 Transport Canada Marine Safety	<b>QUALITY MANUAL</b>	Issue Date April 2001
<b>QUALITY MANAGEMENT SYSTEM</b>		
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# **MARINE SAFETY**

# **QUALITY MANUAL**


**Responsible Authority**

The Director, Quality Assurance Division, is responsible for this document, including any change, correction or update.


Approved by	
 ..... Bud Streeter Director General	 27/3/01 ..... Richard Day Director - Ships and Operations Standards
 ..... Victor Santos-Pedro Director - Construction and Equipment Stds	 ..... Andrew Hart Director - Quality Assurance Division
 ..... John Clarkson A/ Director - Personnel Stds and Pilotage	 ..... Francine Léger Director - Program Services
..... Director - Regulatory and International Affairs	 ..... William J. Nash Regional Director - Pacific
 ..... Peter Timonin Regional Director - Prairie and Northern	 ..... Phillip Nelson Regional Director - Ontario
 ..... Denis Galarneau Regional Director - Québec	 ..... J. William Scott Regional Director - Atlantic



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## A Introduction

The Marine Safety Quality Policy states:

Marine Safety is committed to deliver mandated programs and services at high levels of excellence in effectiveness, consistency, to promote and maintain safety in shipping and protection of the marine environment.

Marine Safety will pursue quality system initiatives that will foster quality culture across the organization, support continuous improvement and strive for stakeholder satisfaction to achieve the departmental mission of *The Best Possible Transportation System*.

As a means of implementing the quality policy, Marine Safety has committed itself to achieving compliance with the ISO 9001:2000 quality management system standard (ISO is the International Organization for Standardization). Although Marine Safety is not seeking certification to the ISO 9001:2000 standard, Marine Safety will implement all ISO 9001:2000 requirements, and all Marine Safety operations will be covered by the quality management system. Terminology used in the standard has been modified in the Quality Manual to reflect the service orientation of Marine Safety.

Factors which determine the extent of documentation for the quality management system include the size and structure of Marine Safety; the complexity and interaction of the processes; and the competence of Marine Safety personnel.

The Quality Manual contains the quality management system policies of Marine Safety and is applicable to all Marine Safety programs in order to provide consistency in service and application. For each process related to the quality management system, Marine Safety will establish procedures for that process (and a work instruction if required) which contain an operational policy and details of how the process is to be carried out.

This Quality Manual is based on the International Standard ISO 9001:2000.

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## **B QUALITY MANAGEMENT SYSTEM POLICIES**

### ***1 Quality Management System***

#### **1.1 General Requirements**

Marine Safety shall establish, document, implement, maintain and continually improve a quality management system in accordance with the requirements of the ISO 9001:2000 International Standard. Marine Safety shall manage its processes in accordance with the requirements of this International Standard.

#### **1.2 Documentation Requirements**

Marine Safety shall develop and maintain documentation for its quality management system which is appropriate for the organization, its processes and personnel.

##### **1.2.1 Quality Manual**

Marine Safety shall establish and maintain a Quality Manual which meets the requirements of the ISO 9001:2000 standard and which provides information on the operation of the quality management system.

The Quality Manual contains the quality management system policies and represents the first tier of quality management system documentation. The second tier of documentation comprises the quality management system procedures for each program. Where required to provide more detail on how activities are carried out, a third tier of documentation comprising work instructions shall be prepared.

##### **1.2.2 Control of Documents**

Marine Safety shall control documents required for the quality management system and shall establish a documented procedure to control documents. This includes a procedure to approve documents for adequacy prior to use; to review, update as necessary and reapprove documents; to identify the current version status of documents; to ensure that relevant versions of applicable documents are available at points of use; to ensure that documents remain legible and readily identifiable; and to identify and prevent from unintended use any obsolete documents. A procedure shall identify documents of external origin and control their distribution e.g. documents from ship owners and other government departments.

Marine Safety is subject to the requirements of the Access to Information Act and the Privacy Act when responding to requests for documents and records.

##### **1.2.3 Control of Records**

Marine Safety shall establish a documented procedure for the identification, storage, retrieval, protection, retention time and disposition of records providing evidence of service conformity and of the effective operation of the quality management system. Records shall be controlled primarily electronically and include decisions of the Board of Steamship Inspection, stakeholder records and information in various databases.



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## ***2 Management Responsibility***

### **2.1 Management Commitment**

The Deputy Minister is committed to the development and improvement of the quality management system within Marine Safety. The Deputy Minister has delegated responsibility for the implementation and maintenance of the quality management system to the Director General, Marine Safety. The Director General and the other Directors of Marine Safety shall provide evidence of their commitment through communications within the organization; by establishing a quality policy and objectives; by quality assurance reviews; by ensuring the availability of necessary resources; and through appropriate training.

### **2.2 Stakeholder Focus**

The Director General, and other Directors of Marine Safety shall endeavour to ensure that stakeholder needs and expectations are determined, converted into requirements and fulfilled with the aim of achieving stakeholder satisfaction. Stakeholders include individuals and organizations that fall under the legislative regime; partner organizations such as industry associations, other federal and provincial government departments, labour unions and other areas of Transport Canada; the general public; employees; and suppliers.

### **2.3 Quality Policy**

The Director General, Marine Safety shall endeavour to ensure that the quality policy developed by Marine Safety is appropriate for Marine Safety and Transport Canada; is communicated and understood within the organization; and is reviewed for continuing suitability.

### **2.4 Planning**

#### **2.4.1 Quality Objectives**

The Director General, Marine Safety shall endeavour to ensure that quality objectives are established at relevant functions and levels within Marine Safety. Quality objectives shall be measurable and consistent with the quality policy including the commitment to continual improvement. Quality objectives shall include those needed to meet requirements for Marine Safety services. Marine Safety Directors shall establish overall objectives for their areas of responsibility at the planning meeting of the Marine Safety National Management Committee (MSNMC), and shall be accountable for satisfying their commitments.

#### **2.4.2 Quality Management System Planning**

The Deputy Minister, the Director General, Marine Safety and the Regional Directors, Marine Safety shall endeavour to ensure that the planning of the quality management system is carried out to meet quality objectives. Quality planning is part of the executive accountability framework. The output of the planning process shall be documented.

Planning shall endeavour to ensure that change is conducted in a controlled manner and that the integrity of the quality management system is maintained during this change.

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## 2.5 Responsibility, Authority and Communication

### 2.5.1 Responsibility and Authority

The Director General, Marine Safety shall endeavour to ensure that functions and their interrelations within Marine Safety, including responsibilities and authorities, are defined and communicated in order to facilitate effective quality management. The Director General, Marine Safety shall review responsibilities and authorities as part of resource planning during any MSNMC planning meeting.

### 2.5.2 Quality Management Representative

The Director General, Marine Safety shall appoint the Director, Quality Assurance as the Quality Management Representative for Marine Safety. The Quality Management Representative shall have the functional and administrative responsibility and authority to implement the quality management system within Marine Safety. The Quality Management Representative shall report to the MSNMC on the performance of the quality management system, including needs for improvement within Marine Safety.

The Director General, Marine Safety shall appoint Regional Directors, Marine Safety as the Regional Quality Management Representatives who, irrespective of other responsibilities, shall have the functional and administrative responsibility and authority related to the quality management system. The Regional Quality Management Representatives shall support and receive direction from the Director, Quality Assurance, as the overall Quality Management Representative, concerning matters related to the quality management system.

### 2.5.3 Internal Communication

Marine Safety shall endeavour to ensure that appropriate communication processes are established between its various levels and functions and that communication takes place regarding the processes of the quality management system and their effectiveness.

## 2.6 Management Review

### 2.6.1 General

The Marine Safety National Management Committee shall review the quality management system at planned intervals (at least annually) to ensure its continuing suitability, adequacy and effectiveness. The review shall evaluate the need for changes to Marine Safety's quality management system, including quality policy and quality objectives. Records from management reviews shall be maintained.

In preparation for any planned management review, the Marine Safety Quality Management Representatives (at Headquarters and within the Regions) shall collect and review data related to the operation of the quality management system and present the results to the MSNMC. Such data shall include the results of audits, stakeholder feedback, process performance, status of preventative/corrective actions and follow-up actions from previous reviews and recommendations for improvement. The output from the management review shall include any decisions related to improvement and resource needs. The Director General, Marine Safety shall periodically present this information to the Deputy Minister. The output from the management review shall include any decisions and actions related to improvements of the

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quality management system and its processes; improvements to services; and any resource needs.

### ***3 Resource Management***

#### **3.1 Provision of Resources**

As part of the process at any MSNMC planning meetings, Marine Safety shall determine and provide, in a timely manner, the resources needed to implement and improve the processes of the quality management system and to address stakeholder satisfaction.

#### **3.2 Human Resources**

##### **3.2.1 General**

Marine Safety shall endeavour to ensure that personnel who are assigned responsibilities defined in the quality management system are competent on the basis of appropriate education, training, skills and experience.

##### **3.2.2 Competence, Awareness and Training**

Marine Safety shall identify the competency needs for personnel performing activities affecting service quality; train personnel to satisfy these needs; and evaluate the effectiveness of the training provided. Marine Safety shall endeavour to ensure personnel are aware of how they contribute to meeting quality objectives. Marine Safety shall maintain records of education, experience, training and qualifications, as appropriate.

#### **3.3 Infrastructure**

Marine Safety shall identify, provide and maintain the facilities and tools (electronic and otherwise) it needs to achieve the conformity of its services.

Adequacy of facilities shall be addressed as part of the annual MSNMC planning meeting. However, the authority to obtain and control facilities and tools largely lies outside the purview of Marine Safety. Facilities are identified and managed by Regional personnel according to the needs of each Region.

#### **3.4 Work Environment**

Marine Safety shall identify and manage the human and physical factors of the work environment needed to achieve conformity of service. The Marine Safety Occupational Health and Safety Committee shall participate in developing and implementing policies and procedures related to the work environment, including workplace hazards and transportation to and from work sites. The MSNMC shall periodically review the work environment safety policy.

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## **4 Delivery of Services**

### **4.1 Planning for Service Delivery**

Planning for delivery of services shall identify and implement the sequence of activities required by Marine Safety to prepare and deliver its services to stakeholders. Such planning shall be consistent with the other requirements of Marine Safety quality management system and shall be documented in a form suitable for Marine Safety's method of operation. Planning for delivery of services shall be part of any MSNMC planning meeting.

This planning shall determine service quality objectives; the need to establish and document processes and provide resources specific to the service; and the need for records to confirm that service delivery meets requirements.

### **4.2 Stakeholder-related Processes**

#### **4.2.1 Identification of Stakeholder Requirements**

Marine Safety shall determine stakeholder requirements and shall provide services meeting those requirements including those for availability, delivery and post-delivery support.

#### **4.2.2 Review of Service Requirements**

Marine Safety shall review the identified stakeholder requirements together with additional requirements determined by Marine Safety. This review shall be conducted prior to the commitment to provide a service to the stakeholder and shall endeavour to ensure that service requirements are defined; any impediments to delivery of services have been identified and resolved; and that Marine Safety has the ability to meet defined requirements. The results of the review shall be recorded. Where service requirements change, Marine Safety shall ensure that relevant documentation is amended and that relevant personnel are made aware of such changes.

#### **4.2.3 Stakeholder Communication**

Marine Safety shall identify and implement arrangements for communication with stakeholders. These arrangements will provide program information; provide for handling of inquiries; and provide for feedback from stakeholders, including complaints.

### **4.3 Design and Development**

#### **4.3.1 Design and Development Planning**

Marine Safety shall plan and control the design and development of its programs and services to ensure that stakeholder requirements are converted into the appropriate products and services.

Examples of design and development projects are:

- development of regulations/codes/standards
- vessel inspection and certification programs
- training programs

Design and development planning shall determine:

- the design and development stages;
- review, verification and validation activities appropriate to each stage of the design and development;

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responsibilities and authorities for design and development activities.

Arrangements between different groups involved in design and/or development activity shall be managed to ensure effective communication and clear assignment of responsibilities. Inputs relating to program/service requirements shall be defined, documented, and reviewed for adequacy, with incomplete or conflicting requirements resolved. Outputs shall be documented in a form that enables verification against design input and shall be approved prior to release.

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## 4.4 Purchasing

### 4.4.1 Purchasing Process

Marine Safety shall follow the requirements of the Financial Administration Act (FAA) when purchasing products and services. Marine Safety purchases products and services directly or through Public Works and Government Services Contracting (PWGSC). Marine Safety and PWGSC shall evaluate and select suppliers based on their ability to supply product and services in accordance with Marine Safety's requirements. The results of evaluations shall be recorded.

### 4.4.2 Purchasing Information

Marine Safety or PWGSC, as appropriate, shall endeavour to ensure the adequacy of specified requirements contained in the purchasing documents prior to their release.

### 4.4.3 Verification of Purchased Product

Marine Safety shall identify and implement the activities necessary to confirm that purchased product and services meet requirements.

## 4.5 Service Delivery

### 4.5.1 Control of Service Delivery

Marine Safety shall control its programs and the delivery of services to all stakeholders (e.g. inspections and follow up activities) in order to ensure consistency. Marine Safety shall accomplish this by providing staff with the training and tools they need to carry out their activities (e.g. appropriate information, work instructions, equipment) and by implementing monitoring and control activities.

### 4.5.2 Validation of Processes for Service Delivery

Marine Safety shall validate any service delivery processes where the results of the service cannot be verified by measurement or monitoring or where deficiencies may become apparent only after the service has been delivered. For example, the certification process for a safety product such as a lifejacket may not reveal a design flaw which may only become apparent after the product has been in service for some time.

### 4.5.3 Identification and Traceability

Marine Safety shall identify, where appropriate, the different phases involved in the preparation for and the actual delivery of the service. Marine Safety shall identify the measurement and monitoring status of appropriate stages of service preparation and delivery e.g. status of a plan approval. Marine Safety shall control and record the unique identification of the service, including traceability of decisions and services delivered, where traceability is a requirement.

### 4.5.4 Stakeholder Property

Marine Safety shall identify, verify, protect and safeguard stakeholder property while it is under the control of Marine Safety or is being used by Marine Safety. Control over stakeholder information is addressed in part by the Access to Information Act and the Privacy Act. Any occurrence where stakeholder property is lost, damaged or otherwise found to be unsuitable for

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use shall be recorded and reported to the stakeholder by the Marine Safety person responsible for the property.

Examples of stakeholder property include:

- vessel plans and data submitted for approval
- research and development information
- intellectual property
- commercially competitive data
- physical property, e.g. life jacket prototype

#### 4.5.5 Preservation of Product

Marine Safety shall preserve the conformity of its products e.g. safety inspection certificates in accordance with stakeholder requirements during internal processing and final delivery. Marine Safety shall develop procedures for control of any documents, materials or property required for evidentiary purposes.

#### 4.6 Control of Monitoring and Measuring Devices

Marine Safety shall determine the monitoring and measuring devices (e.g. instruments such as sound-level meters) required to assure conformity of services to specified requirements. Measuring and monitoring processes shall be used and controlled to ensure that measurement capability is consistent with the measurement requirements. Software used for measuring and monitoring of specified requirements shall be validated prior to initial use and reconfirmed as necessary.

### ***5 Measurement, Analysis and Improvement***

#### 5.1 General

Marine Safety shall define, plan and implement the measurement and monitoring activities needed to assure conformity and achieve continual improvement. This includes the determination of the need for, and use of, applicable methodologies including statistical techniques.

#### 5.2 Monitoring and Measurement

##### 5.2.1 Stakeholder Satisfaction

Marine Safety shall monitor information relating to stakeholder perception as to whether requirements have been met as one of the measurements of performance of the quality management system. Marine Safety shall document the methodologies for obtaining and using this information.

##### 5.2.2 Internal Audit

Marine Safety shall conduct internal audits to determine whether the quality management system conforms to the requirements of the ISO 9001:2000 standard and has been effectively implemented and maintained. Marine Safety shall develop an audit programme which takes into consideration the status and importance of the processes and areas to be audited, as well as the results of previous audits. The audit criteria, scope, frequency and methods shall be defined.

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The Marine Safety management responsible for the area being audited shall endeavour to ensure that actions are taken without undue delay to eliminate detected nonconformities and their causes. Follow-up actions shall include the verification of the implementation of corrective action and the reporting of verification results.

### 5.2.3 Monitoring and Measurement of Processes

Marine Safety shall apply suitable methods for monitoring, and where applicable, measurement of the processes necessary for service delivery. These methods shall confirm the continuing ability of each process to achieve planned results. When planned results are not achieved, corrective action shall be taken as appropriate to ensure conformity of service.

### 5.2.4 Monitoring and Measurement of Service Delivery

Marine Safety shall measure and monitor the characteristics of service delivery to verify that the service (e.g. on-site inspections) meets regulatory and stakeholder requirements. Monitoring and measurement shall be carried out at appropriate stages of service delivery based on program planning. Marine Safety shall use evidence such as reports to monitor service delivery and shall audit these reports to confirm that the service meets requirements. Service delivery shall not proceed until all the specified activities have been satisfactorily completed, unless otherwise approved by a designated authority and, where applicable, the stakeholder.

### 5.3 Control of Nonconforming Services

Marine Safety shall endeavour to ensure that any product or service which does not conform to requirements is identified and controlled to prevent unintended use or delivery. Nonconformities which have a potential impact on public safety may be identified by any source within or external to Marine Safety. Recommendations for corrective actions for these nonconformities may be identified by the Transportation Safety Board, the provincial coroner, Marine Safety staff or other parties as appropriate.

The responsibilities and authorities for dealing with nonconformities shall be defined in procedures.

Nonconforming products or services shall be corrected and subject to re-verification after correction to demonstrate conformity. Correction shall be undertaken immediately if the safety of stakeholders is affected by the nonconformity. When nonconforming service is detected after delivery, Marine Safety shall take action appropriate to the consequences of the nonconformity.

### 5.4 Analysis of Data

Marine Safety shall collect and analyse appropriate data to determine the suitability and effectiveness of the quality management system and to evaluate where continual improvement of the effectiveness of the quality management system can be made. This shall include data generated by monitoring and measuring activities and other relevant sources. Results of the analysis shall be presented periodically at MSNMC meetings.



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## 5.5 Improvement

### 5.5.1 Continual Improvement

Marine Safety shall continually improve the effectiveness of the quality management system through the use of the quality policy, quality objectives, audit results, analysis of data, corrective/preventive actions and management review.

### 5.5.2 Corrective Action

Marine Safety shall take corrective action to eliminate the cause of nonconformities in order to prevent recurrence. Corrective action, and the response time to initiate such actions, shall be appropriate to the consequences of the nonconformities.

A documented procedure shall be established for reviewing nonconformities; determining cause; evaluating the need for action to ensure nonconformities do not recur; and determining, implementing and reviewing corrective actions taken.

Regional Directors, Marine Safety, shall prepare summaries of nonconformities and corrective actions taken in their Regions for submission to the Director, Quality Assurance, who shall combine these with the results of any internal audits and provide a summary report to the MSNMC on a periodic basis.

Identification of root causes of nonconformities is a non-judgemental process which seeks to improve the effectiveness of the quality management system. The corrective action process is not a mechanism to assign blame. Where warranted, corrective actions based on a nonconformity detected in one part of the Marine Safety organization shall be applied to any or all other parts of the Marine Safety organization, as appropriate.

### 5.5.3 Preventive Action

Marine Safety shall determine preventive action to eliminate the causes of potential nonconformities to prevent occurrence. Preventive actions taken shall be appropriate to the impact of the potential problems.

A documented procedure shall be established to define requirements for determining potential nonconformities and causes; evaluating the need for action to prevent occurrence; and determining, implementing and reviewing preventive actions taken.

Regional Directors, Marine Safety, shall prepare summaries of preventive actions taken in their Regions for submission to the Director, Quality Assurance, who shall provide a summary report to the MSNMC on a periodic basis.

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8.2 Monitoring and Measurement	QM 5.2
8.2.1 Customer Satisfaction	QM 5.2.1
8.2.2 Internal Audit	QM 5.2.2
8.2.3 Monitoring and Measurement of Processes	QM 5.2.3
8.2.4 Monitoring and Measurement of Product	QM 5.2.4
8.3 Control of Nonconforming Product	QM 5.3
8.4 Analysis of Data	QM 5.4
8.5 Improvement	QM 5.5
8.5.1 Continual Improvement	QM 5.5.1
8.5.2 Corrective Action	QM 5.5.2
8.5.3 Preventive Action	QM 5.5.3

