supernumerary is non-Canadian or when the voyage will be in foreign (non-Canadian) waters, to ensure that they have sufficient medical insurance coverage for such eventualities. Failure to have appropriate insurance coverage could result in delays in treatment, a reduced level of care, or detention pending settlement of the account.

The Canadian Coast Guard assumes no liability for loss of, or damage to, any personal effects or equipment brought aboard the ship or the aircraft by supernumerary personnel. Supernumerary personnel may wish to consider purchasing insurance from their own insurance carrier to cover such eventualities as loss of personal property or damage to personal property, to avoid out-of-pocket expense.

Certain areas of the ship and access to certain items of ship's equipment such as the onboard local area network or secure communications may not be available to certain supernumeraries by reason of their security clearance status with the Canadian government. Any restrictions will be explained by the Commanding Officer upon the supernumerary joining the ship.

My signature below indicates that I have read The General Statement of Risks (Annex D – Forms) outlining the risks that may be encountered by me while aboard the below-named CCG ship during the below-stated period of time. I acknowledge that I have understood these risks. I also acknowledge that I have asked for additional information where necessary and that I have been satisfied with the response that I have received. Understanding that none, some, or all of the above listed events may arise while on board the vessel, I accept these risks as being inherent in being aboard the vessel.

Name: _____

Signature: _____ Date: _____

If applicable -
Parent/Guardian
Name: _____

Signature: _____ Date: _____

Aboard
CCGS: _____

From: _____ To: _____

Witnessed
By: _____

PART ONE OF TWO – STATEMENT OF MEDICAL FITNESS (INFORMATION)**FOR GUIDANCE ONLY - NOT FOR RELEASE TO VESSEL**

To ensure that you will not suffer undue risk to your health by taking passage aboard a Canadian Coast Guard (CCG) ship, you are required to determine whether any of the following statements apply to your personal situation.

IF ANY OF THE STATEMENTS NUMBERED 1 THROUGH 6 ARE ANSWERED “TRUE”, YOU MUST ARRANGE FOR A CONFIDENTIAL ASSESSMENT OF YOUR CASE BY A MEDICAL PROFESSIONAL PRIOR TO SAILING AND IN SUFFICIENT TIME TO ALLOW FOR YOUR CASE TO BE REVIEWED BY HEALTH CANADA IF NECESSARY (21 WORKING DAYS).

When your physician assesses your condition, he or she should do so knowing: the length of the voyage; the general location of the ship during the voyage; an outline of your duties and responsibilities; and, after having read The General Statement of Risks (Annex A to this procedure). If your physician indicates that he or she has limits that he or she would apply to pronouncing you fit to undertake the voyage, you must be prepared to waive any confidentiality in this specific regard and reveal those conditions to your supervisor, the ship's First Aid Attendant(s) or Rescue Specialist(s), and the Commanding Officer. It is possible that those limiting conditions may impose a duty on the ship that is beyond the reasonable capacity of the ship to accommodate. In such circumstances, the Commanding Officer, taking into account the recommendations and/or advice of Health Canada medical professionals, will be the final arbiter as to your acceptance on board. Any disclosure made by you will be PROTECTED information and will be handled appropriately within the guidelines established by the Department of Fisheries and Oceans for such material.

| | | |
|--|-------------------------------|--------------------------------|
| 1. Since my last health assessment, I have undergone treatment, or I have consulted a health practitioner, for symptoms related to: heart; lungs; blood vessels; high blood pressure; dizziness; shortness of breath; muscle weakness; persistent aches or pains; or, blurred vision. | <input type="checkbox"/> True | <input type="checkbox"/> False |
| 2. I have a history of seizures. | <input type="checkbox"/> True | <input type="checkbox"/> False |
| 3. I have fainted or have lost consciousness during the past 12 months. | <input type="checkbox"/> True | <input type="checkbox"/> False |
| 4. I am age 39, or under, and I have not had a full physical examination within the last 36 months, or; I am age 40, or over, and I have not had a full physical examination within the past 24 months; or, I am age 65, or over, and have not had a full physical examination within the past 12 months. | <input type="checkbox"/> True | <input type="checkbox"/> False |
| 5. A medical practitioner, within the last 48 months, recommended restrictions on my activities. | <input type="checkbox"/> True | <input type="checkbox"/> False |
| 6. I have an existing physical or mental condition that is unable to be corrected by prosthetics, eyeglasses, or hearing aids, thereby adversely affecting my ability to walk, to climb, to see, or to hear. | <input type="checkbox"/> True | <input type="checkbox"/> False |
| 7. I am taking prescription medication regularly and/or suffer from known allergies. | <input type="checkbox"/> True | <input type="checkbox"/> False |

Note: If Question #7 is answered “True”, please attach to Part Two of this form the names of the medication that you are taking, the dosage, the amount of medication that you are bringing on board ensuring that it is sufficient for the duration of the voyage, and the location where you will be storing the medication. If the medication is to be taken only upon the onset of certain symptoms, please indicate what those symptoms are and arrange to meet with the ship's First Aid Attendant(s) or the Rescue Specialist(s) to ensure that they are aware of your situation. Also indicate any known allergies.

PART TWO OF TWO – STATEMENT OF MEDICAL FITNESS

PROTECTED WHEN COMPLETED

STATEMENT OF MEDICAL FITNESS

This part to be submitted to the Commanding Officer or their designate upon boarding.

**MAKING A FALSE STATEMENT WILL RESULT
IN SEVERE PERSONAL PENALTIES**

“I declare that, after having read and understood the inherent risks in being aboard a Canadian Coast Guard (CCG) ship, as stated in The General Statement of Risks and after having completed the information portion of this form, titled Annex B - Part One of Two – Information Portion, I believe that I have no physical or health conditions which might endanger my life, the health and safety of the crew, or the safety of the ship on which I will be engaged. I further declare that, if completion of the information section of the form titled Annex B – Statement of Medical Fitness indicated that a health assessment of my condition was warranted that I have consulted a medical health professional who, in accordance with the conditions stated on the form, has determined that I am fit to undertake the voyage or that I am fit with certain limitations to undertake the voyage.”

“Where the physician has indicated that I am fit with limitations for the voyage, I am, without reservation, disclosing the terms of those limitations to the ship’s First Aid Attendant(s), Rescue Specialist(s), Commanding Officer, and Health Canada health professionals on the reverse of this form or on an attached sheet. I release this information on the understanding that this information will be PROTECTED information and will be handled appropriately within the guidelines established by the Department of Fisheries and Oceans for such material.”

“I also declare that if I am required to take a regular course of prescription medication that I have a supply of medication with me that is sufficient for the duration of the voyage plus any reasonably anticipated delays that might occur. I will advise my on-board supervisor (where applicable), the ship’s First Aid Attendant(s) or Rescue Specialist(s), and the Commanding Officer of the location of such medication, the dosage and/or the symptoms which might indicate when the medication should be taken. I will also advise these persons of any known allergies.”

Failure to disclose information respecting your health could result in inappropriate emergency treatment in the event that you are incapacitated thereby resulting in your disability or death; or, could result in your injury or death through your inability to respond to shipboard challenges and emergency situations; or, could result in injury or death to others or damage to the ship and the environment in attempting to effect your rescue, treatment, or evacuation.

Declared by:

Name: _____

Signature: _____ Date: _____

If applicable -
Parent/Guardian Name: _____

Signature: _____ Date: _____

For a Voyage Aboard CCGS: _____

From: _____ To: _____

Witnessed By: _____

PROTECTED WHEN COMPLETED

**PROCESS FOR OBTAINING SECURITY CLEARANCE
FOR SUPERNUMERARY PERSONNEL**

The Superintendent of Fleet Planning or his/her delegate will send the appropriate forms to the sponsoring officer for the supernumerary or directly to the supernumerary and upon receipt of the information and duly signed forms, will transmit the security clearance request to Corporate security (fax copies are acceptable for the entire process).

1 FOR NON-CANADIAN CITIZENS:

1.1 Non-Canadian citizen includes Landed Immigrants or Permanent Residents who have been living in Canada for less than 5 years. The Visiting Foreign Nationals Forms shall be completed as follows:

- 1.1.1 Page 1 – Right to access ship verification: This page must be filled out entirely. **Both** the applicant and the sponsoring officer must sign the form. The following documents should also be attached:
- a) A letter of “good conduct” from your national police authorities, from a consulate or embassy (i.e. a copy of judicial record). French nationals can obtain this letter at www.cjn.justice.gouv.fr.
- Note:** There is no need to produce a letter if the applicant has been living in Canada for the last five years.
- b) A photocopy of the applicant passport and visa (when required) signed by their employer or sponsoring officer (ex: research supervisor, employer or collaborator, abroad or in Canada). The role of the employer or supervisor is to validate the authenticity of the documents and information contained therein.
- 1.1.2 Page 2 – Certificate and Briefing Form for Reliability Status for Access.
- a) Applicant to complete Personal information in Part A.
 - b) Applicant to initial under the Visitor Initials column for each of the six restrictions identified in section B.
 - c) Applicant to sign and date section C.
- 1.1.3 Where possible, a corporate security briefing shall occur and the person providing the briefing shall sign Part D and initial Part B under Manager Initials column for each of the six restrictions identified in section B. This briefing shall be given by the Commanding Officer, the Superintendent Fleet Planning, the DFO program manager or their delegate or the responsible person from the Canadian university organizing the visit.
- 1.2 If a security clearance is granted, Corporate Security will return the Certificate and Briefing Form for Reliability Status for Access with Part E signed.
- 1.3 If the Briefing was not conducted prior to submitting the security clearance request, it shall be done no later than when the applicant is granted access onboard.
- 1.4 The form shall then be returned to Corporate Security within 48 hours after the applicant has joined the vessel.

2 FOR CANADIAN CITIZENS:

2.1 Personnel Screening, Consent and Authorization Form “TBS/SCT 330-23English” must be completed as follow:

2.1.1 Section A – Administrative information - to be completed by the Superintendent, Operational Business or his/her delegate.

2.1.2 Section B – Biographical information - To be filled out entirely by the applicant.

2.1.3 Section C – Consent and verification – Applicant to initial beside checked boxes 1 and 2, sign and date at the end of section C.

2.2 If a security clearance is granted, a security screening certificate and briefing form will be issued by corporate security. Part C of the form shall be signed by the applicant and part D by the person providing the briefing (Commanding Officer or, Superintendent of Fleet Planning or, delegate) no later than when the applicant is granted access onboard. The form has to be returned to Corporate Security within 48 hours after the applicant has joined the vessel.

Note: The reliability status is only valid for one year but can be automatically renewed for applicants who need to access a CCG ship in the year following their previous application.

3 FOR CANADIAN AND NON CANADIAN CITIZENS:

3.1 When a security clearance has been granted, the information is available in the Security Module of PeopleSoft. Access to the module can be provided upon request to the Director, Fleet Safety and Security.

**PROCESS FOR OBTAINING SECURITY CLEARANCE FOR
SUPERNUMERARY PERSONNEL, CONTINUED**

**Corporate Security Briefing Certificate
Reliability for Access for FOREIGN VISITORS**

| PART A – TO BE COMPLETED BY DFO PROGRAM MANAGER | | |
|--|---|-------------------------|
| Surname | Full given names (no initials) | |
| Country of Origin | Date of Birth | |
| Date of Visit From : _____ To : _____ YYYY – MM – DD YYYY – MM – DD | Access required while visiting Department (facility and/or vessels) | |
| PART B – BRIEFING SUMMARY AND RESTRICTIONS | | |
| <p>If a Visitor fails to safeguard, releases without appropriate authority or uses information/assets for unauthorized purposes, such action may constitute a contravention of the <i>Security of Information Act</i>, the <i>Access to Information Act</i>, the <i>Privacy Act</i> or other Acts of Parliament, or a breach of the Policy on Government Security (PGS).</p> <p>These provisions apply both during and after the above noted visit. Specific safeguards are identified in the PGS and associated Standards and in corresponding departmental or organizational policies and guidelines which apply to classified and protected information/assets. These safeguards must be applied.</p> | | |
| RESTRICTIONS | Manager Initials | Visitor Initials |
| The visitor will only be given the access required to perform their authorized work as defined in the agreement. | | |
| No access to classified information, Cryptographic Controlled Items (CCI) or the areas where these items are stored. | | |
| Reliability for DFO access is not transferable and is valid only for the visit noted above. | | |
| Silent hour access to DFO facilities is restricted. | | |
| Managers must brief DFO personnel working with the Visiting Foreign National of the security restrictions. | | |
| PART C – ACKNOWLEDGMENT BY VISITOR | | |
| I understand and agree to comply with the above briefing summary and restrictions. | | |
| _____ | _____ | |
| Visitor's Signature | YYYY – MM – DD | |
| PART D – BRIEFING OFFICIAL (PROGRAM MANAGER OR HIS/HER REPRESENTATIVE) | | |
| Name and initials | Phone Number () - | |
| I have briefed the above mentioned visitor. | | |
| _____ | _____ | |
| Program Manager's Signature | YYYY – MM – DD | |
| PART E – SECURITY OFFICIAL (NATIONAL HEADQUARTERS) | | |
| Name and title of authorized security official (National Headquarters) | Phone Number () - | |
| As the security official, I certify that the Reliability for Access has been granted. | | |
| _____ | _____ | |
| Security Official (HQ) Signature | YYYY – MM – DD | |
| Office Address: 200 Kent Street Ottawa, ON, K1A 0E6 | Facsimile: (613) 998-1493 | |

**PROCESS FOR OBTAINING SECURITY CLEARANCE FOR
SUPERNUMERARY PERSONNEL, CONTINUED**

**Personal Information Form
Reliability for Access for FOREIGN VISITORS**

| PART A – TO BE COMPLETED BY VISITOR | |
|--|---|
| Surname | Full given names (no initials) |
| Sex <input type="checkbox"/> Male <input type="checkbox"/> Female | Date of Birth (YYYY – MM – DD) |
| Country of Origin including address | Address while in Canada |
| Phone Number () - - | Email |
| Name of originating institution (Company, University, etc.): | Name and title of responsible manager at institution of origin: |
| PART B – DECLARATION (VISITOR) | |
| I the undersigned understand and agree with all the information above and that all the documents submitted with this application are authentic. | |
| _____ Visitor's Signature | _____ YYYY – MM – DD |
| PART C – TO BE COMPLETED BY PROGRAM MANAGER | |
| Name of DFO facility or vessel visited | Name of DFO Program |
| DFO manager responsible for program | Phone number () - - |
| Date of Visit From : _____ To : _____ YYYY – MM – DD YYYY – MM – DD | Purpose of Visit |
| Will the visitor be using/transporting radioisotopes during visit on DFO facilities? <input type="checkbox"/> Yes <input type="checkbox"/> No | Will the visitor require access to DFO Corporate Networks during visit on DFO facilities? <input type="checkbox"/> Yes <input type="checkbox"/> No |
| If yes, please contact the DFO National Radiation Safety Officer (250) 363-6449 | If yes, please contact the DFO Corporate IT Security Coordinator (613) 993-8318 |
| PART D – REQUIRED DOCUMENTATION | |
| <ul style="list-style-type: none"> • Letter of good conduct from national police authorities • Visa (Copy) – if applicable • Passport (Copy) • Letter of reference from sponsoring institution (Company, University, etc.) | |
| PART E – DECLARATION (PROGRAM MANAGER) | |
| I the undersigned, understand and agree with all the information above and that all the documents submitted with this application are authentic to the best of my knowledge. | |
| _____ Program Manager's Signature | _____ YYYY – MM – DD |
| Office Address: 200 Kent Street Ottawa, ON, K1A 0E6 | Facsimile : (613) 998-1493 |

**PROCESS FOR OBTAINING SECURITY CLEARANCE FOR
SUPERNUMERARY PERSONNEL, CONTINUED**



Government of Canada / Gouvernement du Canada

PROTECTED (when completed)

**PERSONNEL SCREENING,
CONSENT AND AUTHORIZATION FORM**

| OFFICE USE ONLY | | |
|------------------|--------------------------------|-------------|
| Reference number | Department/Organization number | File number |

NOTE: For Privacy Act Statement refer to Section C of this form and for completion instructions refer to attached instructions.
Please typewrite or print in block letters.

A ADMINISTRATIVE INFORMATION (To be completed by the Authorized Departmental/Agency/Organizational Official)

New
 Update
 Upgrade
 Transfer
 Supplemental
 Re-activation

The requested level of reliability/security check(s)

Reliability Status
 Level I (CONFIDENTIAL)
 Level II (SECRET)
 Level III (TOP SECRET)

Other _____

PARTICULARS OF APPOINTMENT/ASSIGNMENT/CONTRACT

Indefinite
 Term
 Contract
 Industry
 Other (specify secondment, assignment, etc.) _____

Justification for security screening requirement _____

| | | | |
|--|---|----------------------------------|----------------------|
| Position/Competition/Contract number | Title | Group/Level (Rank if applicable) | |
| Employee ID number/PRI/Rank and Service number (if applicable) | If term or contract, indicate duration period | From | To |
| Name and address of department / organization / agency | Name of official | Telephone number () | Facsimile number () |

B BIOGRAPHICAL INFORMATION (To be completed by the applicant)

Surname (Last name) _____ Full given names (no initials) underline or circle usual name used _____ Family name at birth _____

All other names used (i.e. Nickname) _____ Sex Male Female Date of birth _____ Country of birth _____ Date of entry into Canada if born outside Canada _____

RESIDENCE (provide addresses for the last five years, starting with the most current)

Home address _____ Daytime telephone number () _____ E-mail address _____

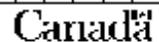
| | | | | | | |
|---|------------------|-------------------|-------------|------------------------------|----------------------|---------|
| 1 | Apartment number | Street number | Street name | Civic number (if applicable) | From | To |
| | City | Province or state | Postal code | Country | Telephone number () | present |
| 2 | Apartment number | Street number | Street name | Civic number (if applicable) | From | To |
| | City | Province or state | Postal code | Country | Telephone number () | |

Have you previously completed a Government of Canada security screening form? Yes No If yes, give name of employer, level and year of screening. _____ Y

CRIMINAL CONVICTIONS IN AND OUTSIDE OF CANADA (see instructions)

Have you ever been convicted of a criminal offence for which you have not been granted a pardon? Yes No If yes, give details. (charge(s), name of police force, city, province/state, country and date of conviction) _____

| | | |
|----------------|----------------------|------------------------|
| Charge(s) | Name of police force | City |
| Province/State | Country | Date of conviction () |



Change of Command Document (Station Mode)

To: Regional Director Fleet
Attn: Marine Superintendent

From: Commanding Officer
Vessel: CCGS _____

This document serves as a record of the exchange between Commanding Officers at crew change. To ensure information on all matters pertaining to the ships' operation and on the condition of the vessel's hull, machinery and equipment for familiarization, reporting and acceptance of command have taken place.

(A) Date: _____ **Time:** _____ **Location:** _____

| | | | |
|--------------------|--|------------------|--|
| | | | |
| Fuel | | Lube Oil | |
| Propulsion | | M/E | |
| Small Craft | | Generator | |
| Other | | Dirty Oil | |

(C) Status of Certificates: (as per attached list from Certificate Register)
Certificate(s) requiring attention during the upcoming patrol (please identify):

.....

(F) Departmental Readiness:

SIGNIFICANT DEFECTS/DEFICIENCIES

.....

(G) Document Status: (any deficiencies to be identified and be recorded in Notation where applicable)

| Attention Required: | YES | NO | Attention Required: | YES | NO |
|--|------------|-----------|--|------------|-----------|
| Drug Control Register | | | Credit Cards | | |
| Significant Operational Administrative Correspondence | | | Department Heads Changeover Notes | | |
| Safe Combination transmitted | | | Gun/Ammunition Register | | |
| Deck/Station Log Book | | | Stability Information | | |
| Tackle Register | | | Garbage Log | | |
| Oil Record Book | | | Crew List | | |
| GAC/XCS entered | | | Keys/ Pager / Cell transferred | | |
| Vehicle license renewal Date | | | Trailer License renewal date | | |
| Vehicle license # | | | Vehicle KM's | | |

(H) Safety Management System reviewed since last Change of Command:

| | |
|---|--|
| New NCR's / Observation | |
| Significant Incident Investigation Reports | |
| Publication Amendments: (identify only changes since the last change of command) | |
| Fleet Safety Manual: | |
| CG Fleet Orders: | |
| Fleet Bulletin: | |
| CCG Technical Bulletin: | |
| Safety Bulletin (TC): | |
| Others (specify): | |

(I) Notations: Additional Information for completion by either Commanding officer (if insufficient space, please attach supplemental page)

.....

.....

.....

.....

I, Captain, _____ have fully briefed and hereby relinquish command of CCGS _____ to Captain _____.

Having received the aforementioned briefing and information from the departing Captain, I hereby acknowledge receipt of and assume full control and command of:
CCGS _____

Captain _____
Commanding Officer (relieved)

Captain _____
Commanding Officer (relieving)

Date: _____

Date: _____

Change of Command Document

To: Regional Director Fleet
Attn: Marine Superintendent

From: Commanding Officer
Vessel: CCGS _____

This document serves as a record of the exchange between Commanding Officers at crew change. To ensure information on all matters pertaining to the ships' operation and on the condition of the vessel's hull, machinery and equipment for familiarization, reporting and acceptance of command have taken place.

(A) Date: _____ **Time:** _____ **Location:** _____

| | | | |
|--------------------|--|------------------|--|
| | | | |
| Fuel | | Lube Oil | |
| Propulsion | | M/E | |
| Small Craft | | Generator | |
| Aviation | | Dirty Oil | |
| Water | | | |
| Potable | | Ballast | |

(B) Current Operational Assignment: _____
 (As per attached Sailing Orders)

(C) Status of Certificates: (as per attached list from Certificate Register)
Certificate(s) requiring attention during the upcoming patrol (please identify):

(D) MARSEC LEVEL: MARSEC 1 MARSEC 2 MARSEC 3

(E) Secure Communications Equipment:

I have verified that the SECTERA device is onboard Check

I have relayed the PIN to the relieving Commanding Officer (SECTERA type 1 unit only) Check

(F) Departmental Readiness:

SIGNIFICANT DEFECTS/DEFICIENCIES

(G) Document Status: (any deficiencies to be identified and be recorded in Notation where applicable)

| Attention Required: | YES | NO | Attention Required: | YES | NO |
|---|------------|-----------|--|------------|-----------|
| Drug Substance Register | | | Credit Cards | | |
| Significant Operational Administrative Correspondence | | | Monthly Outside Canadian Territorial Fuel Consumption Report | | |
| Ships Safe Combination transmitted | | | Department Heads Changeover Notes | | |
| Ship Security Plan | | | Stability Information | | |
| Tackle Register | | | Gun/Ammunition Register | | |
| Oil Record Book | | | Crew List | | |
| Garbage Log | | | Deck Log Book | | |

(H) Safety Management System reviewed since last Change of Command:

| | |
|---|--|
| New NCR's / Observation | |
| Significant Incident Investigation Reports | |
| Publication Amendments: (identify only changes since the last change of command) | |
| Fleet Safety Manual: | |
| CG Fleet Orders: | |
| Fleet Bulletin: | |
| CCG Technical Bulletin: | |
| Safety Bulletin (TC): | |
| Others (specify): | |

(I) Notations: Additional Information for completion by either Commanding officer (if insufficient space, please attach supplemental page)

.....

.....

.....

.....

I, Captain, _____ have fully briefed and hereby relinquish command of CCGS _____ to Captain _____.

Having received the aforementioned briefing and information from the departing Captain, I hereby acknowledge receipt of and assume full control and command of:
CCGS _____

Captain _____
Commanding Officer (relieved)

Captain _____
Commanding Officer (relieving)

Date: _____

Date: _____

DIVING OPERATIONS CHECKLIST

CCGS _____

Date of Operation: _____

- Designated Officer selected - Name _____
Signature _____

- Diving Supervisor – Name _____
Signature _____

- Divers certification and logbook reviewed
- CO/Designated Officer aboard
- Collision Regs - Warning devices deployed (shapes, buoys, flags, lights)
- MCTS advised (Traffic Control / Sécurité Call)
- Engineroom notified - diving notices posted in E/R
- Engineroom systems secured & logged in E/R log – Lockouts and Tagouts
- Diving plan and contingency plans reviewed
- General announcement made
- Commencement of diving operations logged
- Completion of diving operations logged

SAMPLE - WORK ALOFT / OVER THE SIDE CHECKLIST

- Supervisor shall ensure proper safety equipment is provided and worn.
- Workers shall wear safety harnesses when working aloft.
- Appropriate temporary structure best suited to area of work to be used.
- Support and belaying points that is to be used for temporary structure to be identified and inspected.
- All ropes, wires, straps or other equipment that is being used to support a temporary structure shall be inspected before being put in use.
- If necessary, drop zone around work area to be determined and marked off.
- When operational, Bridge to be informed before work party goes aloft.
- Personnel working over the side on a temporary structure shall wear; if appropriate, personal floatation devices.
- When working in the area of remote controlled movable or high voltage equipment, precautions shall be taken to ensure the equipment is shutdown and tagged to indicate it is not to be used. When working near **radar scanners** the following precautions shall be taken:
 - Radars shutdown and signs placed on radar indicating radar is not to be switched on.
 - Scanner switches located in _____ can be locked out if required.

LOGBOOK ENTRIES ARE REQUIRED WHEN OPERATIONAL

CONFINED SPACE ENTRY PERMIT

GENERAL

Location / name of confined space: _____

Reason for Entry: _____

THIS PERMIT IS VALID FROM
(Max 12 hrs – extend to 24; new permit every 24 hrs)

_____ Hrs _____ Hrs

_____ Date _____ Date

Section 1 - Pre-entry preparation

 (To be checked by the **Entry Supervisor**)

| | YES | NO |
|--|--------------------------|--------------------------|
| • Has the space been thoroughly ventilated? | <input type="checkbox"/> | <input type="checkbox"/> |
| • Has the space been isolated by locking-out all connecting pipelines or valves and electrical power or equipment? | <input type="checkbox"/> | <input type="checkbox"/> |
| • Has the space been tested and found safe for entry? | <input type="checkbox"/> | <input type="checkbox"/> |

Air Monitoring Equipment Used: Meter Type: _____ Serial # _____

 Last Calibrated: _____ User Name _____

Bump Test Completed: Pass _____ Fail _____

NOTE: *With a fail a total recalibration of meter must be completed.*

Monitoring equipment was checked correct, using check gases, prior to testing this confined space.

Date: _____ Time: _____ User name: _____

Pre-entry atmosphere test readings: Oxygen _____ % Vol (19.5 to 23%)
 Hydrocarbon _____ % LFL (Less than
 10%)
 Toxic Gases _____ ppm

| | | |
|---|--------------------------|--------------------------|
| • Have arrangements been made for continuous atmosphere checks to be made while the space is occupied and re-checked after work breaks? (Attach record sheet as needed) | <input type="checkbox"/> | <input type="checkbox"/> |
| • Have arrangements been made for the space to be continuously ventilated throughout the period of occupation and during work breaks? | <input type="checkbox"/> | <input type="checkbox"/> |
| • Are access and illumination adequate? | <input type="checkbox"/> | <input type="checkbox"/> |
| • Is the rescue team in place and aware of the confined space entry work and is the Rescue Equipment readily available. | <input type="checkbox"/> | <input type="checkbox"/> |
| • Has a trained responsible person been designated to be in constant attendance at the entrance to the space? | <input type="checkbox"/> | <input type="checkbox"/> |
| • Has the Officer-of-the-Watch (both Bridge and Engine room) been advised of the planned entry? | <input type="checkbox"/> | <input type="checkbox"/> |
| • Are emergency and evacuation procedures established and understood by all personnel involved with the Confined Space entry. | <input type="checkbox"/> | <input type="checkbox"/> |
| • Is the equipment to be used in good working condition and has it been inspected prior to entry? | <input type="checkbox"/> | <input type="checkbox"/> |

| | | |
|--|--------------------------|--------------------------|
| • Are personnel properly clothed and equipped? | <input type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|

| Section 2 - Pre-entry checks (To be checked by all persons entering the space and or by the team leader) | YES | NO |
|---|--------------------------|--------------------------|
| • I have received permission from the Entry Supervisor to enter the space? | <input type="checkbox"/> | <input type="checkbox"/> |
| • Section 1 of this permit has been satisfactorily completed by the Entry Supervisor | <input type="checkbox"/> | <input type="checkbox"/> |
| • I have agreed and understood the communication procedures? | <input type="checkbox"/> | <input type="checkbox"/> |
| • I have agreed upon a reporting interval of _____ minutes? | | |
| • Emergency and evacuation procedures have been agreed and are understood? | <input type="checkbox"/> | <input type="checkbox"/> |
| • I am aware that the space must be vacated immediately in the event of a ventilation failure or if atmosphere tests show a change from the agreed safe criteria? | <input type="checkbox"/> | <input type="checkbox"/> |

| | |
|---|--|
| Section 3 – Atmospheric Testing & Personnel Entry (See ANNEX B and attach record sheets as needed) | |
|---|--|

Signed upon completion of Sections 1, 2, and 3 by:

| | | |
|---|------|------|
| _____ | Date | Time |
| Responsible person supervising entry | | |
| _____ | Date | Time |
| Person entering the space (Team Leader) | | |

ANNEX – B Atmospheric Testing & Personnel Entry

Page ___ of ___

| | | | | | |
|----------------------------|-----------|---------------------------------|-----|----------|---------------------------------|
| Meter Type | | Date: of last meter calibration | | | |
| | | | | | |
| Atmospheric Testing | | | | | |
| Time: | Readings: | | | | Atmospheric Tester Signature |
| | O2 | CO2 | H2S | LEL | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Personnel Entry | | | | | |
| Name | | Time in: | | Time Out | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

HOTWORK AUTHORIZATION PERMIT

| | |
|--|---|
| HOTWORK REQUESTED BY: | LOCATION: |
| PROCESSES TO BE USED: | EXPECTED DURATION: |
| FIRE WATCH ASSIGNED / COMPARTMENT: | COMPARTMENTS / TANKS / SPACES AFFECTED: |
| SECTION 1 PRE-WORK CHECKLIST COMPLETED AND ATTACHED <input type="checkbox"/> | |
| SECTION 2(A OR B) EQUIPMENT INSPECTION COMPLETED AND ATTACHED <input type="checkbox"/> | |
| <p>THIS PERMIT IS VALID FROM:</p> <p style="text-align: center;">_____</p> <p style="text-align: center;">_____</p> <p style="text-align: center;">Date Time</p> | |
| <p>THIS PERMIT EXPIRES AT:</p> <p style="text-align: center;">_____</p> <p style="text-align: center;">_____</p> <p style="text-align: center;">Date Time</p> | |
| AUTHORIZED BY: DATE: <p style="text-align: center;">Chief Engineer or delegate</p> | WORK TO BE PERFORMED BY: |
| COOL DOWN & POST WORK CHECKS COMPLETED | |
| WORK COMPLETED BY: DATE: | |

HOTWORK AUTHORIZATION PERMIT, CONTINUED

| | |
|--|--|
| <p>Section 1 - Pre-Work Checklist (To be completed by person doing the hotwork)</p> | |
| <p>GENERAL REQUIREMENTS:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Protect Machinery In General Vicinity From Hotwork Operations. <input type="checkbox"/> Remove all Combustibles in General Vicinity. <input type="checkbox"/> Ensure Hotwork Area Is Free Of Flammable Gases And / Or Vapours. <input type="checkbox"/> Post Warnings In Order That Personnel May Protect Themselves. <input type="checkbox"/> Remove Access Covers And Ventilate Any Heat-Affected Compartments. Ensure Compartments Are Free Of Flammable Gases And / Or Vapours. <input type="checkbox"/> Ensure Bearings, Armatures And Other Machinery Are Not Subjected To Welding Currents Through Improper Grounding. <input type="checkbox"/> Advise EOW and OOW of hot work area and commencement | |
| <p>PIPE REPAIRS:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Isolating Valves Closed, Drains Opened To Vent System. <input type="checkbox"/> Pipe Source Identified To Ensure Pipe Is Oil, Vapour And / Or Gas Free. <input type="checkbox"/> Can Pipe Work Be Removed To A Pre-Authorized Hotwork Zone? | |
| <p>PROTECTIVE CLOTHING</p> | <p>INSPECT JACKETS, APRONS, GLOVES, ETC. FOR:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Holes / Tears <input type="checkbox"/> Damaged or Missing Fasteners <input type="checkbox"/> Oil or Grease |
| <p>HEADGEAR</p> | <p>INSPECT HELMETS AND GOGGLES FOR:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Proper Lens Shade Number <input type="checkbox"/> Cover Plates <input type="checkbox"/> Spatter Buildup <input type="checkbox"/> Damage (Cracks, Burns, etc.) <input type="checkbox"/> Cleanliness |
| <p>VENTILATION EQUIPMENT (Where Fitted in Workshops)</p> | <p>INSPECT VENTILATION & FUME EXTRACTION EQUIPMENT FOR:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Is It Operational <input type="checkbox"/> Damage <input type="checkbox"/> Filters |
| <p>QUALIFIED FIRE WATCH</p> <ul style="list-style-type: none"> <input type="checkbox"/> First Aid <input type="checkbox"/> Fire Fighting <input type="checkbox"/> Evacuation Procedures <input type="checkbox"/> Hotwork Safety Procedures | <p>ADJACENT COMPARTMENTS:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Fire Watch Required <input type="checkbox"/> Flammables Removed <input type="checkbox"/> Equipment Protected |
| <p><input type="checkbox"/> Have All Safety And Technical Aspects Been Discussed And Understood By All Personnel Involved?</p> <p><input type="checkbox"/> Are You Confident This Operation Can Be Performed Safely?</p> | |
| <p>DATE: _____ SIGNATURE: _____</p> | |

HOTWORK AUTHORIZATION PERMIT, CONTINUED

| Section 2A - Oxyfuel Equipment Maintenance Checklist | |
|---|--|
| CYLINDERS | INSPECT FUEL GAS AND OXYGEN CYLINDERS FOR: <ul style="list-style-type: none"> <input type="checkbox"/> Loose or Missing Valve Handles or Keys <input type="checkbox"/> Valve Protection Caps <input type="checkbox"/> Damaged or Dirty Threads <input type="checkbox"/> Disabled Pressure Relief Devices <input type="checkbox"/> Corrosion or Damage <input type="checkbox"/> Legible Labelling <input type="checkbox"/> Oil or Grease |
| REGULATORS | INSPECT FUEL GAS AND OXYGEN REGULATORS FOR: <ul style="list-style-type: none"> <input type="checkbox"/> Overly Tight / Loose Adjusting Screws <input type="checkbox"/> Worn Inlet / Outlet Connections <input type="checkbox"/> Reverse Flow Check Valves <input type="checkbox"/> Damaged or dirty Threads <input type="checkbox"/> Oil or Grease |
| HOSES | INSPECT FUEL GAS AND OXYGEN HOSES FOR: <ul style="list-style-type: none"> <input type="checkbox"/> Proper Identification (Color) <input type="checkbox"/> Damaged or Dirty Threads <input type="checkbox"/> Proper Splices where Present <input type="checkbox"/> Cuts, Nicks, Burns, or other Damage <input type="checkbox"/> Oil or Grease |
| TORCH HANDLE | INSPECT TORCH HANDLE FOR: <ul style="list-style-type: none"> <input type="checkbox"/> Reverse Flow Check Valves <input type="checkbox"/> Overly Tight / Loose Torch Valves <input type="checkbox"/> Damaged or dirty Threads <input type="checkbox"/> Oil or Grease |
| ATTACHMENTS | INSPECT WELDING AND HEATING TIPS AND CUTTING ATTACHMENTS FOR: <ul style="list-style-type: none"> <input type="checkbox"/> Dirty or Damaged Threads <input type="checkbox"/> Damaged "O" Rings <input type="checkbox"/> Overly Tight / Loose Oxygen Valves <input type="checkbox"/> Overly Tight / Loose Cutting Handle <input type="checkbox"/> Oil or Grease |
| LEAK TEST | |
| <input type="checkbox"/> Completely Assemble System, Pressurize, and Inspect for Leaks with Soapy Water | |
| DATE: | SIGNATURE: |

HOTWORK AUTHORIZATION PERMIT, CONTINUED

| Section 2B - Electric Welding Equipment Maintenance Checklist | |
|--|--|
| PRIMARY POWER | INSPECT PRIMARY POWER SUPPLY FOR: <ul style="list-style-type: none"> <input type="checkbox"/> Correctly Sized Breaker <input type="checkbox"/> Correctly Sized Supply Cable <input type="checkbox"/> Properly Wired / Insulated Receptacle or Hard Wired Installation <input type="checkbox"/> Supply Cable Condition |
| POWER SOURCE | INSPECT POWER SOURCE / WELDING MACHINE FOR: <ul style="list-style-type: none"> <input type="checkbox"/> Excessive Corrosion or Dirt <input type="checkbox"/> Securely Fastened Cases and Panel Covers <input type="checkbox"/> Exposed Terminals <input type="checkbox"/> Worn / Damaged / Poorly Insulated Controls |
| CABLES | INSPECT WELDING CABLES FOR: <ul style="list-style-type: none"> <input type="checkbox"/> Cuts <input type="checkbox"/> Oil or Grease Accumulation <input type="checkbox"/> Damaged Insulation <input type="checkbox"/> Correct Sizing <input type="checkbox"/> Safe Splicing where Present <input type="checkbox"/> Frayed or Loose Connections |
| GROUND CLAMP | INSPECT GROUND CLAMP FOR: <ul style="list-style-type: none"> <input type="checkbox"/> Correct Sizing (Duty Cycle Rating) <input type="checkbox"/> Oil or Grease Accumulation <input type="checkbox"/> Damaged or Corroded Contact Pads <input type="checkbox"/> Worn Spring or Threads |
| ELECTRODE HOLDER | INSPECT ELECTRODE HOLDER FOR: <ul style="list-style-type: none"> <input type="checkbox"/> Correct Sizing (Duty Cycle Rating) <input type="checkbox"/> Oil or Grease Accumulation <input type="checkbox"/> Worn Parts <input type="checkbox"/> Damaged Insulation <input type="checkbox"/> Exposed Live Components |
| DATE: | SIGNATURE: |

SAMPLE - LOCKOUT / TAGOUT RECORD SHEET

| LOCKOUT/TAGOUT RECORD SHEET | | | |
|---|------------------|--|------------------|
| Date: | | Lockout Number | |
| Component / System: | | | |
| Requested By: | | | |
| Independent Verification Required at Lockout/Tagout | | | Yes |
| | | | No |
| Safety-Related Testing Required Specify Testing To Be Conducted: | | | Yes |
| | | | No |
| Placement of Locks/Tags Authorized: | Chief Engineer | | |
| Installed (Lockout/Tagout Holder) | | Lockout/Tagout Removed (Lockout/Tagout Holder) | |
| Name | Date/Time | Name | Date/Time |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| Restoration Completed / Operability Checks Satisfactory Specify Testing Conducted: | | | Yes |
| | | | No |
| Date: | | Chief Engineer | |

| | | |
|---|--|--|
| ENERGIZED ELECTRICAL WORK PERMIT | | VESSEL: CCG |
| This work permit is required when working on equipment operating at 240 volts or more and powered by a transformer of more than 125 kVA. | | |
| Location: | | Circuit # |
| Period of validity (Date): | | |
| MAINTelligence Work order number: | | |
| Description of Equipment / System: | | |
| Reason for energized work: | | |
| <input type="checkbox"/> Equipment troubleshooting <input type="checkbox"/> System calibration <input type="checkbox"/> Other (specify) _____ | | |
| Risk assessment: The following section shall be completed. | | |
| Checklist: <input type="checkbox"/> Safe environment <input type="checkbox"/> Work procedures met <input type="checkbox"/> Inspections during work <input type="checkbox"/> Installation of signage required <input type="checkbox"/> Control room and wheelhouse notified of work <input type="checkbox"/> Personal Protective Equipment <input type="checkbox"/> Insulated material involved (tools, mat, ladder etc.) <input type="checkbox"/> Presence of lockout/tagout if required <input type="checkbox"/> Safety tests required | | <input type="checkbox"/> Tags or signs required <input type="checkbox"/> Measuring instruments used appropriate to work <input type="checkbox"/> Metal accessories (jewellery, watch, belt buckle, etc.) removed <input type="checkbox"/> Clear and effective communications among team <input type="checkbox"/> Emergency power disconnect switch identified and accessible <input type="checkbox"/> Other (Specify) _____ _____ |
| Emergency procedures to be followed: | | |
| Return to service completed / Functional inspection satisfactory | | |
| Comments: | | Date: |
| Issued By: Chief Engineer: (Print) | | Signature: |
| Issued To: | | Signature: |
| Date issued: | | |

GARBAGE RECORD LOG

Introduction

In accordance with *Regulation 9 of Annex V of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL 73/78)* a record is to be kept of each discharge operation or completed incineration. This includes discharges to reception facilities, accidental discharges, and to other ships.

Garbage and Garbage Management

Garbage includes all kinds of food, domestic and operational waste, generated during the normal operation of the vessel and liable to be disposed of continuously or periodically except those substances (such as oil, sewage or noxious liquid substances).

Description of the Garbage

The garbage is to be grouped into categories for the purposes of this record log as follows:

Plastics

Floating dunnage, wood products, lining, or packing material

Ground-down (compacted) paper products, rags, glass, metal, bottles, crockery, etc.

Paper products, rags, glass, metal, bottles, crockery, etc.

Food waste

Incinerator ash

Entries in the Garbage Record Log

Entries in the Garbage Record Log shall be made on each of the following occasions:

When garbage is discharged to reception facilities ashore or to other ships:

Date and time of discharge

Port or facility, or name of ship

Category of garbage discharged

Estimated amount discharged for each category in m³

Signature of the person in charge of the operation

When garbage is incinerated:

Date and time of start and stop of incineration

Position of the ship (latitude and longitude)

Estimated amount incinerated in m³

Signature of the person in charge of the operation

Accidental or other exceptional discharges of garbage

Time of occurrence

Port or position of the ship at time of occurrence

Estimated amount and category of garbage

Circumstances of disposal, escape or loss, the reason therefore and general remarks.

Amount of garbage

The amount of garbage on board should be estimated in M3, if possible separately according to category. The Garbage Record Log contains many references to estimated amount of garbage.

It is recognized that the accuracy of estimating amounts of garbage is left to interpretation.

Volume estimates will differ before and after processing. Some processing procedures may not allow for a usable estimate of volume, e.g. the continuous processing of food waste. Such factors should be taken into consideration when making and interpreting entries made in a record.

INFORMATION TO BE CONTAINED IN HALOCARBON NOTICES

| FHR Clause # | <u>TYPE OF NOTICE</u> | <u>INFORMATION TO BE CONTAINED</u> |
|-------------------------|---|---|
| 8(2) | Dismantling, Disposal or Decommissioning Notice for a System | <input type="checkbox"/> name and address of the ship <input type="checkbox"/> Inventory tag number of the system <input type="checkbox"/> location of the system <input type="checkbox"/> name of service technician and certificate number <input type="checkbox"/> service company name (if applicable) <input type="checkbox"/> type and quantity of halocarbon and date recovered <input type="checkbox"/> type and capacity of system <input type="checkbox"/> final destination of system |
| 10(1) | Leak Test Notice for Refrigeration System and Air Conditioning System | <input type="checkbox"/> name and address of the ship <input type="checkbox"/> Inventory tag number of the system <input type="checkbox"/> location of the system <input type="checkbox"/> name of certified person and certificate number <input type="checkbox"/> service company name (if applicable) <input type="checkbox"/> type of halocarbon contained in system <input type="checkbox"/> dated list of leak tests, leaks detected and leak repairs |
| 31(1) | System Service Log | <input type="checkbox"/> name and address of the ship <input type="checkbox"/> Inventory tag number of the system <input type="checkbox"/> location of the system <input type="checkbox"/> name of certified person and certificate number <input type="checkbox"/> service company name (if applicable) <input type="checkbox"/> Description of service done (leak test, repairs, maintenance) <input type="checkbox"/> type and quantity of halocarbon added or recovered <input type="checkbox"/> type and capacity of system |
| 32(b) and 33(1) | Halocarbon Release Report | <input type="checkbox"/> name and address of the ship <input type="checkbox"/> Inventory tag number of the system <input type="checkbox"/> type and quantity of halocarbon released <input type="checkbox"/> date of release <input type="checkbox"/> type of system and equipment data (Manufacturer, serial #, etc) <input type="checkbox"/> circumstances leading to the release, corrective action and actions to prevent subsequent releases |
| 30(3) | System Recharge Halon | <input type="checkbox"/> name and address of the ship <input type="checkbox"/> Inventory tag number of the system <input type="checkbox"/> location of the system <input type="checkbox"/> service company name (if applicable) <input type="checkbox"/> type and quantity of halocarbon and date charged <input type="checkbox"/> capacity of system |
| | Inventory | <input type="checkbox"/> name and address of the ship <input type="checkbox"/> Inventory tag number of the system <input type="checkbox"/> location of the system <input type="checkbox"/> type and capacity of system <input type="checkbox"/> equipment data (Manufacturer, Model #, serial #) <input type="checkbox"/> type and quantity of halocarbon contained in the system |

INFORMATION TO BE CONTAINED IN NOTICES, CONTINUED

Halocarbon Notice

Date of notice: _____

Type of Notice

- Leak test
- Release Report
- Service
- Disposal of system
- Other: _____

Inventory tag #: _____

Name & data of system: _____

Type of system:

- Refrigeration
- Air Conditioning
- Solvent

Type of Halocarbon : _____ System Capacity _____kW

Halocarbon recovered / released: _____kg

System serviced by: _____ Certificate #: _____

Company name/address: _____

Narrative: _____

Name: _____ Signature: _____ Date: _____
(Site responsible)

WHEN CONTRACTING WORK ON SYSTEMS CONTAINING HALOCARBON

Contracting for Refrigeration and Air Conditioning Service

When Issuing a Contract:

- Ask for Environmental Awareness Training Card (called by different names in each province) and number (check expiry date)
- Ask for certificate of trade qualifications number (C of Q number) for each individual who will work on the site and require updating for any changes in personnel
- Specify they must use approved recovery equipment
- Specify that all work will need to be conducted according to section 2.7 and 2.8 of the *Code of practice for elimination of fluorocarbon emissions from refrigeration and air conditioning systems*.
- Specify that all work must comply with FHR, the Refrigerant Code of Practice and any other applicable federal or provincial regulations

Notes:

- Each province has its own version of the Trade Qualification Certificate for any given trade, although the certificate appearance is similar across the provinces.
- Individuals working on site must comply with these requirements.

| | | | | |
|---|--|--|---------------------|-----------------|
|  | SAFETY MANAGEMENT SYSTEM REPORT | | NCR #: | |
| | Major | Minor | Observation | AUDIT #: |
| | Vessel/Site : | | | DATE: |
| Lead Auditor: | Vessel or Site Rep | | Procedure #: | |
| Auditor: | | | | |
| Observer: | | | | |
| NON-CONFORMITY /OBSERVATION * | | | | |
| | | | | |
| Signed _____ | _____ | | _____ | |
| | Vessel or Site Representative | | Auditor / Employee | |
| IMMEDIATE CORRECTIVE ACTION | | | | |
| | | | | |
| Signed _____ | _____ | | _____ | |
| | Vessel or Site Representative | | Auditor / Employee | |
| ACTION TO PREVENT RECURRENCE: | | | | |
| | | | | |
| Corrective action to be completed by: (Date): _____ | | Proposed follow-up: (Date): _____ or <input type="checkbox"/> Next Verification Audit | | |
| FOLLOW-UP AND CLOSE OUT | | | | |
| | | | | |
| Date NCR Closed Out: _____ | | SFSS Signature _____ | | |

NON-CONFORMITY and OBSERVATION REPORT, CONTINUED

Instructions for Completion of Non-Conformity / Observation Report

This is a dual purpose form to be used for both non-conformities and observations whether identified by the ship, management, or through audit. Strike out the heading that does not apply.

- ① **NCR # - (Non-Conformity / Observation Report #)**
To be completed when a Non-Conformity / Observation is reported. The NCR #'s will be generated by the vessel or shore site and must be maintained in a strict numerical sequence. The NCR # will use the Regions unique two letter code: HQ, NL, MA, QC, CA, PA, the vessel code as per guidance document of FSM. Shore sites will use unique codes – contact the Superintendent, Fleet Safety and Security for the codes used in your region. NCR numbering will restart at 001 at the beginning each fiscal year.

Example:
an NCR # for the CCGS BARTLETT from Pacific Region will be PA-B010-YYYY-###. YYYY = fiscal Year.
- ② **AUDIT #**
Identifies the audit number for control and tracking purposes; ***this field is to be completed only during a formal internal audit.*** The specific Audit # will be assigned and controlled by the Director, Fleet Safety and Security. Regions are identified by a unique two letter code: HQ, NL, MA, QC, CA, PA. IC is an Internal Certification Audit, and EA is an External Audit.
Example: a Pacific Region Audit will be PA-YYYY-### (Sequential number reset annually)
Each audit observation will be assigned one of the vessel's or shore site's specific NCR#'s.
- ③ **DATE**
Enter the date the Non-Conformity or Observation was raised, and the form completed.
- ④ **MAJOR MINOR OBSERVATION**
Indicate by striking out the non-applicable word, whether the non-conformity is a Major, a Minor or an observation as defined in Procedure 1.0.
- ⑤ **VESSEL/SITE**
Enter the name of the vessel/site who the NCR or Observation is raised against.
- ⑥ **AUDITOR/EMPLOYEE:**
Enter the name of the individual who is raising the NCR or Observation.
- ⑦ **VESSEL/SITE REPRESENTATIVE**
Enter the name of the individual who receives the form on behalf of the vessel or department.
- ⑧ **PROCEDURE #**
This refers to the clause or section of the Fleet Safety Manual (FSM), the ISM Code or Regulation (either SOLAS, STCW, or Flag State) to which the Non-Conformity or Observation applies. NCR's may also be written for not following other acts, regulations, policies, orders, circulars etc.
- ⑨ **NON-COMFORMITY/OBSERVATION**
This section is a common area to clearly state the fact identified as non-compliant with a requirement of the FSM, ISM or ISPS. The deficiencies should be stated for not following the system and the content is to be complete and concise, and written in such a manner to be easily understood by a second party reviewing the non-conformity report. Clarity should not be sacrificed for the sake of brevity. Only one non-conformity or observation can be reported per form.

NON-CONFORMITY and OBSERVATION REPORT, CONTINUED

10 VESSEL/SITE REPRESENTATIVE SIGNATURE

The signature in this block only indicates that the person signing the form has received it and understands the contents.

1 AUDITOR/EMPLOYEE SIGNATURE

The signature in this block indicates the person raising the non-conformity or observation report.

2 CORRECTIVE ACTION

The Commanding Officer or Site Manager must, in consultation with the Superintendent, Fleet Safety and Security (where appropriate), develop an appropriate corrective action to the reported non-conformity and enter that information in this section. Clearly state what immediate action is taken to address the deficiency and any further action taken to ensure that recurrence is avoided.

Where the authorities or resources necessary to complete the corrective action are within the ship's capacity, the corrective action plan should be reported to the Superintendent, Fleet Safety and Security within 7 days of the non-conformity date. When the non-conformity is referred by the ship to senior level authority, the senior level has 30 days from the non-conformity date to develop and report the corrective action that will be taken.

3 DATE CORRECTIVE ACTION TO BE COMPLETED:

To be completed by the Auditor. Enter the date that the parties have agreed to have the corrective action implemented. The time required to fully implement a corrective action should not normally be more than 90 days (not including lay-up time). Where the time required will exceed 90 days, written explanation shall be provided.

4 VESSEL/SITE REPRESENTATIVE SIGNATURE

This signature block should be that of the Commanding Officer or OIC.

5 PROPOSED FOLLOW-UP

This date is selected by the Superintendent, Fleet Safety and Security to follow up on the corrective action (when applicable).

6 FOLLOW UP DETAILS

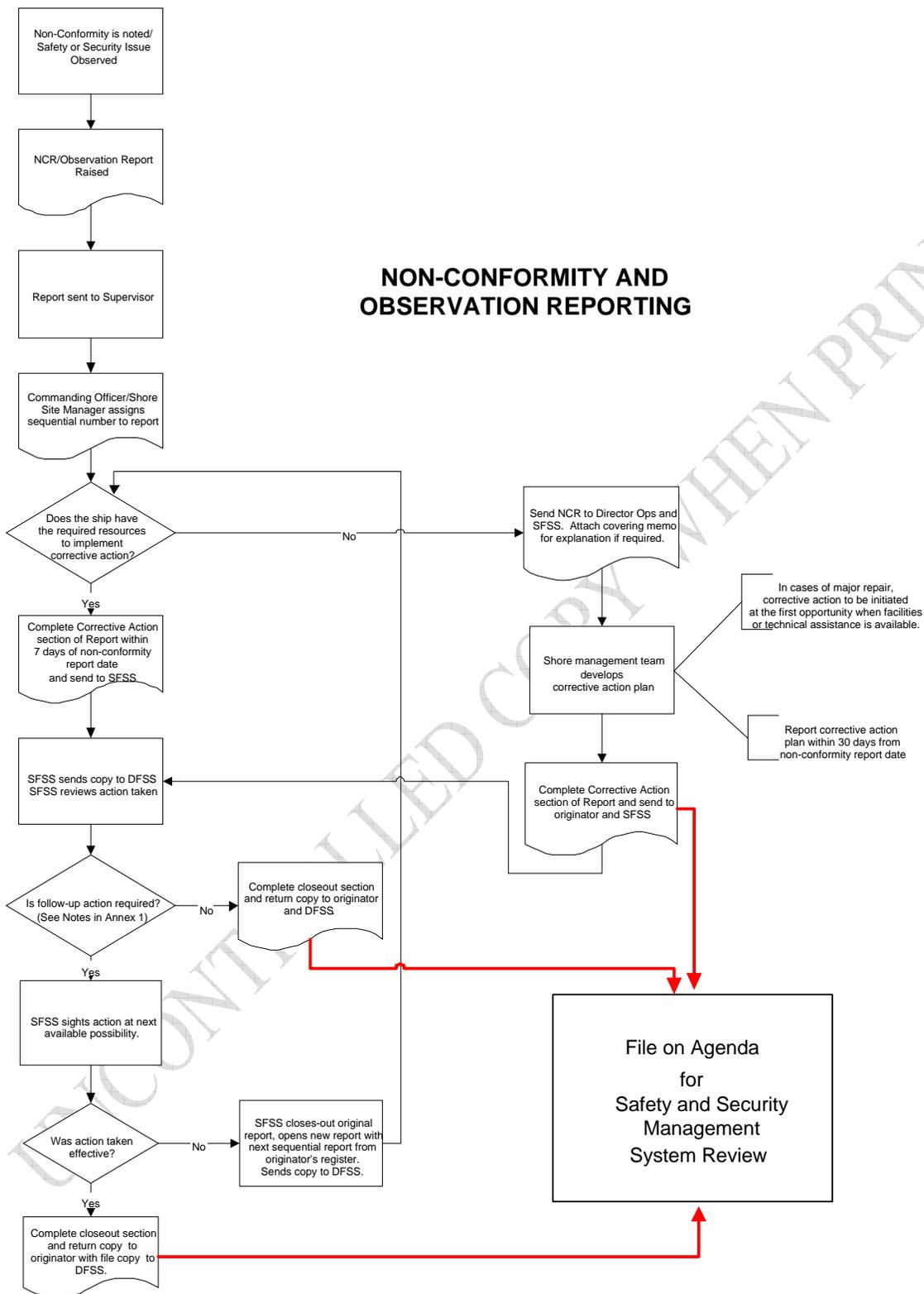
This section is to be completed by the Superintendent, Fleet Safety and Security or an internal auditor and should indicate how the non-conformity has been corrected. Not all corrective action will require follow-up action by the Superintendent, Fleet Safety and Security; some may be closed on the basis of the information presented in the report. However, major non-conformities or a non-conformity issued as a result of lack of attention to a previously issued non-conformity will always required objective evidence to be observed by the Superintendent, Fleet Safety and Security for close-out.

All reports will be examined as a matter of routine at the next internal audit of the ship or site.

7 DATE NCR CLOSED OUT & SIGNATURE

The date that the internal auditor (or Superintendent, Fleet Safety and Security) has reviewed the corrective action and declared it completed and effective. The signature of the auditor or Superintendent, Fleet Safety and Security, that closed the NCR.

NON-CONFORMITY and OBSERVATION REPORT, CONTINUED



FISHERIES AND OCEANS CANADA
CANADIAN COAST GUARD

INCIDENT INVESTIGATION REPORT

To be **thoroughly** completed by the responsible manager with assistance from the OSH Committee Member or Representative.
Please print or type. Return completed form to Fleet Safety & Security.

| A. TYPE OF OCCURRENCE | | | |
|--------------------------|--|--------------------------|---|
| <input type="checkbox"/> | Minor Injury (<i>First Aid Only</i>) | <input type="checkbox"/> | Minor Injury (<i>Visit to Doctor</i>) |
| <input type="checkbox"/> | Unsatisfactory Condition | <input type="checkbox"/> | Disabling Injury (<i>Any Time Loss</i>) |
| <input type="checkbox"/> | Security Incident | | |
| <input type="checkbox"/> | Near Miss | <input type="checkbox"/> | Hazardous Occurrence (select incident from "B") |

| B. HAZARDOUS OCCURRENCE - TYPE OF INCIDENT | | | |
|--|---|--|--|
| <input type="checkbox"/> Collision | <input type="checkbox"/> Grounding/Stranding/Striking | <input type="checkbox"/> Steering loss | |
| <input type="checkbox"/> Fire | <input type="checkbox"/> Mechanical Failure | <input type="checkbox"/> Person Overboard | |
| <input type="checkbox"/> Flooding | <input type="checkbox"/> Elect. Power Failure | <input type="checkbox"/> Pollution/Environmental | |
| <input type="checkbox"/> Fouling Underwater Object | <input type="checkbox"/> Propulsion Failure | <input type="checkbox"/> Other <i>specify:</i> | |

| C. GENERAL INFORMATION | | | |
|-------------------------------|-----------------------|--------------------------|--|
| Site or Vessel Name : | Work Nature (Tasking) | Date of Report | |
| Mailing Address | | | |
| Responsible Supervisor's Name | | Supervisor's Telephone # | |

| D. EMPLOYEE DATA* (IF APPLICABLE – ONLY WHERE THERE IS AN INJURY TO AN EMPLOYEE) *ALL FIELDS MUST BE COMPLETED | | | |
|--|---|---|------------------------|
| Employee's Surname | Given Name | Initials | Employee Date Of Birth |
| Gender <input type="checkbox"/> Male <input type="checkbox"/> Female | Age | Number of Years of Experience in the Occupation | |
| Job Title | Employment Status <input type="checkbox"/> Full Time <input type="checkbox"/> Term <input type="checkbox"/> Casual / Relief <input type="checkbox"/> Program Client <input type="checkbox"/> Contractor <input type="checkbox"/> Student <input type="checkbox"/> Other(specify): _____ | | |

| E. OCCURRENCE INFORMATION | | | |
|--|-----------------------------|---|---------------------------------|
| Occurrence Location | Date and Time of Occurrence | Hours on Shift This Day Prior to Occurrence | Hours Awake Prior to Occurrence |
| | hrs | hrs | hrs |
| Weather Conditions At the Time of the Occurrence | | | |
| Description of Injury (<i>if applicable</i>) | | | |
| Was a risk assessment performed prior to commencement of the task which resulted in this occurrence? <input type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| Specify : | | | |
| Was accident prevention training in relation to the duties performed provided to the injured employee prior to the time of the hazardous occurrence? <input type="checkbox"/> Yes <input type="checkbox"/> No Specify: _____ | | | |

| F. INVESTIGATION OF OCCURRENCE |
|--|
| Description of Occurrence- Sequence of Events (<i>attach additional sheets, chartlets, diagrams as required</i>) |
| |

G. DIRECT CAUSES

In this section please identify **all** personal, environmental and/or job/system factors

H. ROOT CAUSES

In this section please identify all substandard practices and/or substandard conditions if any

I. WITNESSES (IF MORE PLEASE ATTACH INFORMATION)

| | | | |
|-------------------|--------------|-------------------|--------------|
| Witness #1 – Name | Telephone #: | Witness #2 – Name | Telephone #: |
| | | | |
| Witness #3 – Name | Telephone #: | Witness #4 – Name | Telephone #: |
| | | | |

J. CORRECTIVE & PREVENTATIVE MEASURES

Corrective measures taken and/or recommended to prevent recurrence

K. RESPONSIBILITY FOR CORRECTIVE & PREVENTATIVE MEASURES/ACTIONS

| | | |
|--|----------------------|----------------|
| Corrective action responsibility assigned to | Date to be completed | Follow-up date |
| | | |

L. PROPERTY DAMAGE

Estimated Loss (\$)

Nature & extent of property damage

M. INVESTIGATION COMPLETED BY

| | | |
|---|-------------|-----------|
| Name of Manager or Manager Appointee | Telephone # | Signature |
| | | |
| Manager's Comment | | |
| | | |
| Name of OSH Committee Member / OSH Representative | Telephone # | Signature |
| | | |
| OSH Committee Member / Representative Comment | | |
| | | |

N. COMMANDING OFFICER / EMPLOYER COMMENTS

| | | |
|--|-------------|-----------|
| Name of Commanding Officer or Employer | Telephone # | Signature |
| | | |
| Additional Comments | | |
| | | |

General Guidelines

- Please refer to Procedure 9.B.1 of the Fleet Safety Manual for additional information and definitions.
- This document is PROTECTED A once completed. Employee personal information should only be entered in Section E if required.
- Please TYPE or PRINT. Be thorough and detailed, attaching any additional information as required.

Roles

- All employees are responsible for reporting all hazardous occurrences, injuries, significant near misses and unsatisfactory conditions to their supervisor.
- The Supervisor (investigator) is responsible to investigate and report all hazardous occurrences, injuries, significant near misses and unsatisfactory conditions. An OHS Committee Representative must also be in attendance of the investigation. The Supervisor is responsible for thoroughly and accurately completing the Incident Investigation Report (IIR) according to these guidelines.
- The Commanding Officer is responsible for reviewing and signing the Incident Investigation Report (IIR) and sending all IIRs to the Regional Superintendent, Fleet Safety and Security (SFSS).

Section Specific Guidelines

- Section A: "Type of Occurrence" Identify the incident by checking the relevant boxes. Select only ONE incident. If incident is a Hazardous Occurrence specify the incident in section B.

Note: Use "miscellaneous" and "other" options as infrequently as possible. If chosen, ensure explanations are thorough and identify the incident clearly.

- Section B: "Hazardous Occurrence – Type of Incident. Only use when incident is classified as a Hazardous Occurrence otherwise leave blank.
- Section C: "General Information - Vessel" Required information. If the incident occurred in the galley and had no relation to the actual tasking just indicate 'Galley Operations' in the tasking box. Note: The vessel's Official Number is only required if the incident was classified as MOHS in Section A.
- Section D: "Employee Data" Employee data is required ONLY if an employee has received an injury. This section is to be filled out with the injured employee's information. The job title should include current level if applicable.
- Section E: "Occurrence Information" Fill out ALL areas accurately and thoroughly as this information may be used to evaluate procedures in conjunction with all other incident reports. Ensure to identify the date and time of the occurrence as this is a commonly missed field. Actions to be taken regarding risk assessment are as follows: If "Yes," attach completed Pre-Job Safety Assessment (PJSA), Pre-Operation Risk Assessment (PORA), or other acceptable risk assessment formats to the IIR; If "No," provide a reason for failing to perform a risk assessment.

Note: Routine work is not a valid reason for failing to conduct a risk assessment.

- Section F: "Investigation of Occurrence" Describe the incident and how it occurred using a sequence of events/narrative. Attach any relevant/required information, diagrams or charts as these add value to the investigation. Since, persons who are not onboard the vessel at the time of the incident are reviewing the facts, a full description of the events prior to and during the incident are required. If the incident required first aid, describe the treatment and include the name of whoever performed the treatment. Note: DO NOT use names; refer to all individuals by title.
- Sections G and H: Root Causes and Direct Causes Identify any and all root causes and direct causes of the incident. It may be beneficial to identify the Direct Causes and work backward to find the Root Cause, a factor without which the incident would not occur.

Note 1: Root Cause: An underlying cause which can be attributed to a substandard condition or practice and which management has control to fix and, when fixed, will prevent or significantly reduce the likelihood of the problem's recurrence.

Note 2: Direct Cause: An immediate cause or reason for an action/event to occur. The direct causes may include personal, environmental and job/system factors, as well as, an action or set of circumstances which may have led to or allowed for the incident to occur.

- Section I: "Witnesses" Identify any witnesses to the incident. If more witnesses exist than the space given, attach necessary information. Indicate telephone number when the witness cannot be contacted via the vessel telephone number (contractors and other employers for example).
- Section J: "Corrective and Preventative Measures" Indicate and describe corrective or preventative measures to be taken in order to prevent recurrence and fix the root/basic cause(s). This includes short-term actions such as fixing a mechanical problem and long-term action such as changing procedures (upon approval).
- Section K: "Responsibility for Corrective and Preventative Measures/Actions" Indicate the individual responsible for implementing the corrective/preventative measures outlined in Section K. An estimated completion date of no more than 90 days following the incident is to be assigned. A follow-up date must also be assigned to ensure corrective action has been implemented.
- Section L: "Property Damage" Include an accurate and thorough description of any property or facility damage which occurred during or because of the incident. Estimate the monetary loss.
- Sections M and N: "Investigation Completed By" and "Commanding Officer/Employer Comments" To be completed by required individuals. The investigator is to check the box agreeing they have completed the form to this guides specifications. In all cases, the Commanding Officer must review and sign the report. Please use direct landline telephone numbers if applicable.

Reporting Guidelines

- Immediately following the incident, the OHS Committee or a Representative of said committee must be informed and the OHS Committee must receive a copy of the final report as soon as possible.
- A preliminary report must be sent to the SFSS within 24 hours of the incident. This report should include: information from Sections A through F, and indicate whether the incident has caused or is likely to cause an obstruction to navigation, pollution or other hazard. The SFSS is responsible for the dissemination of the report to required parties.
- A copy of the final report and any attachments must be sent to the SFSS within 72 hours. **The original copy of the report must be retained on board.** The SFSS is responsible for the dissemination of the report to required parties.
- If an injury occurs and worker compensation is required, relevant Workers' Compensation Board forms should be completed and sent to the SFSS. If the incident is identified as a hazardous occurrence warranting attention by Human Resources and Skills Development Canada, the SFSS will forward relevant information.

Contractor Safety and Security

Canadian Coast Guard Fleet Safety, Security, Quality, and Environmental Requirements and Expectations for Contractors.

1. Application:

This document is provided to outline the general requirements and expectations of contractors working onboard Canadian Coast Guard (CCG) ships and stations that are under the care, custody and control of the CCG.

These arrangements shall be formalized and documented in writing to impart knowledge, comprehension, acknowledgement and compliance with the requirements stated in the **Guide on the Safety Responsibilities of DFO in Relation to Contractual Agreements, Partnering & Volunteers** and **CCG Fleet Safety Manual (FSM)**.

2. Objective:

To ensure compliance with all applicable federal and provincial laws concerning health and safety of employees; in particular [Part II of the Canada Labour Code](#), and relevant regulations, [Maritime Occupational Health and Safety \(MOHS\)](#) and [Canadian Occupational Health and Safety \(COHS\)](#).

The Fleet Safety Manual (FSM) provides guidance and takes every measure possible; to reduce risks, prevent accidents, near misses, and any incident that would potentially result in injury, loss of life, damage to property or the environment, thereby ensuring CCG due diligence and compliance with these requirements.

3. Definitions:

Workplace under the control of the CCG:

When CCG employees are actively working on the site, the entire workplace is then considered to be the CCG's responsibility under [Part II of the Canada Labour Code](#). The CCG's obligations in relation to the safety of the workplace under its control still apply when work is being performed by contractors and/or subcontractors. As a result, the activities of every contractor and subcontractor must not endanger the health and safety of CCG employees or the security of the vessel.

When the site is under the control of CCG, the CCG must ensure that contractors and subcontractors follow procedures that are at a minimum equivalent to those found in the FSM.

Contractor Safety and Security Continued

Workplace NOT under the control of CCG:

When the Contractor has care and custody of the site and CCG employees are only doing quality assurance (QA) work related to the contract, the worksite (vessel) is NOT considered a workplace under the control of the CCG for the purpose of the [Canada Labour Code Part II](#).

4. Responsibilities:

Commanding Officer or the Competent Person Designated Responsible:

- is responsible, when the workplace is under the control of CCG, to disclose all pertinent information regarding known or foreseeable hazards at the worksite, to ensure all persons are aware of the CCG's responsibilities and to safeguard the health, safety and security, of all persons and the environment in accordance with applicable laws; and
- When the workplace is NOT of the control of the CCG, the Commanding Officer or the Competent Person Designated Responsible should be satisfied that the contractor has acceptable processes in place to prevent accidents and to reduce the risk of damage to the ship. If applicable, prior to contract start, the Contractor shall provide the CCG with documentation indicating processes for care and custody of the vessel or station, the protection of equipment, and the conduct of hazardous activities (e.g. burning and welding, confined space entry etc).

Contractors:

When work is carried out aboard a CCG vessel under CCG control:

- shall ensure that they disclose any pertinent information, agree to follow all applicable laws, and comply with the requirements of the FSM; and in particular
- that Contractor's employees and/or subcontractors engaged in general housekeeping, maintenance and/or repair activities must not commence work until they have received the contractors basic safety familiarization contained in Annex B and completed a pre-job safety assessment (PJSA).

When work is carried out at a station under CCG control:

- Contractor's employees and/or subcontractors engaged in general housekeeping, maintenance and/or repair activities must not commence work until they have received the contractors basic safety familiarization contained in Annex B.

All persons including Contractors:

- have the responsibility to take all reasonable and necessary precautions including stopping the action immediately to ensure the health, safety, security of any person or damage to vessel or the environment.
- must report any injury or infraction immediately to their supervisor. Note: the CCG and the Contractor must disclose immediately to each other any such report or infraction; and
- have a responsibility to communicate any potential hazards to their own safety, the safety of others and to the safety of the vessel as they arise.

UNCONTROLLED COPY WHEN PRINTED

FSM 10.A.7

CONTRACTORS BASIC SAFETY FAMILIARIZATION

(This record shall be kept for a period of two years)

The Commanding Officer or any Qualified Person delegated responsible, shall ensure that contractors receive a basic shipboard or shore facilities safety familiarization and should including, but is not limited to, knowledge of the following items:

- a) Fire alarm and conduct to follow in case of fire or other emergency situations, and
- b) Off limit spaces, and
- c) Hazards encountered at the worksite (asbestos, fire fighting systems, hazardous material etc).

Date Basic Safety Familiarization completed _____

mm dd yyyy

Brief description of contract or work to be completed:

From: _____
mm dd yyyy

To: _____
mm dd yyyy

Name (Print) _____
Contractor Representative

(Print) _____
Competent Person, Designated Responsible

Signature: _____
Contractor Representative

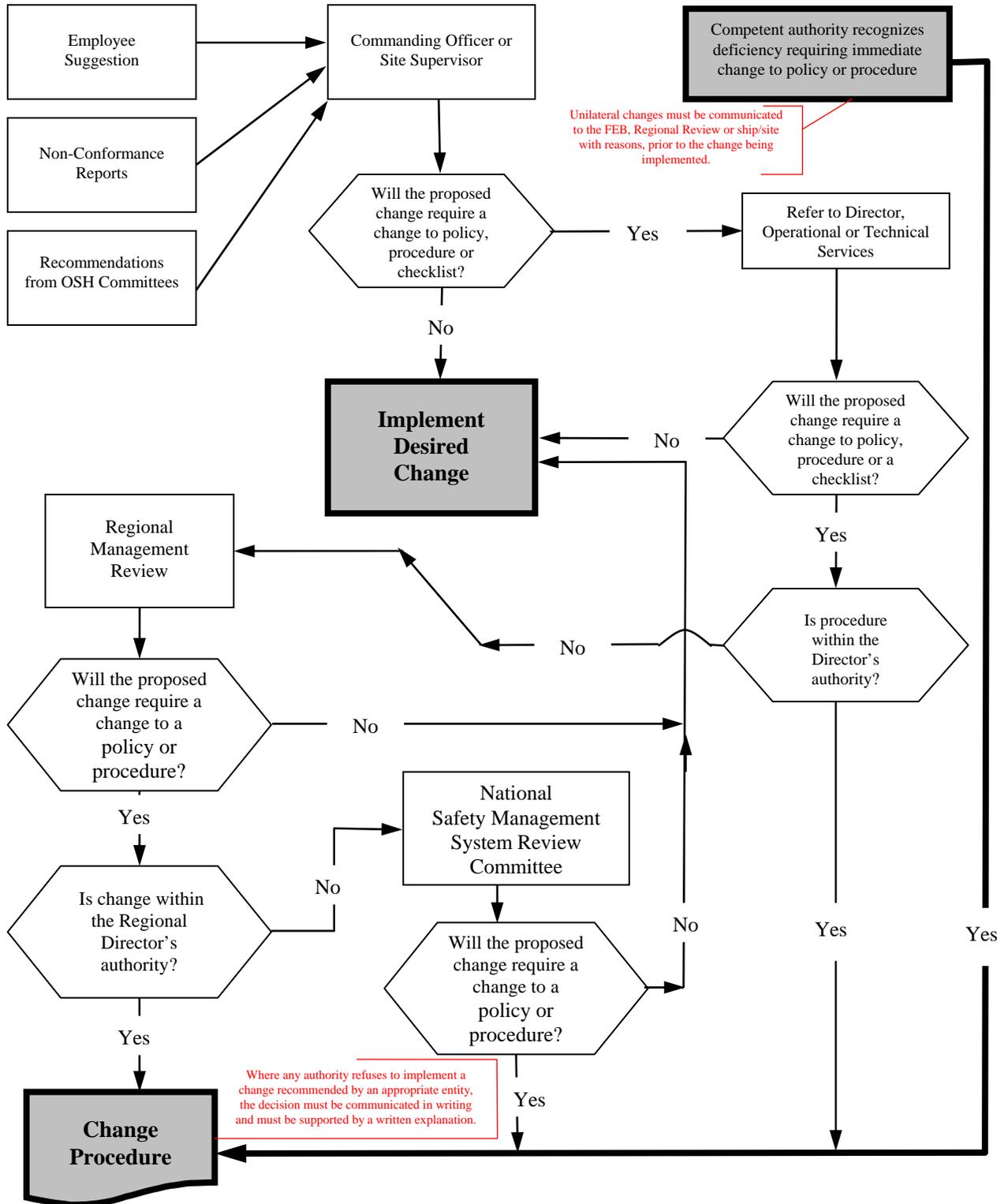
Signature: _____
Competent Person, Designated Responsible

11.A.3

| <u>CERTIFICATES</u> | <u>Date of Issue</u> | <u>Expiry Date</u> | <u>Inter' Survey* Due</u> | <u>Action Being Taken (As appropriate)</u> |
|---------------------|--|--------------------|---------------------------|--|
| 1 | CERTIFICATE OF REGISTRY | | | |
| 2 | CARGO SHIP SAFETY CONSTRUCTION (SIC 3) | | | |
| 3 | CARGO SHIP SAFETY EQUIPMENT (SIC 4) | | | |
| 4 | INSPECTION CERTIFICATE (SIC 17) | | | |
| 5 | INSPECTION CERTIFICATE NON-PASS'R,<150 GRT (SIC 22) | | | |
| 6 | CARGO SHIP RADIO SAFETY CERTIFICATE | | | |
| 7 | RADIO INSPECTION CERTIFICATE | | | |
| 8 | DECLARATION OF SHORE BASED MAINTENANCE FOR GMDSS FITTED EQUIPMENT | | | |
| 9 | RADIO STATION LICENSE | | | |
| 10 | CANADIAN/INTERNATIONAL OIL POLLUTION PREVENTION CERTIFICATE(Vessel over 400 GRT) | | | |
| 11 | ARCTIC WATERS POLLUTION PREVENTION CERTIFICATE | | | |
| 12 | INTERNATIONAL/LOCAL LOADLINE CERTIFICATE | | | |
| 13 | INTERNATIONAL TONNAGE CERTIFICATE (ITC 69) | | | |
| 14 | LIFERAFT INSPECTION CERTIFICATES | | | |
| 15 | FIRE DETECTION AND EXTINGUISHING INSPECTION CERTIFICATES | | | |
| 16 | CREWING PROFILE – MINIMUM MANNING DOCUMENT | | | |
| 17 | DE-RAT EXEMPTION CERTIFICATE (Vessels on International Voyages except to USA) | | | |
| 18 | PUBLIC HEALTH INSPECTION | | | |
| 19 | CALIBRATION OF OILY WATER SEPARATOR CERTIFICATE | | | |
| 20 | SAFETY MANAGEMENT CERTIFICATE | | | |
| | | | | |
| | | | | |

|  SAFETY MANAGEMENT SYSTEM SUGGESTION | | | |
|--|---|---|---------------------------------------|
| ATTACH ADDITIONAL SHEETS OR DRAWINGS WHERE NECESSARY | Regional Control Number: (To Be Assigned by SFSS) | National Control Number: (To Be Assigned by HQ) | |
| The Present Situation Is: | | | |
| My Suggestion Is: | | | |
| My Suggestion Would: | | | |
| Received by SFSS: | | Acknowledgement Sent: | |
| Reviewed By: | | | Date: |
| Recommendation: | | | |
| Date Suggestion Implemented: | | | Response Sent to Suggestor On: |
| Suggested By: | | | |
| Ship/Site: | | | |

11.B.1 – SAFETY MANAGEMENT SYSTEM SUGGESTION FLOWCHART



PRE-JOB SAFETY ASSESSMENT (PJSA)



JOB DESCRIPTION:

Date :

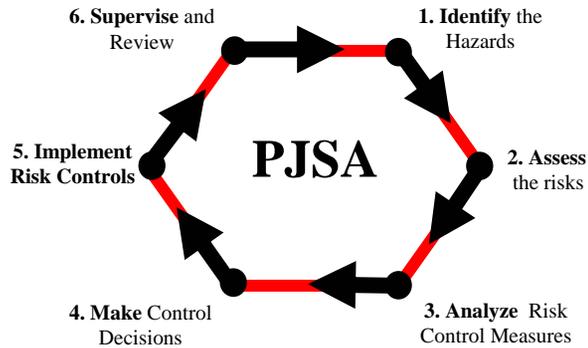
Ship/Station:

Number of workers :

Worker/Contractor :

Location:

Immediate Supervisor's Name:



Review the following at the work site and **ONLY** check the items which apply to the task.
List all the hazards you have checked on the back of the card. In the third column detail your methods of **CONTROL**.

| Shutdowns/Permits-signed / posted | | Respiratory Hazard | | Working at Heights Hazards | |
|-----------------------------------|--|------------------------------------|--|---------------------------------------|--|
| Hot Work | | Silica / Concrete | | Barricades / flagging and signs | |
| HVAC | | Asbestos | | Dangerous openings | |
| Sprinkler | | Mould | | Protect from falling items | |
| Fire Suppression Systems | | Fibreglass/insulation | | Powered platforms (man lift) | |
| Electrical | | Smoke | | Others working above or below | |
| Water (valves) | | Airborne particles- chipping | | Fall arrest | |
| Hydraulic (valves) | | Spray Painting | | Ladders | |
| Compressed Gasses | | MSDS Reviewed | | Other: | |
| Lockout procedure in place | | Other | | Ergonomics Hazards | |
| Confined Space | | Activity Hazards | | Working in tight area | |
| Asbestos | | Sensitive equipment in area | | Part of body in line-of-fire | |
| Other: | | Burn / Heat sources | | Working above your head | |
| Environmental Hazards | | Energized Equipment in area | | Pinch points identified | |
| Spill potential | | Welding / Grinding | | Repetitive motion | |
| Weather Conditions | | Electrical cords / tools-condition | | Repetitive work in awkward position | |
| Ventilation Required | | Equipment / tools – inspected | | Other: | |
| Heat stress / cold exposure | | Housekeeping | | Personal Limitations / Hazards | |
| Other workers in area | | Other: | | Trained to use tool / perform work | |
| Inadequate lighting | | Access / Egress Hazards | | Clear instructions | |
| Noise levels. | | Partially obstructed | | Insufficient number of workers | |
| Biohazards | | Slip / trip potential identified | | Physical limitations | |
| Other: | | Other: | | Other: | |

