Basic
Environmental Management System (EMS) Template

Revision 2.0 (March 2002)

The italicized text below provides some introductory information. After reading this Introduction & User Guide, delete all of the italicized text. The definitions and table of contents that follow this text form the beginnings of your industry- or organization-specific EMS template.

Introduction & User Guide

This EMS Template has been assembled from the best and most recent guidance, examples, tools, and forms included in several U.S. Environmental Protection Agency (EPA)-sponsored EMS source documents (see annotated list at the end of the introduction). The template is designed to provide a good starting point for how you might develop a template to support your association members or organizations as they move forward with facility-specific EMS planning and implementation. Most facilities have components of an EMS already in place. Therefore, this template encourages the user to identify and build on existing components whenever possible.

This template describes an EMS that is based on the elements of the ISO 14001 standard and also incorporates EPA's National Environmental Performance Track emphasis on sustained compliance, pollution prevention, and information sharing with the community. Though there are other types of EMSs that one could adopt, and EPA does not specifically endorse any individual EMS standard, the ISO 14001 EMS is the one most widely recognized across the world and one that many companies are beginning to require their suppliers to adopt. Therefore, moving in the direction of implementation and maintenance of an EMS based on the ISO 14001 standard may be a wise business decision. The choice to build an EMS that, if desired, could be certified sometime in the future, may make sense for you based on your business goals and needs. Facilities implementing an EMS which meets the requirements of the ISO 14001 standard can either self-declare conformance or seek third-party registration.

To facilitate your implementation process, this template contains eighteen modules. These modules are grouped into four activities that correspond generally to the plan-do-check-act model that most management systems follow:

- *Laying the groundwork & obtaining top management commitment;*
- *Developing policy and planning elements;*
- *Developing implementation elements; and*
- *Developing corrective and preventive action, management review, and continual improvement elements.*

There is logical sequence in working through the modules in their numbered order for the first two activities. Once an initial round of EMS planning is complete, the modules in the second two activities can be approached in a somewhat parallel fashion.

There are four different types of material provided in the modules of this EMS template. Definitions of each are provided below:

- ***Guidance***. *Guidance refers to information that describes what an EMS element represents and what you will need to develop and maintain to fully satisfy EPA's definition of a complete EMS.*
- ***Tools***. *Tools refer to worksheets or questionnaires that assist you in thinking through how to create a particular EMS element efficiently and comprehensively. Sample procedures that you can adopt for your own EMS are also considered tools.*
- ***Forms***. *Forms are different from tools in that they can actually become part of your documented system, for instance serving as records for information that might be measured, monitored, audited, or reviewed by top management.*
- ***Examples***. *These are examples of how one might use a tool or complete a form.*

Reviewers and users should note that Version 2.0 of this template represents a working document and may be refined based on input from representatives of EPA, trade associations, and individual facilities.

Brief descriptions of the EPA-sponsored EMS source documents used to develop this guide are provided below. Most of these documents are provided on the EMS Pathfinder; you also obtain these documents from EPA.

- *Integrated Environmental Management Systems Implementation Guide, EPA, Office of Pollution Prevention and Toxics, EPA 744-R-00-011, October 2000. This document represents efforts by EPA to show how Design for the Environment (DfE) technical work can be used to support the development of an EMS. It unites the EMS plan-do-check-act model with DfE approaches such as the EPA Cleaner Technologies Substitutes Assessment Methodology. It contains useful EMS guidance, tools, forms, and examples and has material especially relevant to facilities with intensive chemical use.*
- *Integrated Environmental Management Systems, A Company Manual Template for Small Business, EPA, Office of Pollution Prevention and Toxics, EPA 744-R-00-012, December 2000. This document represents an EMS template, including cover page, table of contents, and complete documentation, for a fictional corporation. It contains procedures and associated forms for an EMS that is designed according to the principles of the Integrated Environmental Management System implementation guide (see above).*

- *Environmental Management Systems: An Implementation Guide for Small and Medium-Sized Organizations, NSF International, Second Edition, January, 2001. This document, supported with funding from the EPA Office of Water, explains EMS concepts, using the ISO 14001 standard guidance, tools, forms and examples that are broadly applicable to many different types of businesses.*
- *Implementation Guide For The Code of Environmental Management Principles for Federal Agencies (CEMP), EPA, Office of Enforcement and Compliance Assurance, EPA 315-B-97-001, March 1997. This document helps federal agencies move toward responsible and proactive environmental management. It describes five broad principles that are meant to foster environmental performance objectives that are proactive, flexible, cost-effective, integrated, and sustainable.*
- *Environmental Management Review (EMR) National Report: Lessons Learned in Conducting EMRs at Federal Facilities, EPA, Office of Enforcement and Compliance Assurance, EPA 315-R-99-003, November 1999. This document presents lessons learned by EPA from its review of individual facility environmental protection programs and management systems. This program is intended to ensure compliance and progress towards environmental excellence. Supplementary EMR Checklists are also included with this document.*
- *The EPA Environmental Management System Pilot Program for Local Government Entities, Prepared by Global Environment & Technology Foundation, Assistance Agreement No. X 825557-01-0, January 2000. This document represents a final report to EPA on a multi-year pilot program to implement EMS for local government entities. It presents lessons learned and examples that can be useful to businesses and other organizations.*
- *Improving Environmental Performance and Compliance, 10 Elements of Effective Environmental Management Systems, Guidance Document, Enforcement Cooperation Program of the Commission for Environmental Cooperation, June 2000. This document sets out what the three North American governments have agreed is important to address in implementing an EMS. It is intended to assist EMS users in making responsible decisions and taking actions to achieve better environmental performance by maintaining and moving beyond compliance with environmental laws. It provides a list of ten elements to ensure that what needs to be done is being done to meet environmental goals. It is intended as guidance for those organizations in the public and private sectors that seek to apply EMS in a way that will work effectively and build better relationships with customers, suppliers, lenders, investors, the local community, and the government.*
- *Environmental Management Systems Implementation Guide for the Shipbuiding and Ship Repair Industry (Version 3.0, November 2001), This document draws on various of the above documents, input from shipbuilding and repair representatives and consultants, and EPA experience with this sector, to provide an EMS template for this sector. The template includes specific examples and case studies that address the needs of this industry. During calendar year 2002, a pilot implementation project is being conducted by the Sustainable Industries Partnership Programs Division of the EPA Office of Policy Economics and Innovation. This pilot project will use the template combined with some technical assistance provided by EPA to support 10 volunteer facilities as they implement an EMS for one of their facilities.*

Table of Contents

Table of Contents
Definitions

Laying the Groundwork

Module 1: Laying the Groundwork & Obtaining Top Management Commitment

EMS Policy and Planning

Module 2: Environmental Policy
Module 3: Environmental Aspects
Module 4: Legal and Other Requirements
Module 5: Objectives and Targets
Module 6: Environmental Management Programs

EMS Implementation

Module 7: Structure and Responsibility
Module 8: Training, Awareness, and Competence
Module 9: Communication
Module 10: EMS Documentation
Module 11: Document Control
Module 12: Operational Control
Module 13: Emergency Preparedness and Response

EMS Corrective and Preventive Action, Management Review, and Continuous Improvement

Module 14: Monitoring and Measurement
Module 15: Nonconformance and Corrective and Preventive Action
Module 16: Records
Module 17: EMS Audits
Module 18: Management Review

Definitions

Alternatives evaluation: Process by which alternative methods for completing a particular function are evaluated using business and environmental criteria.

Cross functional team (CFT): Members of an organization who are responsible for representing their area or department in several facets of the EMS, e.g., establishing environmental aspects, determining significant aspects, setting objectives and targets, implementing environmental management programs, reviewing and tracking EMS internal audits results, and serving as an information resource. The CFT meets to discuss the EMS on a regular basis.

Document: Written communication that presents an organization's policy, procedures, and requirements. Documents describe the EMS, provide a basis for auditing, provide continuity of the EMS and its requirements during changing circumstances, support training of personnel in EMS requirements, present the EMS for external purposes, demonstrate the conformance of the EMS in contractual situations, and allow improvement in the control of practices and environmental management activities.

EMS coordinator: A member of the organization whose responsibility is to identify, assign, schedule, provide the necessary support for, and ensure completion of all tasks relating to the EMS. The coordinator works closely with the EMR and with the CFT. The EMS coordinator is also responsible for maintaining this manual, under the leadership of the management representative. It is possible for the functions of EMS coordinator and EMR to be performed by the same person.

Environmental aspect: An element of a company's activities, products, or services that can or does interact with the environment (create an environmental impact).

Environmental impact: Any change to the environment, whether adverse or beneficial, resulting from a company's activities, products, or services.

Environmental management program (EMP): Action plan necessary to achieve the objectives and targets.

Environmental management representative (EMR): Member of the organization's top management group who is responsible for the functioning of the EMS. An EMR ensures that all tasks relating to the EMS are identified and completed in a timely manner. An EMR is responsible for reporting periodically to the top plant management group on the progress and results of the EMS.

Non-conformity: Discrepancy between a company's actual EMS activities and the procedures laid out in their EMS manual and associated documentation (that is, where the actual activities do not follow the procedures).

Objective: Overall environmental goal, arising from the environmental policy, that an organization sets itself to achieve, and which is quantified where practicable.

Outcome measure: Key monitoring and measurement characteristics associated with results, i.e. by-products or environmental-impacting outputs, of a process or activity, such as amount of waste generated (per unit of production) or the number of spill occurrences (per unit of time).

Performance indicator: Measurement criteria that allow an organization to evaluate the success of the overall EMS program (as opposed to measurement criteria developed for evaluating progress toward individual objectives).

Process measure: Key monitoring and measurement characteristics associated with "upstream" factors of a process or activity, such as the amount of paint used per unit of product or percent of employees trained on a topic related to environmental improvement.

Record: Written evidence established and maintained to track performance of an EMS and to demonstrate conformance with EMS requirements.

Root cause analysis: Systematic process to uncover underlying causes of a particular issue or problem. If a drum is not labeled, you would ask what happened that resulted in the unlabeled drum (for example, a new employee did not know the procedure, which would indicate that entry training might be a root cause of the issue).

Significant environmental aspect (SEA): An environmental aspect deemed by a company as having, or potentially having, a significant impact on the environment.

Stakeholder: Anyone who has a stake in your company's environmental performance. Internal stakeholders may include employees, shareholders, customers, suppliers, investors and insurers. External stakeholders may include neighbors, community organizations, environmental groups, larger companies, the media, and the general public.

Target: Detailed performance requirement, quantified where practicable, applicable to the organization or parts thereof, that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives.