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# Chapter 1 Introduction

Forestry certification has been attracting considerable attention from the forestry sector in the province over the past five years. The interest from the international and domestic marketplace in buying wood products from certified forests has grown and many of British Columbia forest products companies have obtained registration of their forest management programs. This has been supported by the provincial government, recognizing that forestry certification is voluntary and complementary to the standards of the province's Forest Practices Code and the new Forest Practices and Range Act.

The fundamental values of this environmental management system (EMS) is that it enables BC Timber Sales (BCTS) to arrange and focus its' management activities into an integrated, functioning system (including administration, planning and operations) with particular emphasis upon environmental impacts and risks. More specifically, the EMS encourages the following:

- corporate commitment to excellence in forest management, and related quality control
- development of a foundation to address resource management activities and practices
- application of continual improvement principles and procedures
- disclosure of objectives, targets and results (public, transparent)
- assignment of fiscal and human resources to appropriate activities
- assignment of personal responsibilities and accountabilities
- development of good record keeping processes and procedures
- demonstrating due diligence
- development of a base for engaging with other certification systems

The Timber Sales Managers have the overall responsibility for implementation of the EMS, using a similar set of operational controls adapted for their operations. Each BCTS Timber Sales Office will set performance targets for their Business Area (BA), which will be delivered through environmental management programs prepared by each BA.

# Content

The EMS consists of this manual and all related documents that it refers to.



### Chapters 1 and 2

These two chapters provide some introductory background, a brief description of the EMS and an overview of the ISO 14001 International Standard.

#### Chapters 3 to 18

These chapters outline the process and procedures of all the elements of the EMS. They follow the ISO 14001 standard sequentially in numerical order.

Each chapter contains a purpose and scope, identifies those personnel that have key roles and responsibility, and describes the procedure to be followed. The applicable ISO 14001 standard clause is provided. The related documents and records to be completed for the particular procedure are listed.

The EMS Manual is to be used by BA personnel, registrants and other parties responsible for the implementation and auditing of the EMS. It is designed to enable an understanding of the essential elements of the ISO 14001 standard, its operational requirements, and procedures corresponding to each clause of the standard.

### Implementation

The EMS will be implemented at a Business Area (BA) level. Each BA will obtain a separate registration certification and provide EMS awareness training for BCTS personnel.

EMS conformance is on a voluntary basis for some Licenses and Contracts signed prior to the implementation date of this EMS, where the Licences and Contracts do not contain clauses that require mandatory conformance to the EMS. All Licenses and Contracts issued after the implementation date of the EMS will contain clauses that require mandatory conformance to the relevant requirements of the EMS.

# Scope

The scope of the EMS includes the following functional areas: planning, harvesting, roads, and silviculture. All activities undertaken by BA staff, licensees/ permittees / contractors that occur on areas of land from which timber has been sold or is planned to be sold, and those areas covered under a permit or contract, are included. Table 004-3 (see Chapter 4) specifies the individual activities that are included in the scope of this EMS.

Individual BA licensees/ permittees or contractors with licences, permits or contracts that were issued prior to the implementation of the EMS and that did not include mandatory EMS participation clauses, may participate in the EMS on a voluntary basis. All new licences, permits or contracts require mandatory participation in the EMS.



# Updates

The BA TSM is accountable for ensuring that the EMS Manual will be maintained.

The official copy of the latest version of the EMS Manual should be maintained on the BCTS website. Users of the EMS should check the website to ensure that they have a current version.



# Chapter 2

# **Overview of ISO 14001 International Standard**

### Overview

ISO 14001 is the environmental management system (EMS) standard developed by the International Organization for Standardization. Published in 1996, the standard has resulted from the efforts of a technical committee representing 70 countries around the world. As illustrated in the diagram this standard is based on a circular system-flow model commencing with environmental policy, followed by planning, implementation and operation, checking and corrective action and closing the loop with management review.

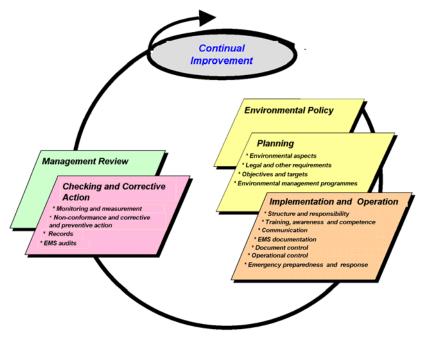


Figure 2.1: ISO System Model

\* Diagram courtesy of ISO 14001 International Standard.



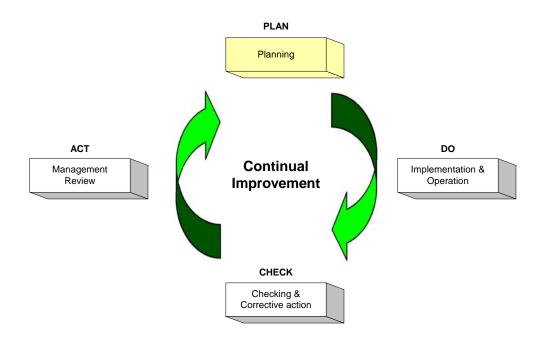
This standard is applicable to organizations wishing to:

- Implement, maintain, and improve an environmental management system;
- Assure conformance with the stated environmental policy;
- Demonstrate such conformance to others;
- Seek certification of the environmental management system by a third party registering organization.

ISO 14001 does not state specific environmental performance criteria. Instead, it enables an organization to formulate policies and objectives, taking into account legislative requirements and information about significant environmental aspects which it can control and over which it has an influence.

The guiding principles of the environmental management system are based on a cycle of PLAN-DO-CHECK-ACT and continual improvement of performance.

Organizations must demonstrate continual improvement to maintain certification once their EMS is registered.



#### EMS CYCLE

Figure 2.2: EMS Cycle



The five guiding principles of the EMS are:

# **Principle 1 – Commitment and Policy**

An organization should define its environmental policy and ensure commitment to its environmental management system.

# **Principle 2 – Planning**

An organization should formulate a plan to fulfil its environmental policy.

# **Principle 3 – Implementation**

For effective implementation an organization should develop the capabilities and support mechanisms necessary to achieve its environmental policy, objectives and targets.

# Principle 4 – Measurement and Evaluation

An organization should measure and evaluate its environmental performance.

# **Principle 5 – Review and Improvement**

An organization should review and continually improve its environmental management system with the objective of improving its overall environmental performance.

Further information can be found by reference to the publications:

ISO 14001: 2004(E)	Environmental management systems – Requirements with guidance for use
ISO 14004: 2004(E)	Environmental management systems – General guidelines on principles, systems and support techniques.



# Chapter 3 Environmental Policy

# Purpose

To define and maintain an environmental policy that is appropriate to the activities of BC Timber Sales in the Business Area.

### Scope

This Chapter defines the procedure for approval, adoption, and communication of the environmental policy.

### Roles

(see Chapter 8: Structure and Responsibilities)

• Timber Sales Manager

### Procedure

The TSM will:

- approve an environmental policy and review it annually for its continuing suitability and appropriateness.
- Communicate the environmental policy to all BA staff, licensees / permittees / contractors, and the public.
- Ensure the policy is prominently displayed and available at the TSO (Timber Sales Office).

# **ISO 14001 Reference**

#### Clause 4.2 Environmental policy

Top management shall define the organization's environmental policy and ensure that, within the defined scope of its environmental management system, it



a) is appropriate to the nature, scale and environmental impacts of its activities, products or services;
b) includes a commitment to continual improvement and prevention of pollution;
c) includes a commitment to comply with applicable legal requirements and with other requirements to which the organization subscribes which relate to its environmental aspects,
d) provides the framework for setting and reviewing environmental objectives and targets;
e) is documented, implemented and maintained
f] is communicated to all persons working for or on behalf of the organization, and
g) is available to the public.

# **Related Documents**

• Environmental policy



# Chapter 4 Environmental Aspects

# Purpose

To ensure that BA periodically assesses the elements of its activities, which can interact with the environment, in such a way as to determine those with potential for significant environmental impact.

### Scope

This Chapter defines the procedures for addressing and maintaining a list of significant environmental aspects.

# Roles

(see Chapter 8: Structure and Responsibilities)

- BA CSO
- BA EMS Committee
- Timber Sales Manager (TSM)

# Procedure

The TSM will:

• Address any changes to the environmental aspects, presented by the BA EMS Committee, taking into consideration any information presented during the annual management review (Chapter 18).

The BA CSO will:

• Maintain the Environmental Aspect List and Risk Assessment (Table 004-3) and Significant Environmental Aspects List (Table 004-1).



The BA EMS Committee will:

- Periodically compile input on aspects including new processes or technology, and from BA staff, interested parties, and licensees / permittees / contractors.
- Following the procedure described in Aspect Risk Assessment Procedure (Table 004-2), conduct a review of Environmental Aspect List and Risk Assessment (Table 004-3) and Significant Environmental Aspects List (Table 004-1) annually or as required by the TSM based on information including:
  - Changes in legislation and the impact on the EMS,
  - Changes in scale and technology of woodlands operations,
  - New or modified activities,
  - Evaluation of operational controls,
  - Review of non conformance issues,
  - Concerns expressed by interested parties, and
  - Criteria, objectives, and indicators of Sustainable Forest Management as applicable to the scope of the EMS.
- Submit recommendations for revision to the Environmental Aspect List and Risk Assessment (Table 004-3) and Significant Environmental Aspects List (Table 004-1), as required to the TSM or on an annual basis for their consideration in the management review.
- Approve the list of significant environmental aspects.
- Facilitate adoption of changes to the EMS.

# ISO 14001 Reference

#### Clause 4.3.1 Environmental Aspects

*The organization shall establish, implement and maintain a procedure(s)* 

- a. To identify the environmental aspects of its activities, products and services within the defined scope of the environmental management system that it can control and those that it can influence taking into account planned or new developments, or new or modified activities, products and services and
- b. To determine those aspects that have or can have significant impact(s) on the environment (i.e. significant environmental aspects)

The organization shall document this information and keep it up to date

# **Related Documents**

- List of Significant Environmental Aspects. (Table 004-1)
- Aspect Risk Assessment Procedure (Table 004-2)
- Aspect List and Risk Assessment (Table 004-3)

# Records



Name Records of management review Records of stakeholder or licensee input Responsibility BA CSO BA CSO Retention SO+1Y 10Y CY+6Y 4Y



# Chapter 5

# Legal & Other Requirements

# Purpose

To ensure that BA staff have access to legal and other requirements that are applicable to the BA operations.

# Scope

This Chapter defines the procedure for the access, review, evaluation and communication of current pertinent legislation and other requirements or commitments.

# Roles

(see Chapter 8: Structure and Responsibilities)

- BA EMS Committee
- BA CSO
- BA Staff
- Timber Sales Manager (TSM)

# Procedure

The TSM will:

- Ensure that BA staff has access to the current pertinent legislation.
- Determine and approve other requirements or commitments, such as Sustainable Forest Management polices and plans, that may apply to the BA,
- Communicate any other requirements or commitments to the relevant BA staff.

The BA EMS Committee will:



- Evaluate relevancy of legislation and other requirements to the activities and aspects of the BA and maintain this information within Table 004-3
- Review changes to legal and other requirements or commitments and evaluate the need for changes to EMS documents.
- Evaluate the requirements for further training of staff and licensees / permittees / contractors.

The BA CSO and/or relevant staff will:

- Monitor changes in legislation for relevancy to the BA activities
- Identify and record external controlled documents on the Document Control Matrix (see Chapter 11)
- Communicate changes to legal and other requirements or commitments and changes in EMS procedures to appropriate staff and licensees / permittees / contractors through inhouse communication, in-house training sessions as applicable and pre-work conferences.

# ISO 14001 Reference

#### Clause 4.3.2 Legal and other requirements

*The organization shall establish, implement and maintain a procedure(s)* 

- a. To identify and have access to the applicable legal requirements and other requirements to which the organization subscribes related to its environmental aspects, and
- b. To determine how these requirements apply to its environmental aspects

The organization shall ensure that these applicable legal requirements and other requirements to which the organization subscribes are taken into account in establishing, implementing and maintaining its environmental management system.

# **Related Documents**

• n/a

### Records

Name	Responsibility	Reten	tion
BA EMS Committee meeting minutes	BA CSO	SO	7Y



# Chapter 6 Objectives and Targets

# Purpose

To ensure that the BA establishes and maintains documented environmental objectives and targets consistent with its environmental policy.

# Scope

This Chapter provides the procedures for the development, approval, maintenance and review of the environmental objectives and targets of the EMS.

# Roles

(see Chapter 8: Structure and Responsibilities)

- BA CSO
- BA EMS Committee
- Timber Sales Manager (TSM)

### Procedure

The TSM will:

• Approve objectives and targets.

The BA CSO will:

• Maintain Objectives and Targets in the EMP Template (Table EMS 006-1) as approved by TSM.

The BA EMS Committee will:

• Establish Objectives in consideration of:



- significant environmental aspects,
- legal requirements,
- sustainable forest management plans (if applicable),
- technological options,
- financial, operational and strategic business requirements,
- views of interested parties and participating licensees / permittees / contractors, and
- continual improvement requirements.
- Ensure objectives are developed and reviewed annually and are consistent with the environmental policy and any direction from the TSM based on the results of the management review (Chapter 18).
- Develop and maintain measurable targets to meet the objectives.

# **ISO 14001 Reference**

#### Clause 4.3.3 Objectives, targets, and programme(s)

The organization shall establish and maintain documented environmental objectives and targets, at each relevant function and levels within the organization.

The objectives and targets shall be measurable, where practicable, and consistent with the environmental policy, including the commitments to prevention of pollution, to compliance with applicable legal requirements and with other requirements to which the organization subscribes, and to continual improvement

When establishing and reviewing its objectives and targets, an organization shall take into account the legal requirements and other requirements to which the organization subscribes, and its significant environmental aspects. It shall also consider its technological options, its financial, operational and business requirements, and the views of interested parties

### **Related Documents**

• EMP Template (Table EMS 006-1)

### Records

Name BA EMS Committee meeting minutes **Responsibility** BA CSO RetentionSO7Y



# Chapter 7 Environmental Management Program

# Purpose

To ensure that the BA establishes and maintains program(s) for achieving its objectives and targets consistent with the environmental policy.

# Scope

This Chapter identifies the procedures for the development of Environmental Management Programs, which ensure that the BA operations are consistent with:

- Objectives and targets established in the EMS.
- Available resources and time frames for achieving the objectives and targets.

### Roles

(See Chapter 8: Structure and Responsibilities)

- Timber Sales Manager (TSM)
- BA EMS Committee

### Procedure

The TSM will:

- Approve the environmental management programs.
- Implement the environmental management programs according to the plan.

The BA EMS Committee will:

• Develop environmental management programs (Table EMS 006-1) that encompass the BA objectives and targets, which describe:



- The action(s) required to achieve the target.
- Responsibility for achievement.
- Deadlines for completion.

# **ISO 14001 Reference**

#### Clause 4.3.3 Objectives, targets, and programme(s)

The organization shall establish and maintain a programme(s) for achieving its objectives and targets. Programme(s) shall include:

- a) designation of responsibility for achieving objectives and targets at relevant functions and levels of the organization and,
- *b) the means and time-frame by which they are to be achieved.*

# **Related Documents**

• EMP Template (Table EMS 006-1)

# Records

Name	Responsibility	Reter	ntion
BA EMS Committee meeting minutes	BA CSO	SO	7Y



# Chapter 8

# Structure and Responsibility

# Purpose

To ensure that the roles, responsibilities and authorities for the BA environmental management system (EMS) are defined, documented and communicated in order to facilitate effective environmental management performance.

# Scope

This Chapter provides the procedure for the designation of the responsibility for all EMS and SFMP roles within the BA, including BA staff, contractors and all participating BCTS licensees / permittees and their forest workers.

# Roles

• Timber Sales Manager (TSM)

# Procedure

The TSM will designate specific management representative(s) who, irrespective of other responsibilities, will have responsibilities and authority for:

- Ensuring that environmental management system requirements are established, implemented and maintained in accordance with the ISO 14001 Standard.
- Ensuring that the SFMP requirements are established, implemented and maintained in accordance with relevant standards.
- Reporting on the performance of the EMS to Senior Management (i.e.: the TSM and Operations Manager) for review and as a basis for continual improvement of the EMS.
- Documenting the assignment of roles and responsibilities.

The TSM will be responsible for providing resources necessary to ensure effective environmental management and implementation of the SFMP as relevant.



All supervisors and others with a role in the EMS and SFMP will communicate the roles and responsibilities to the people that report to them.

Participating licensees / permittees / contractors and their sub-contractors and BA staff will ensure that their operations conform to the EMS requirements for environmental field procedures and emergency response plans. They will ensure that their workers receive appropriate training according to Chapter 9 Training, Awareness, and Competence.

Roles and responsibilities for implementation, maintenance and reporting on the performance of the EMS and SFMP are defined in the various components of the relevant documents including:

- EMS Manual chapters
- Environmental Operating Procedures
- Environmental Field Procedures
- Emergency Preparedness and Response Manual
- Sustainable Forest Management Plan(s)

The reporting structure for the EMS and SFMP is illustrated in the BA EMS Organization Charts, Table 008-1. The roles and responsibilities for the EMS and SFMP are summarized in the Responsibility Matrix, Table 008-2. These documents are maintained by the TSM.

# ISO 14001 Reference

#### Clause 4.4.1 Resources, roles, responsibility and authority

Management shall ensure the availability of resources essential to establish, implement, maintain and improve the environmental management system. Resources include human resources and specialized skills, organizational infrastructure, technology and financial resources.

Roles, responsibilities and authorities shall be defined, documented and communicated in order to facilitate effective environmental management

The organizations top management shall appoint a specific management representative(s) who, irrespective of other responsibilities, shall have defined roles, responsibilities and authority for

- a. Ensuring that an environmental management system is established, implemented and maintained in accordance with the requirements of this International Standard,
- b. Reporting to top management on the performance of the environmental management system for review, including recommendations for improvement

# **Related Documents**

- BA EMS Organization Chart (Table 008-1)
- Key EMS Responsibilities (Table 008-2)



# Chapter 9

# Training, Awareness & Competence

# Purpose

To ensure that all personnel with responsibilities within the scope of the BA EMS have an appropriate level of understanding of the principles of their roles within the EMS and SFMP.

To deliver training to personnel based on their roles within the EMS.

To verify the competency of persons performing roles within the EMS.

# Scope

This Chapter provides the procedures for the development, assessment and maintenance of training needs and responsibility awareness. The EMS training program includes:

- Awareness of their responsibility in meeting the requirements of the EMS and of the potential impact of their work on the environment.
- Awareness of their responsibility in meeting the requirements of the SFMP(s).
- The skills and knowledge to competently fulfil their roles and to minimize the impact of BCTS operations and activities on the environment.

# Roles

(See Chapter 8: Structure and Responsibilities)

- BA CSO
- BA Staff
- Licensee / permittee / contractor

# Procedure



The BA CSO will:

- Maintain the BA Training Needs Matrix (Table 009-1)
- Maintain a set of EMS and SFM awareness training packages
- Assess EMS and SFM awareness training needs for BA staff and prepare a schedule of training.
- Ensure that district staff receives EMS and SFM awareness training appropriate to their position and the BA Training Needs Matrix.
- Maintain records of training.
- Provide access to EMS training information and materials to BCTS licensees / permittees / contractors.
- Monitor the effectiveness of the training programs.

BA Staff will:

- Require BCTS licensees / permittees / contractors to train their workers in the EMS materials and other relevant areas as may be required by environmental legislation and keep records of their training.
- Evaluate the competency of the licensees / permittees / contractors with regard to awareness of the potential environmental impacts of the tasks they perform.

The licensees / permittees / contractors will:

- Provide an appropriate level of EMS and SFM awareness training to their workers, and ensure that their workers meet the relevant training requirements of legislation.
- Maintain records of the training on Form EMS 009-001 or equivalent.

# ISO 14001 Reference

#### Clause 4.4.2 – Competence, training and awareness

The organization shall ensure that any person(s) performing tasks for it on its behalf that have the potential to cause a significant environmental impact(s) identified by the organization is (are) competent on the basis of appropriate education, training or experience, and shall retain associated records.

The organization shall identify training needs associated with its environmental aspects and its environmental management system. It shall provide training or take other action to meet these needs, and shall retain associated records.

*The organization shall establish, implement and maintain a procedure(s) to make person working for it or on its behalf aware of* 

- *a.* The importance of conformity with the environmental policy and procedures and with the requirements of the environmental management system,
- b. The significant environmental aspects and related actual or potential impacts associated with their work, and the environmental benefits of improved personal performance,
- *c.* Their roles and responsibilities in achieving conformity with the requirements of the environmental management system and,



d. The potential consequences of departure from specified procedures

# **Related Documents**

- EMS Training packages
- Table 009-01 (Training Matrix)
- Form EMS 009-001 (L/P/C/ Training Summary)

# Records

Name	Responsibility	Retention
<b>BA</b> Training Plan	<u>BA CSO</u>	SO+1Y 6Y
EMS Training	<u>BA CSO</u>	CY+4Y nil



# Chapter 10 Communication

# Purpose

To ensure that communication procedures are established and maintained which convey environmental expectations and performance regarding the EMS and SFMP.

# Scope

This Chapter provides the procedure and defines the responsibility for internal and external communication of environmental issues and SFMP issues and performance where applicable.

# Roles

(See Chapter 8: Structure and Responsibility)

- Licensees/Permittees/Contractors
- BA Staff
- BA CSO
- BA EMS Committee
- Timber Sales Manager

# Procedure

#### Internal Communication

Participating licensees / permittees / contractors on a day-to-day basis will communicate on environmental issues to BA staff and to their employees as required by Environmental Field Procedures (EFP).

The BA staff on a day-to-day basis will communicate:

- On environmental issues internally and to various licensees/permittees/contractors as required by Environmental Operating Procedures (EOP) (Chapter 12 Operational Control).
- On incidents of potential / alleged non-compliance and non-conformance to the BA CSO.



• Document and evaluate input from the general public and interested parties about the EMS environmental activities.

The BA EMS Committee will:

- Meet quarterly to review environmental performance and related issues.
- Provide advice to the BA CSO for the ongoing management of the EMS and SFMP.
- Communicate status of environmental management programs to the BA CSO, using Table 006-1.

The BA CSO will ensure:

- Communication of any change in the EMS Manual, SFMP and notable legislation to the Timber Sales Manager.
- Communication of changes to legal and other requirements or commitments and changes in EMS procedures and SFMP to appropriate staff and licensees / permittees / contractors through in-house communication, in-house training sessions as applicable, and pre-work conferences.

The Timber Sales Manager:

- Provide direction to the BA CSO for the ongoing maintenance of the EMS and SFMP
- Communicate the environmental policy and other relevant policies to all staff.

#### External Communication

The Timber Sales Manager will:

- Ensure that the environmental policy is made available to the public and interested parties.
- Where relevant, ensure that the SFM policy, the SFMP and annual reports on the progress of the SFMP are made available to the public and interested parties.

The BA CSO will:

- Respond in a timely manner, in an appropriate way, to all public inquiries about the EMS and relevant environmental activities.
- Ensure the complete list of aspects and the significance ranking procedure for the EMS is available in the EMS Manual that will be posted and maintained on the BA Internet sites.
- Where relevant, ensure that the SFMP and annual reports on the progress of the SFMP are posted and maintained on the BA Intranet sites.

# ISO 14001 Reference

#### Clause 4.4.3 Communication

With regard to its environmental aspects and environmental management system, the organization shall establish, implement and maintain a procedure(s) for

- a) internal communication amoung the various levels and functions of the organization;
- *b)* receiving, documenting and responding to relevant communication from external interested parties.



The organization shall decide whether to communicate externally about its significant environmental aspects, and shall document its decision. If the decision is to communicate, the organization shall establish and implement a method(s) for this external communication

# **Related Documents**

• n/a

# Records

Name	Responsibility	Retention
Documented public inquiries and written responses	BACSO	CY+6Y 4Y
Environmental Management Plan	BA CSO	CY+6Y 4Y



# Chapter 11 Document Control

# Purpose

To ensure that the BA establishes and maintains procedures for controlling documents of importance to the design, implementation and operation of the EMS and/or SFM.

### Scope

This Chapter provide defines controlled documents, their creation, maintenance and distribution.

# Roles

(See Chapter 8: Structure and Responsibility)

- BA CSO
- BA staff
- Timber Sales Manager (TSM)

# Procedure

#### **Defining Controlled Documents**

All documents that describe core elements of the EMS and/or the SFM, or which are necessary for the planning and execution of the EMS and/or SFM, shall be defined as controlled documents. These shall include at a minimum:

- the Environmental Policy and other relevant policies
- Procedures and other documented operational controls necessary to conform to the policy and to achieve the objectives and targets
- Procedures to monitor and measure operations and activities that can have significant impact on the environment
- Procedures to assess compliance with legal and other requirements
- External documents that govern activities within the EMS and/or SFM.



All controlled documents shall be identified on a Document Control Matrix.

### Creating and Approving Controlled Documents

Where a controlled document is created by BCTS, a Responsible Person for developing and approving each controlled document shall be defined and recorded on the Document Control Matrix. The document shall then be developed and / or revised as necessary until it is acceptable to the Responsible Person, who will then approve it. The effective date of approval of each document will be recorded on the Document Control Matrix and on the controlled document itself.

Where a controlled document originates externally, the person or agency responsible for developing and maintaining the document will be recorded on the Document Control Matrix. An external controlled document does not require approval by BCTS.

#### Maintaining Controlled Documents

All controlled documents will be subject to periodic review in one or more the following:

- Audits,
- Document reviews made following a change to a related or linked controlled document,
- Document reviews made following a change to legislation or other commitments of the company, and/or
- Management Review.

Where a need to revise a BCTS controlled document is identified, the Responsible Person for the document is informed. The document shall then be revised as necessary until it is acceptable to the Responsible Person, who will then approve it. The effective date of approval of each revised document will be recorded on the Document Control Matrix and on the controlled document itself.

#### Document Distribution

The most current version of all controlled documents shall exist in electronic form, and shall be made available to those who require them on the BA network and/or internet website.

The BA CSO will:

- Ensure the maintenance of the BA network and/or internet website.
- Retain obsolete documents in archives as per the requirements of the ministry Records Management Standards and Procedures.



BA staff may view the documents on the BA network and/or internet website and print copies of various portions for their use. Printed versions of the controlled documents are not official versions and are considered uncontrolled documents. The distribution of controlled documents shall be controlled to ensure that out-of-date or obsolete versions of these documents are removed from use. Holders of printed controlled documents must ensure that they are current and discard obsolete versions.

# ISO 14001-2004 Reference

The standards for EMS documentation and document control are in two sections of the ISO 14001 document:

#### Clause 4.4.4 Documentation

The environmental management system documentation shall include

- a. The environmental policy, objectives and targets,
- b. Description of the scope of the environmental management system,
- c. Description of the main elements of the environmental management system and their interaction, and reference to related documents,
- d. Documents, including records, required by this International Standard, and
- e. Documents, including records, determined by the organization to be necessary to ensure the effective planning, operation and control of processes that relate to its significant environmental aspects

#### Clause 4.4.5 Control of Documents

Documents required by the environmental management system and by this International Standard shall be controlled. Records are a special type of document and shall be controlled in accordance with the requirements given in 4.5.4.

*The organization shall establish, implement and maintain a procedure(s) to* 

- a. Approve documents for adequacy prior to issue,
- b. Review and update as necessary and re-approve documents,
- c. Ensure that changes and the current revision status of documents are identified,
- d. Ensure that relevant versions of applicable documents are available at points of use,
- e. Ensure that documents remain legible and readily available,
- f. Ensure that documents of external origin determined by the organization to be necessary for the planning and operation of the environmental management system are identified and their distribution controlled, and
- g. Prevent the unintended use of obsolete documents and apply suitable identification to them if they are retained for any purpose

# **Related Documents**

• Table 011-1, Document Control Matrix



# Records

Name

Responsibility

Retention



# Chapter 12 Operational Control

# Purpose

To ensure that operational control procedures are established and maintained for activities associated with the significant environmental aspects and in line with environmental policy and the objectives and targets and SFM requirements.

# Scope

This Chapter identifies operational controls for the EMS and provides the procedures for their development and maintenance.

# Roles

(See Chapter 8: Structure and Responsibility)

- BA CSO
- BA EMS Committee
- Timber Sales Manager (TSM)
- BA Staff
- Licensee / Permittee / Contractor

# Procedure

Operational controls for the EMS include:

- Environmental operating procedures (EOP) that provides direction to BCTS BA staff and licencees / permitees / contractors.
- Environmental field procedures (EFP) that provide direction to BCTS BA staff, licensees / permittees / contractors and their forest workers.
- Forms and checklists which are used by BCTS BA staff to monitor environmental performance.
- Emergency Response Manual and Plans.



The TSM will approve any new or revised controls, and will assign responsibility for tasks within the EOPs.

The BA CSO ensures that:

- All required operational controls are developed and maintained according to the requirements of this Manual.
- Operational controls are available to the respective staff, and licensees / permittees / contractors.

The BA EMS Committee will review and make recommendations on required new controls, and any new or revised controls submitted for review and approval.

The BA staff and participating licensees / permittees /contractors are responsible for implementing new or revised operational controls.

# ISO 14001 Reference

#### Clause 4.4.6 Operational Control

The organization shall identify and plan those operations that are associated with the identified significant environmental aspects consistent with its environmental policy, objectives and targets, in order to ensure that they are carried out under specified conditions, by

- *a. Establishing, implementing and maintaining a documented procedure(s) to control situations where their absence could lead to deviation from the environmental policy, objectives and targets, and*
- b. Stipulating the operating criteria in the procedure(s), and
- c. Establishing, implementing and maintaining procedures related to the identified significant environmental aspects of goods and services used by the organization and communicating applicable procedures and requirements to suppliers, including contractors

# **Related Documents**

• n/a



Chapter 13

# Emergency Preparedness and Response

# Purpose

To ensure that the BA establishes and maintains procedures to identify the potential for appropriate response to accidents and emergency situations, and for preventing and mitigating the environmental impacts that may be associated with them.

To ensure that staff and participating licensees/permittees/contractors are able to respond to accidents and emergency situations in an appropriate manner to minimize environmental damage.

# Scope

This Chapter provides the procedures for the development, maintenance, evaluation and approval of the Emergency Response Manual, and the development and maintenance of Emergency Response Plans.

# Roles

(See Chapter 8: Structure and Responsibilities)

- Timber Sales Manager (TSM)
- BA EMS Committee
- BA CSO
- Licensee / Permittee / Contractor

# Procedures

The Timber Sales Manager will:



- Approve the Emergency Response Manual.
- Ensure that staff are appropriately trained in emergency preparedness and response.

#### BA CSO will:

- Make available the Emergency Response Manual to staff
- Establish and maintain a template for Emergency Response Plans including relevant preparedness and response information for:
  - Fire preparedness and response
  - Erosion preparedness and response
  - Spill preparedness and response
  - Other emergency events as necessary.

#### BA EMS Committee:

- Periodically evaluates the efficacy of the Emergency Response Plans, including the results of ERP testing and incidents.
- Annually reviews the Emergency Response Manual to recommend appropriate improvements.

Participating Licensees / Permittees / Contractors will:

- Establish and maintain at the worksite an Emergency Response Plan consist with the requirements of the ERM.
- Conduct periodic tests of emergency preparedness; provide and maintain records for BA staff.
- Submit copies of reports of environmental incidents to BA staff.
- Ensure that all employees are appropriately trained in emergency preparedness and response.

# ISO 14001-2004 Reference

#### Clause 4.4.7 Emergency Preparedness and Response:

The organization shall establish, implement and maintain a procedure(s) to identify potential emergency situations and potential accidents that can have an impact(s) on the environment and how it will respond to them.

The organization shall respond to actual emergency situations and accidents and prevent or mitigate associated adverse environmental impacts.

The organization shall periodically review and, where necessary, revise its emergency preparedness and response procedures, in particular, after the occurrence of accidents or emergency situations.

The organization shall also periodically test such procedures where applicable.

# **Related Documents**

• Emergency Response Manual



• Emergency Response Plan Template

# Records

Name	Responsibility	Retention
Records of Emergency Response Plan testing	<u>CSO</u>	SO+1Y 6Y



# Chapter 14

## Monitoring and Measurement

## Purpose

To ensure that the BA maintains procedures for monitoring operations and activities for EMS and SFM requirements. Monitoring is a key activity to help ensure achievement of objectives and targets, and satisfy the environmental policy. It also provides the basis for determining if the EMS and SFMP are working appropriately, and the basis for securing continual improvement.

## Scope

This Chapter provides the procedures for the monitoring of conformance with environmental operating procedures (EOP), environmental field procedures (EFP), compliance with legal requirements and SFM plans, progress on completing environmental management programs, and achievement of EMS and SFM objectives and targets.

## Roles

(See Chapter 8: Structure and Responsibilities)

- Timber Sales Manager (TSM)
- BA Staff
- BA EMS Committee

## Procedure

## Monitoring of Legal Compliance and Conformance with Environmental Field Procedures

Licensees, Permitees and Contractors will monitor themselves by:

• Monitoring their activities for conformance with the requirements of the EMS and compliance to legal requirements. BA staff will ensure that the acceptance of this monitoring responsibility is acknowledged through signing of license, permit, or contract documents and pre-work forms.



BA staff will monitor Licensees / Permittees / Contractors, other BA staff and BCTS Operations by:

- Conducting inspections of BA licensees / permittees / contractors operations. Inspections are conducted at a frequency that reflects the potential risk of the project, as guided by the risk assessment framework. In the course of conducting inspections, assessing:
  - Compliance with relevant environmental legislation
  - Conformance with the operational plan / project plan, and
  - Conformance with the requirements of the EMS as appropriate depending on the phase of the project.
- Documenting potential non-compliance information resulting from these inspections on BA inspection forms (EMS checklists).

**Note:** Non-compliances of licensees or permittees can only be determined by statutory decision or prosecution. A non-compliance noted on an inspection form is only a potential non-compliance

- Documenting Licensees / Permittees / Contractors non-conformance information on BA inspection forms (EMS checklists).
- Assessing conformance with EOPs and other EMS requirements for those BA staff reporting to them.
- Tracking instances of potential non-compliance and/or significant non-conformance in a tracking system, where a significant non-conformance is one that:
  - cannot be resolved during the course of the inspection, and/or
  - resulted or could result in environmental impact related to the significant environmental aspects, and/or
  - where the information is relevant for performance monitoring purposes (e.g.: trending).
- Monitoring EMP, SFM, and other requirements to which it subscribes (as applicable).

BA EMS Committee will:

- Review the information in the compliance and conformance tracking system (e.g.: for trending, new or developing issues, etc.).
- Review compliance information provided by regulatory agencies (e.g.: MOE, C&E).
- Prepare recommendations for EMS improvements based on their review of compliance and conformance data prior to the annual Management Review.
- The BA EMS Committee will prepare a summary of:
  - The status of environmental management program implementation and performance measures related to the Objectives and Targets on Table 006-1 (EMP Progress Report);
  - Communicate status of environmental management program to the TSM at least annually, prior to the Management Review.

The TSM will, in the course of the Management Review, assess the compliance, conformance, EMP status, and performance monitoring information provided by the BA EMS Committee (see Chapter 18).



## ISO 14001 Reference

#### Clause 4.5.1 Monitoring and measurement

The organization shall establish, implement and maintain a procedure(s) to monitor and measure, on a regular basis, the key characteristics of its operation that can have a significant environmental impact. The procedure(s) shall include the documenting of information to monitor performance, applicable operational controls and conformity wit the organization's environmental objectives and targets.

The organization shall ensure that calibrated or verified monitoring and measurement equipment is used and maintained and shall retain associated records.

#### Clause 4.5.2 Evaluation of compliance

4.5.2.1 Consistent with its commitment to compliance, the organization shall establish, implement and maintain a procedure(s) for periodically evaluating compliance with applicable legal requirements.

The organization shall keep records of the results of the periodic evaluations.

4.5.2.2 The organization shall evaluate compliance with other requirements to which it subscribes. The organization may wish to combine this evaluation with the evaluation of legal compliance referred to in 4.5.2.1 or to establish a separate procedure(s)

The organization shall keep records of the results of the periodic evaluations.

## **Related Documents**

- EMS Checklists
- Table 006-1 (EMP Progress Report)



## Chapter 15

## Non-conformance and Corrective and Preventive Action

## Purpose

To ensure that the BA establishes and maintains procedures for handling and investigating noncompliance and non-conformance, taking action to mitigate any impacts and to initiate and complete corrective and preventive action.

## Scope

This Chapter provides procedures for the investigation, monitoring and reporting of noncompliance with legal requirements and non-conformance with Environmental Field Procedures and Environmental Operating Procedures.

## Roles

(See Chapter 8: Structure and Responsibility)

BA staff BA EMS Committee

## Procedure

#### BA staff will:

In relation to non-compliance with legal requirements and non-conformance with this EMS:

- Monitor activities in accordance with Chapter 14 Monitoring and Measurement.
- Investigate instances of non-compliance and/or non-conformance to determine the root cause. The investigation may entail discussions with the supervisor or other workers to determine the extent of the non-conformance.



• Provide direction regarding corrective actions (actions required to achieve conformance).

In relation to Incident Reports (EMS CHK 007) received from Licensees, Permitees or Contractors, or notification of an incident received from another source;

- The BA staff responsible will investigate the incident and determine if the root cause of the incident is the result of:
  - non-conformance with the EMS requirements,
  - a weakness or failure in the EMS procedures or guidance,
  - operator error,
  - an uncontrollable act, and
- Determine if there are any requirements to report the incident as a non-compliance to a regulatory agency. The BA staff will determine if corrective or preventive actions are required and will initiate the corrective/preventive action accordingly.
- Document actions, recommendations and deadline for completion in the EMS tracking system. Recommendations that involve revising the EMS must be passed to the TSM for consideration.
- Confirm that the corrective or preventive action has been taken before the deadline. Document follow up on the corrective and preventive action in the EMS tracking system.

#### **BA EMS Committee will:**

In relation to non-compliance with legal requirements and non-conformance with this EMS as tracked in the tracking system:

- Periodically review the compliance and conformance results.
- Identify repetitive or significant non-conformances and determine if further preventive and corrective action is required. Determining appropriate action requires considering the identified root causes, the pervasiveness and severity of non-conformance and documented input on corrective/preventive action taken (i.e. from licensees / permittees / contractors or BA staff).
- Document actions, recommendations and deadline for completion in the EMS tracking system. Recommendations that involve revising the EMS must be passed to the TSM for consideration.
- Track the completion of the corrective or preventive action. Document the completion of the corrective and preventive action in the EMS tracking system.
- Periodically review the effectiveness of corrective or preventive actions.

#### *In relation to conformance with the Environmental Management Program(s):*

- Assess achievement with the EMPs, including progress towards achievement of the Objectives and Targets, at least annually. If the targets or activities have not been completed or are not on track, and the objectives may not be met, determine the root cause by identifying the impediments to achievement of the Objectives and Targets.
- Document achievement of Objectives and Targets on the EMP Template (Table 006-1).



• Determine corrective or preventive actions to ensure achievement of the Objectives and Targets.

## **ISO 14001 Reference**

#### Clause 4.5.3 Nonconformity, corrective action and preventative action

The organization shall establish, implement and maintain a procedure(s) for dealing with actual and potential nonconformity(ies) and for taking corrective action and preventive action. The procedure(s) shall define requirements for

- a. Identifying and correcting nonconformity(ies) and taking action(s) to mitigate their environmental impacts,
- b. Investigating nonconformity(ies), determining their cause(s) and taking actions in order to avoid their recurrence,
- *c.* Evaluating the need for action(s) to prevent nonconformity(ies) and implementing appropriate actions designed to avoid their occurrence,
- d. Recording the results of corrective action(s) and preventive action(s) taken, and
- e. Reviewing the effectiveness of corrective action(s) and preventive action(s) taken

Actions taken shall be appropriate to the magnitude of the problems and the environmental impacts encountered.

The organization shall ensure that any necessary changes are made to environmental management system documentation.

## **Related Documents**

n/a

## Records

Name Incident Reports (EMS CHK 018) **Responsibility** BA CSO Retention



## Chapter 16 Records

## Purpose

To ensure that the BA identifies, maintains and disposes of all records generated by the EMS and SFMP from implementation of the procedures in the relevant documentation.

## Scope

This Chapter provides the procedure for the administration and control of all EMS and SFMP records.

## Roles

(See Chapter 8: Structure and Responsibility)

- Timber Sales Manager (TSM)
- Records Clerk
- BA CSO

### Procedure

A government-wide records management program is mandated and administered via policies, standards, and guidelines established by BC Information Management Services (BCIMS). The *Document Disposal Act* (administered by BCIMS) is the enabling legislation.

In the Ministry of Forests, records management is mandated by ministry policy. This policy delegates authority to the ministry Records Officer to administer the ministry records management program.

The BA CSO, in conjunction with the Records Clerk, will administer and control all EMS and SFMP records by:

• Developing a record matrix indicating the "record" to be kept, the source and the retention period.



- Implementing, maintaining and monitoring records management systems and operations according to government policy standards and procedures (see Ministry of Forests Records Management Standards and Procedures).
- Scheduling records identified as inactive for disposal according to the timetable applicable for each records classification. Records are disposed of under the *Document Disposal Act*.

The Timber Sales Managers will ensure that Records Clerks are assigned responsibility and are trained in records management.

The Records Clerks are responsible for:

- Receiving, sorting, filing, maintaining and disposing of correspondence and documents relating to the EMS and SFMP, in accordance with Ministry of Forests Records Management Standards and Procedures, within the Operational Records Classification System (ORCS/ARCS).
- Ensuring that records are readily retrievable and protected against damage, deterioration or loss.

## ISO 14001 Reference

#### Clause 4.5.4 Control of Records

The organization shall establish and maintain records as necessary to demonstrate conformity to the requirements of its environmental management system and of this International Standard, and the results achieved.

The organization shall establish, implement and maintain a procedure(s) for the identification, storage, protection, retrieval, retention and disposal of records

Records shall be and remain legible, identifiable and traceable.

## **Related Documents**

• Ministry of Forests Records Management Standards and Procedures.

## Records

Name	Responsibility	Retention
see Records Matrix	Records Clerk	Per matrix
Table 016-1		



## Chapter 17 Audit Program

## Purpose

To establish and maintain an audit program to determine whether or not the EMS and SFMP is being properly implemented and maintained, and is effective.

To provide information to the TSM on environmental performance of the EMS and the performance of the SFMP.

### Scope

Audit procedures for the EMS and SFMP apply to all activities and services of the BA.

### Roles

(See Chapter 8: Structure and Responsibility)

- Timber Sales Manager (TSM)
- BA CSO
- BA EMS Committee

### Procedure

#### Planning

The TSM will:

- Require the conduct of an annual internal audit of the EMS and SFMP.
- Allocate resources for the audit program.

The BA CSO will:

- Establish and maintain the BA Audit Program and Audit Protocol.
- Prepare an audit plan annually detailing the scope and schedule, and provide recommendations for budgets and adequate resources.



- Reviewing audit summaries, action plans and management reviews to implement changes to the EMS and SFMP
- Prepare summaries of audit reports and the status of action plans for management review.

#### Implementation

The BA CSO will:

- Select the audit team(s) and appoint the lead auditor(s). Staff may be auditors provided they audit EMS and SFMP components outside their direct responsibility. External personnel retained as auditors must be free from conflict as well.
- Schedule the audits and ensure that the purpose and scope of each audit is conveyed to the auditee(s).
- Ensure that the Audit Protocol is followed in the planning and execution of internal audits.
- Review draft and final audit report received from the lead auditor.
- Maintain audit records.
- Prepare summaries of audit reports along with the outcome of action plans for the BA EMS Committee.

#### Audit Report

The lead auditor through the BA CSO will:

• Produce a final audit report within four weeks of the exit meeting and submit to the Timber Sales Manager.

The BA CSO will:

- Prepare an audit action plan within four weeks of receiving the audit report and submit it to the Timber Sales Manager.
- Prepare summaries of audit reports and the outcome of action plans for management review.

The BA EMS Committee will:

- Review draft and final audit reports.
- Make recommendations to the BA CSO on changes to the EMS and SFMP.

#### Audit Action Plan

The BA EMS Committee will:

- Review final audit reports.
- Make recommendations to the BA CSO on changes to the EMS and other actions to be documented in an Audit Action Plan.

The Timber Sales Manager will:

• Implement the audit action plan.



The BA CSO will:

- Document the Audit Action Plan based on input from the BA EMS Committee and others as appropriate
- Monitor progress toward completion of audit action plans.
- Submit progress reports to the TSM bi-annually until all action plan items are completed

All staff and others assigned actions in an Audit Action Plan will:

• Prepare and submit action plan progress reports to the BA CSO bi-annually until all action plan items are completed.

## ISO 14001-2004 Reference

#### Clause 4.5.5 Internal Audit

The organization shall ensure that internal audits of the environmental management system are conducted at planned intervals to

- a. Determine whether the environmental management system
  - Conforms to planned arrangement for environmental management including the requirements of this International Standard, and
  - Has been properly implemented and is maintained, and
- b. Provide information on the results of audits to management

Audit programme(s) shall be planned, established, implemented and maintained by the organization, taking into consideration the environmental importance of the operation(s) concerned and the results of previous audits.

Audit procedure(s) shall be established, implemented and maintained that address

- The responsibilities and requirements for planning and conducting audits, reporting results and retaining associated records,
- The determination of audit criteria, scope, frequency and methods

Selection of auditors and conduct of audits shall ensure objectivity and the impartiality of the audit process.

## **Related Documents**

• Audit Protocol

#### Records

Name Audit Plan, reports, action plans Responsibility BA CSO Retention SO+1Y 10Y



## Chapter 18 Management Review

## Purpose

To ensure that a management review of the EMS and SFMP is conducted annually by Senior Management to ensure that:

- The EMS and SFMP continue to be suitable, effective and adequate.
- Appropriate direction and resources are provided
- The EMS will achieve continual improvement in environmental performance by the BA.

## Scope

A management review will be conducted annually, and will include an assessment of each of the EMS and SFMP elements as follows:

- Communications from external interested parties
- Suitability (given changing circumstances including legal and other requirements) of:
  - Policy
  - Environmental aspects
  - Objectives and targets
  - EMS audit program
- Progress on:
  - Environmental programs
  - Actions arising from previous management reviews
- Results of:
  - Monitoring and measurement
  - Non-conformance and corrective actions
  - Audits of the EMS and SFMP
- Adequacy of resources for the implementation and maintenance of the EMS

## Roles

(See Chapter 8: Structure and Responsibility)

- Senior Management (TSM and Operations Manager)
- BA EMS Committee



• BA CSO

## Procedure

Senior Management is responsible for:

- Meeting annually for the purpose of conducting an EMS and SFMP management review to ensure the ongoing suitability, adequacy and effectiveness of the EMS and SFMP.
- Reviewing the elements of the EMS and SFMP according to the scope of this procedure.
- Providing comments, recommendations and directions to the BA EMS committee for the ongoing implementation and continual improvement of the EMS and SFMP.
- Resolving concerns and issues that are brought up by relevant interested parties.
- Reviewing other relevant recommendations presented by the BA EMS Committee and/or Coordinator.

BA CSO is responsible for:

- Assembling information reports and analysis, as well as recommendations as appropriate, for the management review.
- Scheduling and preparing the agenda for the management review meeting.
- Ensuring that the discussion and any recommendations, actions and directions resulting from the management review were recorded.
- Communicating the results of the management review to the appropriate staff.

BA EMS Committee will:

• Convey issues and concerns to Senior Management and the BA CSO for possible resolution.

## ISO 14001-2004 Reference

#### Clause 4.6 Management Review

Top management shall review the organization's environmental management system, at planned intervals, to ensure its continuing suitability, adequacy and effectiveness. Reviews shall include assessing opportunities for improvement and the need for changes to the environmental management system, including the environmental policy and environmental objectives and targets. Records of the management reviews shall be retained.

Input to management reviews shall include:

- a. Results of internal audits and evaluations of compliance with legal requirements and with other requirements to which the organization subscribes,
- b. Communication(s) from external interested parties, including complaints,
- c. The environmental performance of the organization,
- d. The extent to which objectives and targets have been met,
- e. Status of corrective and preventive actions,
- f. Follow-up actions from previous management reviews,
- g. Changing circumstances, including developments in legal and other requirements related to its environmental aspects, and
- h. Recommendations for improvement



The outputs from management reviews shall include any decisions and actions related to possible changes to environmental policy, objectives, targets and other elements of the environmental management system, consistent with the commitment to continual improvement.

## **Related Documents**

• n/a

## Records

Name Management Review **Responsibility** CSO

**Retention** SO+1Y 10Y