

11 Template for an environmental management system manual according to ISO 14001:2004

The main goal of an environmental management system is to continuously improve the environmental aspects arising from a company's activities and to guarantee legal compliance. The system is documented in an environmental management system manual, which includes the environmental policy, the environmental objectives and the planning process. Furthermore it defines responsibilities and procedures for environmental protection.

This chapter deals with the cornerstone of ISO 14001:2004, the environmental management system and focuses on the following aspects:

- Internal organization of an environmental management system, e.g. definition of responsibilities and tasks at all management levels as well as control of processes with environmental impacts;
- Control, corrective and preventive measures;
- Environmental management system documentation.

Definition

The EMS manual describes the whole environmental management system of a company or organization including the procedures designed to implement the environmental programme of the organization or company.

11.1 Practical implementation

The structure of an EMS manual according to ISO 14001:2004 ideally follows the Plan-Do-Check-Act cycle.

This cycle reflects the structure, and also theoretically reflects the course of activities during the implementation of an environmental management system.

Only chapter II (General requirements) which summarizes the basic structure of the company and the content of the manual does not have a direct correspondence to this Plan-Do-Check-Act cycle.

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Chapters 1 to 5 of the EMS manual are divided into subchapters. The manual of a company should follow this structure.

X.X.1 Objective

In this subchapter the objectives of the respective element of the EMS manual are defined.

X.X.2 Scope

This subchapter highlights to which part of the company the procedures documented in the element are relevant.

X.X.3 Procedure and responsibility

The third subchapter is the main part of each element. Here the procedures to achieve the objectives are defined, and responsibilities and any additional documents are indicated.

This part comprises the following items:

- The element to be controlled;
- The procedures and tools;
- The assignment of responsibilities for these procedures at the different levels of management.

X.X.4 Additional documents

In the last subchapter of each element, documents required for the environmental management system are defined, such as:

- Work instructions and procedures;
- Legal register;
- Environmental register;
- Other environmentally relevant documents, such as:
 - Manuals for equipment and systems;
 - Emergency plans;
 - Material safety data sheets;
 - Organizational manual;
 - Job descriptions, organization charts;
 - Standards;
 - Emission threshold values;
 - Special literature.

In the following chapters the components of the manual are explained in further detail. At the end of each chapter those measures that have already been implemented during a cleaner production project based on the UNIDO Toolkit methodology are indicated.

11.1.1 General requirements

The introductory chapter of the manual provides basic information on the company and the manual in the following format:

- Introduction to the company;
- Authorities – responsibilities (environmental organization chart);
- Revision status of the environmental management system manual and date of last revision;
- Information for the user, contents of the environmental manual and structure of each chapter;
- A list of environmentally relevant documents;
- Terms and abbreviations.

 TOOLKIT	<ul style="list-style-type: none"> • The environmentally relevant documents (energy and material flows, hazardous materials, waste management concept) have been defined in the respective volumes of the UNIDO CP Toolkit.
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11.1.2 Chapter 1: Environmental policy

Requirements of the standard

"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 and services,*
- b) includes a commitment to continuous 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."*

Objectives

- Definition of an environmental policy;
- Authorization (assignment of responsibilities) and communication in the company.

Implementation

The environmental policy should be part of the company's overall policy. The management is responsible for its definition, updating and approval. In general all employees at all levels should be involved in the formulation of the environmental policy. As the environmental policy has been established during the CP project, the following passage summarizes only its essential contents. The environmental policy includes:

- Lines of action:
 - Fostering environmental awareness and responsibility of employees;
 - Information and training of employees;
 - Assessing the environmental aspects of products and processes;
 - Preventive action and minimization of environmental aspects;
 - Resource conservation;
 - Avoiding spills due to accidents;
 - Information to the general public;
 - Advice to customers regarding the environmental aspects of products;
- Compliance with all relevant environmental legislation;
- Commitment to continuous improvement of environmental aspects;
- Reduction of environmental aspects using best available technology where economically viable.

Once the environmental policy has been established it has to be approved by management and published.

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- Environmental policy defined during the cleaner production programme (Volume 2).

11.1.3 Chapter 2: Planning

11.1.3.1 Chapter 2.1: Environmental aspects

Requirements of the standard

"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.

The organization shall ensure that the significant environmental aspects are taken into account in establishing, implementing and maintaining its environmental management system."

Objectives

- Development of a procedure to audit, control and evaluate the relevant environmental aspects.

Implementation

This chapter deals with the following items:

- Identification of environmental aspects of current or relevant former activities, products and services. Examples of these aspects include:
 - Air emissions;
 - Effluents discharge;
 - Soil contamination;
 - Consumption of raw materials and natural resources;
 - Use of energy;
 - Noise emissions;
 - Physical aspects, such as size, form, colour and appearance;
 - Radiation;
 - Solid waste and by-products.

- Consideration of aspects which are connected to the company's products, services and activities, such as
 - Production processes;
 - Packaging and transport;
 - Environmental aspects and practices of suppliers and contractors;
 - Wildlife and biodiversity;
 - Sale, use and disposal of products which are no longer used;
- Introduction of criteria and procedures to identify relevant aspects;
- Documentation and filing of relevant environmental aspects.

For the identification and evaluation of environmental aspects the following has to be considered:

- Location of the activities;
- Costs and time required for the analysis;
- Availability of reliable data.

For the identification of environmental aspects data which was originally collected for other purposes can be used in order to save time and costs.

 TOOLKIT	<ul style="list-style-type: none"> • An input-output analysis has been carried out and documented in the Top 20 worksheets; • Worksheets for waste and emissions have been completed; • Toxic raw materials have been identified; • A material flow analysis and an energy analysis have been carried out.
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11.1.3.2 Chapter 2.2: Legal requirements and other requirements

Requirements of the standard

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

- a) to identify and access 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."

Objectives

The company has to establish a register of legal requirements, i.e. a procedure to identify, evaluate and update applicable legal requirements and requirements from interested stakeholders.

Implementation

Compliance with laws and regulations is a pre-requisite for a positive certification according to ISO 14001:2004. This involves the following steps:

- Identification of all applicable legal requirements including:
 - Legal requirements at the regional, national and international level;
 - All agreements with customers and authorities;
 - Environmental labelling of products;
 - Requirements from the Chamber of Commerce and industrial associations;
 - Requirements from standards;
 - Self-imposed obligations of the company or its owners;
 - Company-specific requirements, e.g. derived from the environmental policy;
- Appointment of a person responsible for environmental law.



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- No direct reference.

11.1.3.3 Chapter 2.3: Objectives, targets and programme(s)

Requirements of the standard

"The organization shall establish, implement and maintain documented environmental objectives and targets, at relevant functions and levels within the organization."

Objectives

- Definition of objectives and targets for each relevant organizational function and level considering environmental aspects, legal and other requirements as well as feasible options for improvement.

Implementation

Environmental objectives have to be consistent with the company's environmental policy to foster preventive environmental protection and to minimize negative environmental aspects. Relevant legal and other requirements, environmental aspects, technological options as well as financial, operational and social conditions of the company have to be taken into account. This chapter describes:

- Procedures and responsibilities for defining objectives and targets;
- Authorities;
- Procedures for updating the objectives.

The objectives and targets should be specific and measurable. They should consider short and long-term perspectives. Quantitative indicators support the control of a company's progress towards these objectives and targets.



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- The use of indicators has been described in Volume 7 and the environmental programme has been documented in the Cleaner production report (Volume 9).

11.1.4 Chapter 3: Implementation and operation

11.1.4.1 Chapter 3.1: Resources, roles, responsibility and authority

Requirements of the standard

"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 organization's 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."*

Objectives

- Ensuring the availability of the necessary resources in terms of staff, skills, technology and financial means;
- Defining responsibilities, tasks and authorities.

Implementation

Top management has to appoint a representative whose name has to be included in this chapter. His position has to be shown in an organization chart.

In addition the responsibilities and authority of this management representative have to be documented to:

- Ensure the implementation and maintenance of the environmental management system;
- Ensure that the performance, evaluation and necessary measures for improvement of the environmental management system are reported to the company's management.

Top management has to provide sufficient resources to guarantee the implementation and maintenance of the environmental management system.



TOOLKIT

- An environmental team has been set up and an environmental manager was appointed (see Volume 2);
- Responsibilities have been partly defined.

11.1.4.2 Chapter 3.2: Competence, training and awareness

Requirements of the standard

"The organization shall ensure that any person(s) performing tasks for it or 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."

Objectives

- Implementation of a procedure to systematically develop technical competencies;
- Identification of training needs, drawing up a training plan and creating awareness.

Implementation

Training, information and motivation of employees have to be carried out properly. Environmental activities can only be successful and lasting if employees from all parts of the company are included in the environmental system. The employees have to be trained and motivated to ensure that they are aware of the impact their work has on the environment. Therefore their training needs have to be identified in order to qualify them for work within the framework of the environmental management system.

Focused training guarantees that all processes with direct environmental impact are carried out by qualified personnel, thus reducing the risk of accidents and incidents.

 TOOLKIT	<ul style="list-style-type: none">• No direct reference.
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11.1.4.3 Chapter 3.3: Communication

Requirements of the standard

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

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

Objectives

- Installation of a system which ensures that the external and internal information flows function smoothly.

Implementation

The company has to:

- Define the responsibility for a communication concept and its implementation;
- Facilitate internal communication by using instruments such as:
 - Monthly/weekly team meetings;
 - Procedures;
 - Internal letters;
 - Reports.

For external communication the following stakeholders are relevant:

- Community/neighbours;
- Customers;
- Suppliers;
- Press and media;
- Authorities;
- Industrial associations, Chamber of Commerce;
- Banks, insurance companies and owners;
- Schools, universities and scientific institutions.

Possible instruments for a communication concept and its implementation are:

- Environmental reports of the entire company or for individual sites;
- Presentation of company-specific environmental activities in the business report;
- Publications in journals, studies, etc.;
- Information events for selected focus groups;
- Open days and company visits for other interested companies;
- Information and data for a technical audience;
- Presentations at seminars and congresses;
- Measures for the motivation of employees.

 TOOLKIT	<ul style="list-style-type: none"> • Some measures have been implemented (Volume 2: Providing information for relevant stakeholders).
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11.1.4.4 Chapter 3.4: Documentation

Requirements of the standard

"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."*

Objectives

- Introducing a documentation system which complies with the requirements of the standard (manual, procedures).

Implementation

The environmental management system documentation comprises:

- Description of the environmental management system and the interaction of its elements;
- Conventions on policy, objectives and targets;
- Information on significant environmental aspects;
- Information on processes;
- Organization chart;
- Internal and external standards;
- Emergency plans for the site.

The following criteria apply to the documentation:

- Impacts of a decision on the environment have to be clearly defined;
- Necessity to demonstrate compliance with legal requirements and other obligations;

Necessity to demonstrate that a procedure has been implemented;

Benefits of proper documentation are:

- Easier definition of training needs due to detailed description of processes and procedures;
- Easier maintenance and revision;
- Reduced risks because of clear wording;
- Easier proof and explanation.

 TOOLKIT	<ul style="list-style-type: none"> • The Cleaner production report (Volume 9) has already documented some management system elements (environmental policy, environmental manager, environmental team)
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11.1.4.5 Chapter 3.5: Control of documents

Requirements of the standard

"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 identifiable,*
- 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.”*

Objectives

- Definition of a procedure to control collection, identification, registration, storage and retrieval of environmental documents and to ensure clear and comprehensible documentation of all environmentally relevant procedures.

Implementation

This chapter deals with the production, review, release, updating and withdrawal of documents.

The documents have to be clearly identified. It is especially important to indicate the revision status to ensure that only the most recent documents are used, e.g. by revision numbers and revision lists.

A list of all persons who receive documents as well as a list of all versions have to be kept to ensure permanent updating.

The responsibility for the production and release of documents has to be defined (environmental manager, process manager, etc.)

At the same time the system documentation should not be too complicated. If possible electronic data processing and electronic means of communication should be used.

**TOOLKIT**

- No corresponding measures during the cleaner production programme.

11.1.4.6 Chapter 3.6: Operational control

Requirements of the standard

"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."*

Objectives

- Exact control of processes with environmental impacts;
- Identification of necessary measurements and indicators;

Implementation

This chapter comprises descriptions of regulations for processes which have a relevant impact on the environment and can be controlled by the company. Practically speaking, this includes areas such as:

- Ecological procurement;
- Storage of materials and especially hazardous materials;
- Maintenance;
- Operation of environmentally relevant plants;
- Waste management;
- Water and waste water management;
- Energy management.



TOOLKIT

- A basis for operational control has been developed during the identification of environmentally relevant areas of the company (Volume 1) and all the relevant emissions have been identified and quantified (Volumes 3 and 4).

11.1.4.7 Chapter 3.7: Emergency preparedness and response

Requirements of the standard

"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 practicable."

Objectives

- Implementation of a procedure to identify and check potential environmentally relevant accidents and emergency situations and to introduce preventive measures.

Implementation

For all activities and areas where emergency situations and accidents can occur, appropriate procedures have to be defined. In many companies risk managers, fire fighters or similar persons are in charge of these procedures.

For the use of hazardous materials and for the prevention of accidents individual procedures have to be written.

Manuals for plants and machinery typically include chapters on reaction to accidents and emergency situations.

The standard approach in the development of procedures to prevent risks and minimize danger is:

- Identification of the danger (e.g. flammable liquids, storage tanks and compressed gases);
- Identification of the most likely emergency situation or accident and the potential damage;
- Identification of suitable methods and measures to react to an accident or an emergency situation;
- Identification of the necessary measures to minimize the environmental impact;
- Establishing plans to facilitate communication in emergency situations;
- Periodical check of the reaction of the organization in emergency situations;
- Training of persons who are in charge during emergency situations;
- Compilation of a list of responsible persons and emergency services including their telephone numbers (fire brigade, cleanup services);
- Identification of evacuation routes and collection points and drawing up of a fire safety plan;
- Compilation of a checklist with potential partners for emergency help during accidents and similar situations.

 TOOLKIT	<ul style="list-style-type: none"> • A list of hazardous materials has been compiled and environmental risks have been considered during the identification of priority areas (Volume 6).
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11.1.5 Chapter 4: Checking

11.1.5.1 Chapter 4.1: Monitoring and measurement

Requirements of the standard

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

Objectives

- Introducing a procedure to measure and control environmentally relevant aspects;
- Documenting the corresponding objectives and targets.

Implementation

Besides site-specific threshold values for concentrations and loads of pollutants, the authorities usually include procedures and standards for measuring and monitoring these values in their permits.

In addition, all the necessary process parameters have to be measured which are critical for evaluating whether the objectives of the environmental programme have been met.

Depending on the size and nature of the company, foremen or middle level management are responsible for measurements and monitoring.

Measurements which are not automatically documented have to be registered in journals. Usually this is the operators' responsibility. These duties have to be documented in the relevant job descriptions and work instructions.

A checklist for inspection of equipment has to be kept which includes the following parameters:

- Emission parameters;
- Location of sampling;
- Equipment to be used;
- Storage of the equipment;
- Corresponding standard for sampling and analysis;
- Frequency of measurements;
- Reference to the authorities;
- Responsibilities.



- The results of environmentally relevant measurements (regarding gaseous emissions and wastewater) have been partly documented in the Cleaner production report (Volume 9).

11.1.5.2 Chapter 4.2: Evaluation of compliance

Requirements of the standard

"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."

Objectives

- Implementation of a procedure for monitoring compliance with all relevant laws, regulations and legal obligations which were identified in chapter 2.2 of the standard ("Legal and other requirements");
- Documentation of compliance audits.

Implementation

The responsibility for the implementation of this procedure has to be defined (typically a member of senior management).

A regular compliance audit needs to be carried out.

The legal obligations have to be documented in an environmental register, including actual compliance with the requirements and permits and required action for compliance (e. g. nature and frequency of measurements, testing requirements for equipment such as doors, cranes, pressure vessels, etc.).



- No corresponding measures during the cleaner production programme.

11.1.5.3 Chapter 4.3: Nonconformity, corrective action and preventive action

Requirements of the standard

"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 the environmental management system documentation."

Objectives

- Implementing a procedure for identifying proper measures in case the company does not meet the objectives and targets;
- Implementing corrective and preventive measures;
- Introducing a procedure for documenting gaps and corrective measures.

Implementation

The company has to document procedures designed to cope with deviations from the targets and the environmental programme. The following elements have to be considered in this process:

- Collection and analysis of reports on gaps;
- Identification of the reasons for the gap;
- Corrective measures resulting from audits or reports from employees;
- Definition, decision and implementation of corrective measures;
- Checking the effectiveness and actual implementation of the measures defined;
- Defining the improvement of monitoring measures;
- Documentation of measures and their changes.

Procedures for corrective action also have to describe the effective handling of:

- Complaints from customers and other stakeholders;
- Legal requirements and requirements from the authorities in general;
- Reports on mistakes that have occurred in system processes and in the company as a whole and which have impacts on the environment.

 TOOLKIT	<ul style="list-style-type: none">• Some basic activities have been implemented during the in-plant assessment (see Volume 7 – Worksheets 7-1 and 7-2 for the definition of indicators for an environmental management system).
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11.1.5.4 Chapter 4.4: Control of records

Requirements of the standard

"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."

Objectives

- The company has to ensure that all the records which are used within the company:
 - Can be clearly identified;
 - Are up to date;
 - Are used for checking the effectiveness of the system and as a basis for audits and management reviews.

Implementation

Environmentally relevant records can include:

- Records of complaints;
- Documentation of training;
- Records from process control;
- Records from inspection, maintenance and calibration;

- Records on customers and suppliers;
- Reports on accidents and incidents;
- Reports on emergency drills;
- Audit results;
- Results of the management review;
- Decisions regarding external communication;
- Records on legal requirements;
- Documents of relevant environmental aspects;
- Information on environmental measures;
- Records on legal compliance.

 TOOLKIT	<ul style="list-style-type: none"> • Documentation of the environmental programme; • Input-output data in the IPA report; • Data describing waste and emissions; • Results of the environmental impact assessment and environmental measures.
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11.1.5.5 Chapter 4.5: Internal audit

Requirements of the standard

"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*
 - 1. conforms to planned arrangements for environmental management including the requirements of this International Standard, and*
 - 2. has been properly implemented and is maintained."*

Objectives

- Developing a procedure and a programme for internal audits and for the systematic preparation and documentation of the certification audit.

Implementation

The initial review and the system audit are instruments used by management and include a systematically documented, regular and objective evaluation of the performance of the company, the management and the processes.

Rules and responsibilities for audits have to be defined.

The procedure for an audit has to cover the following elements:

- Goals;
- Scope;
- Organization and resources;
- Planning and preparation;
- Activities during the audit;
- Report on conclusions, follow-up measures and frequency.

Audits can be performed by qualified internal auditors or by external auditors.

The internal audit team should consist of employees from different departments of the company to ensure the objectivity of the audit process. Auditors cannot audit their own department. ISO 14001 additionally requires that personnel conducting EMS tasks have received appropriate training and that their awareness and competences are consistent with the level of complexity of their function.

Beyond that, their skills should include:

- Enthusiasm (make membership voluntary where possible);
- Attention to detail;
- Ability to act independently;
- Ability to make decisions and stick to them.



TOOLKIT

- No corresponding measures during the cleaner production programme.

11.1.6 Chapter 5: Management review

Requirements of the standard

"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 of the environmental management system, including the environmental policy and environmental objectives and targets. Records of the management reviews shall be retained."

Objectives

- Ensuring a regular management review of the system;
- Defining a procedure to guarantee continuous improvement.

Implementation

Regular monitoring and evaluation of the environmental management system guarantees the improvement of the company's environmental performance.

Responsibilities are defined for:

- Individual management levels including the evaluation of the corresponding elements of the environmental management system;
- The board of directors, who has to analyse the environmental policy and the environmental objectives.

It is not necessary to evaluate all the elements of an environmental management system at the same time. At the end of the evaluation procedure a report has to be prepared by the environmental management representative including observations, conclusions, recommendations and a list of necessary measures. For the preparation of the report the following documents are used:

- Results of internal audits;
- Reports, analyses and minutes;
- Analyses and evaluations from the initial review;
- Results of external audits
- Documented advice and complaints by customers, authorities, neighbours and other interested stakeholders;
- Ideas from employees' proposals;
- Minutes, decisions on corrective and preventive measures including a progress evaluation.



TOOLKIT

- No corresponding measures during the cleaner production programme.