



EPA New England McCormack Building Boston, MA



Environmental Management System Manual

Revision #1

Revised: August 26, 2011

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NOTE: This EMS manual has been organized to reflect the general elements and principles of the ISO 14001:2004 standard. As such, the numbering scheme of the sections in this manual was designed to match the corresponding number of the related clause in the standard.

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4.1 GENERAL REQUIREMENTS

4.1.1 - Purpose

The purpose of this manual is to describe the overarching policies, procedures, management systems and programs that compose the framework for the U.S. EPA New England McCormack building environmental management system (EMS). Supporting documents, such as EMS implementing procedures and Environmental Management Programs (EMPs), are briefly described and referenced by this manual.

4.1.2 - Scope of EMS

Every organization has its own goals that stem from the vision and aspirations of its leaders. These may span the gamut from client service to social service to national defense goals. The possibilities can be virtually limitless. An EMS takes this as a fact, as a pre-existing condition from which the awareness and desire to be environmentally responsible emerge. That desire itself becomes an organizational goal when it is transformed into a commitment. This commitment must be specifically expressed in a written environmental policy when the organization decides to implement an EMS.

EPA Region 1's EMS presently covers the activities at the Boston, Massachusetts McCormack facility. More specifically, the EMS covers all operations occurring on site and within the property boundaries at the McCormack building.

4.1.3 - Background of EMS

Formal Environmental Management Systems (EMS) emerged in the early 1990s to provide organizations with a proactive, systematic approach for managing the potential environmental consequences of their operations. Such systems have been widely adopted by industry and government and have been effective at improving regulatory compliance and environmental performance.

In April 2000, President Clinton signed Executive Order (E.O.) 13148, "Greening the Government through Leadership in Environmental Management" that established a 5-year EMS implementation goal for all Federal Facilities. President Bush and the current administration have supported this position, as evidenced by EO 13423 "*Strengthening Federal Environmental, Energy, and Transportation Management*" which superceded EO 13148 and strengthened the administration's commitment to using EMS as a means to manage risks and impacts to the environment across all Federal agencies. In October 2009 President Obama signed EO 13514 "Federal Leadership in Environmental, Energy, and Economic Performance," which further expanded on the energy reduction and environmental performance requirements for Federal agencies. The U.S. Environmental Protection Agency (EPA), as the principle steward for the environment, has taken a leadership position by developing an EMS implementation initiative.

4.1.4 - EMS Framework

Although several recognized EMS frameworks exist, most are based on the current International Organization for Standardization's ISO 14001:2004 EMS standard. As a result, ISO 14001 is the framework on which organizations most frequently choose to base their EMS, and this is proving to be the case with U.S. federal facilities.

ISO management systems traditionally utilize the Plan-Do-Check-Act (PDCA) process to incorporate a continual improvement process. The PDCA cycle is an ongoing process, with the complete cycle repeated on a periodic basis. The McCormack building has incorporated the PDCA process in the development, implementation and maintenance of its EMS. The components of this process are described below:

Phase 1: Planning

The organization identifies how its operations might harm the environment, and develops methods to reduce this harm.

Phase 2: Doing

The organization implements these methods to reduce harm and operates them for a designated time period.

Phase 3: Checking

The organization assesses whether the methods that it is operating to reduce environmental harm and ensure regulatory compliance are proving to be effective.

Phase 4: Acting

The organization determines what changes are necessary based on the performance assessment of the methods (see Phase 3) designed to reduce environmental harm.

The findings of Phase 4 may indicate that adjustments to methods already in place are necessary or that entirely new methods are needed to achieve established environmental objectives. Output from this phase is fed back into Phase 1 Planning to make necessary changes and additions designed to bring the EMS to the desired level of effectiveness. This system feedback propels the continual improvement of the EMS.

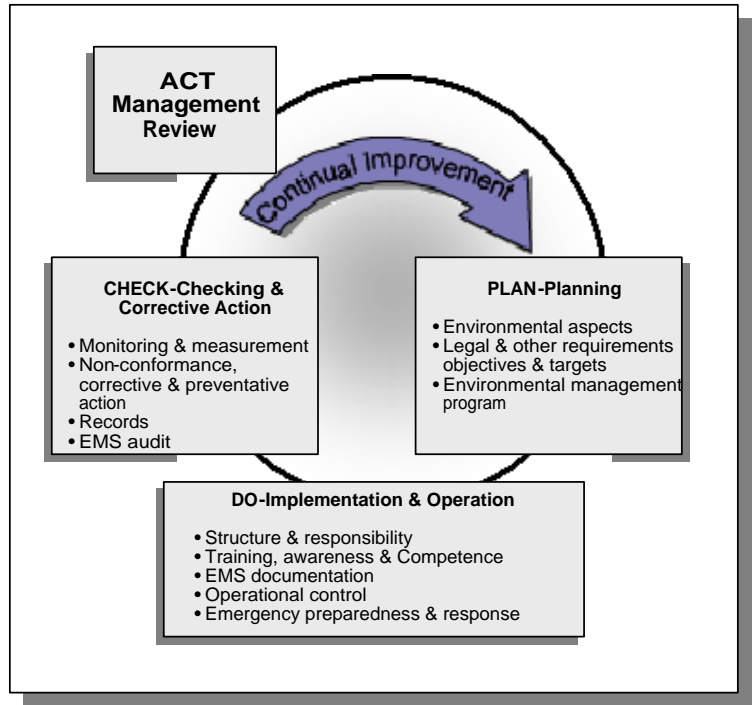


Figure 1: ISO 14001 EMS Model

The EMS continually moves through this cycle, fine-tuning its management of those areas of the organization’s operations that may harm the environment and/or present a risk to the organization. This “continual improvement cycle” is a core tenet of the EMS; it allows the system to adapt to the dynamic nature of the organization’s operations and needs.

4.1.5 - Organizational Profile

General

Organization name: EPA New England McCormack building
 Address: 5 Post Office Square – Suite 100
 Boston, MA 02109-3912
 Phone number: (617) 918-1064
 Fax number: (617) 918-0064
 E mail: Kaufman.alice@epa.gov
 Home page: www.epa.gov/region1

Incorporation, Ownership, Decision Makers and Users

Type: Not-For-Profit – Federal Government

Countries in which EPA New England McCormack building operates: United States

Organizational Directors:

Name	Position
Fred Weeks	Acting Director, OARM
Ed Woo	Acting Deputy Director, OARM

Executive Decision Makers:

Name	Position
Fred Weeks	Acting Director, OARM
Ed Woo	Acting Deputy Director, OARM
Alice Kaufman	Manager, Operations

Other Stakeholders:

Name
SEPA Headquarters
GSA
State Environmental Agencies
Residents / Citizens of New England

Nature of Business

Type:

Federal Government Agency

Primary activities:

Serve as New England Regional headquarters for environmental compliance and regulatory controls.

Operations

Production:

Purchasing:

The facility purchases office, field equipment to perform day-to-day functions. General office supplies, energy and fuel are purchased to perform office duties. EPA Region 1 also purchases recycled / post consumer goods.

Industry

Nature of the industry:

Federal Government Agency

Position within industry:

EPA Region 1 is one of ten Regional offices nationally and services the Boston Regional office.

Governments / regulatory bodies affecting organization's operations:

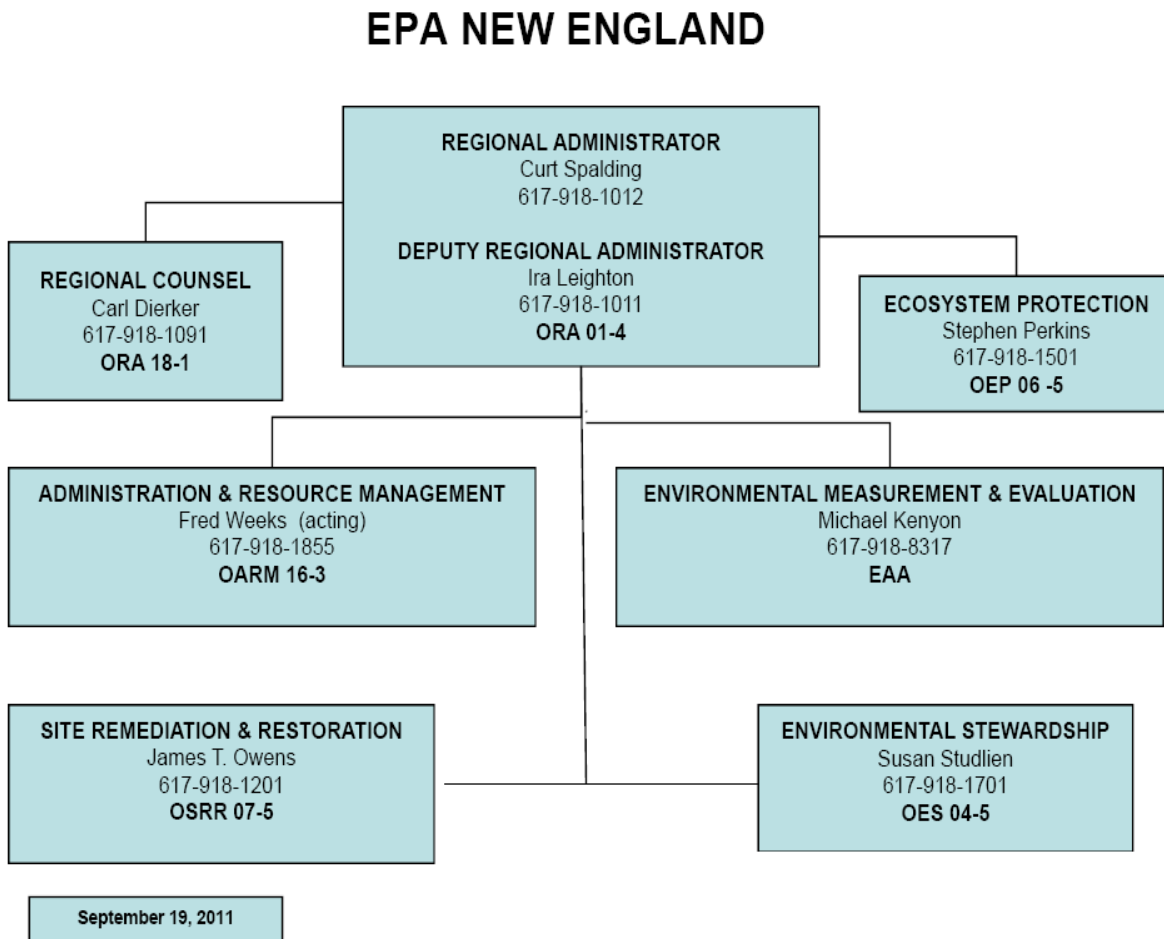
Federal Government:
 Specify: RCRA, Worker Safety, Radiation
 Contact: USEPA, OSHA, NRC

Provincial or State Government:
 Specify: RCRA, Air Pollution Control
 Contact: MADEP

Corporate Information

Facility Description – The McCormack building is a 22 story building of approximately 600,000 gross square feet, located in the heart of Downtown Boston and the Financial District. There are a number of alternative transportation choices including 53 bike racks and six showers, a range of Massachusetts Bay Transportation Authority (‘T’) stations, as well as several parking spaces beneath the building, some of which are reserved for fuel-efficient vehicles. The McCormack building also features a ‘green roof’ which covers the 4th and 5th floors. This area of roof insulates the building, reduces the urban heat island effect, and cuts down on energy usage as well as costs. The building received a gold rating in the LEED program for green building new construction and design features include dual flush toilets, waterless urinals, and energy efficient lighting.

Organizational structure:



Management system structure – EPA Regions 1’s EMS is modeled after the ISO 14001 standard, and was originally developed following the sections of the standard within the GreenWare software program. This EMS manual has been organized with specific sections to reflect this standard.

Computers and software packages – The McCormack building uses networked servers and personal computers which include intranet and internet connections. Software packages include a wide variety of commercially-available software, including but not limited to GreenWare, Lotus Notes, MS Word, MS Excel, MS PowerPoint and MS Office.

Expected growth potential and outlook - Flat to downsized.

Personnel

Number of employees at McCormack building: 840*

* Totals include EPA personnel, grantees and contractors.

Management System

Date of EMS implementation: 11/2/2004

Senior Management personnel:

Name	Title	Reports to
Curt Spalding	RA	Lisa Jackson
Ira Leighton	Deputy RA	Curt Spalding
Fred Weeks	Acting Director OARM	Curt Spalding
Jim Owens	Director OSRR	Curt Spalding
Susan Studien	Director OES	Curt Spalding
Stephen Perkins	Director OEP	Curt Spalding

Environmental issues initially identified relate to:

- Waste generation
- Use of raw material/natural resources
- Transportation

Facility:

Name, facility type	Owned/leased	Age	Condition
New England McCormack building, office	Leased	78 years	Renovated 2009

4.2 ENVIRONMENTAL POLICY

The environmental policy documents the intentions and principles of the New England McCormack building's management in relation to environmental performance and provides the framework for setting environmental performance objectives. The environmental policy is described in the document titled "*Environmental Policy*."

A procedure was developed and documented that describes the process used to develop and maintain the environmental policy. This procedure is titled "*4.2 Environmental Policy*" and is reviewed on an annual basis to ensure the procedure remains effective and up to date.

In accordance with the procedure, the environmental policy is reviewed on an annual basis to ensure it remains relevant to the organization and considers any changes in focus and/or needs of the McCormack building.

The environmental policy is communicated to all employees, contractors, and others working on behalf of the McCormack building. The policy is presented to staff during EMS awareness training. The EMS Coordinator and the EMS Core Team is responsible for maintaining records pertaining to the implementation and review of the policy.

The environmental policy is made available to the public in accordance with the Agency's established external communication and information control procedure and is posted in various locations in the McCormack Building and on the Internet.

4.3 EMS PLANNING

4.3.1 - Environmental Aspects

For the initial development of its EMS, the McCormack building utilized the GreenWare software system to identify all of the activities, products and services within the scope of the EMS over which it has control or influence, and their associated aspects. These aspects were evaluated, scored and ranked using the GreenWare software to determine those aspects considered by the organization to have a significant environmental impact or pose a significant risk to the environment or the organization.

A procedure was developed and documented that describes the process used to determine these aspects and what criteria were used to determine significance. This procedure is titled "*4.3.1 Environmental Aspects*" and is reviewed on an annual basis to ensure the procedure remains effective and up to date.

In accordance with the procedure, the activities and aspects are reviewed on an annual basis to ensure they remain relevant to the organization and consider any changes in the activities and/or needs of EPA Region 1 within the defined scope of the EMS.

A current list of significant environmental aspects (SEAs) is maintained by the EMS Coordinator and is located on-line in the Lotus Notes Database as part of the management system documentation.

4.3.2 - Legal and Other Requirements

When determining significant environmental aspects, EPA Regions 1 considers legal and other requirements. Legal and other requirements are those established by federal, state government, and other authorities that apply to environmental aspects of the McCormack building. Other requirements include those stipulated by Agency policy or directives, or by Executive Order.

The McCormack building has developed a procedure to ensure it maintains knowledge of current legal and other

requirements that are applicable to the environmental aspects (hazards) of its activities, products, and services. The procedure is titled “4.3.2 *Legal & Other Requirements*” and is maintained by the EMS Coordinator on-line in the Lotus Notes Database within the documentation of the EMS.

Legal and other requirements are incorporated into the environmental management system (EMS) and will be considered as one of the criteria used to identify environmentally significant aspects and to establish objectives and targets for those aspects at all relevant levels and functions of the organization.

Environmental management programs (EMPs) are developed to manage each SEA and achieve the organization’s objectives and targets for that aspect and includes a listing of the current legal and other requirements associated with that aspect. The EMS Coordinator is responsible for ensuring that the legal and other requirements listed within the EMP are current. The EMPs are maintained by designated staff and are available on-line in the Lotus Notes Database as part of the management system documentation.

4.3.3 - Objectives & Targets

Objectives and targets have been established for each identified SEA. An objective is an overarching goal established by the organization to be consistent with its environmental policy for the management of its SEAs and continual improvement of the EMS and the McCormack building’s environmental performance. Objectives can range from significant improvement of environmental performance to maintaining an existing program.

Targets are established for each objective and consist of specific performance requirements and a schedule for implementation in order to achieve the established objective. Progress toward targets is determined by developing performance indicators or metrics that can be either quantitative or qualitative.

EPA at the McCormack building has developed a procedure to establish objectives and targets. The procedure is titled “4.3.3 *Objectives & Targets*” and is maintained by the EMS Coordinator on-line in the Lotus Notes Database as part of the management system documentation.

4.3.4 - Environmental Management Programs

An environmental program (EMP) describes how the organization manages its environmental aspects that are deemed significant (see Section 4.3.1 of this manual). An EMP is in place for each SEA and includes or references a specific action plan (i.e., the means, tasks and time frame) for achieving environmental objectives and targets (see Section 4.3.3 of this manual). The EMP also includes roles and responsibilities, performance indicators, and operational controls associated with the aspect, activity and action plan.

The McCormack building has developed a procedure to develop and maintain EMPs. The procedure is titled “4.3.4 *Environmental Management Programs*” and is maintained by the EMS Coordinator on-line in the Lotus Notes Database as part of the management system documentation.

4.4 EMS IMPLEMENTATION AND OPERATION

4.4.1 - Structure & Responsibility

Consistent with the environmental policy, the management of the McCormack building has committed to managing identified SEAs within the EMS incorporating continual improvement principles. This management commitment includes making available the resources needed to establish, implement, maintain and improve the EMS.

A procedure has been developed to describe the McCormack building’s organizational structure relating to the EMS and how the EMS functions within EPA’s overall organizational structure in terms of authorities, roles, and responsibilities for environmental management.

The procedure is titled “4.4.1 *Structure & Responsibility*” and is maintained by the EMS Coordinator on-line in the Lotus Notes Database as part of the management system documentation.

4.4.2 - EMS Training

The McCormack building periodically identifies training needs to ensure that all persons working for or on behalf of EPA Region 1 employees who perform tasks that have the potential to cause or contribute to a significant environmental impact are competent based on education, training or experience.

A procedure has been developed to establish guidelines for periodic EMS awareness and competency training. More specifically, this procedure establishes a training program for employees that achieve EMS awareness and a process for identifying training. The procedure is titled "4.4.2 EMS Training," and is maintained by the EMS Coordinator on-line in the Lotus Notes Database as part of the management system documentation.

4.4.3 - Communication

EPA Region 1 has developed a procedure that establishes a process for internal communication to build understanding, cooperation, and involvement from all employees of the McCormack building and assure performance of their duties in an environmentally conscious manner. The procedure is titled "4.4.3-I Internal Communication."

EPA Region 1 also has developed a procedure that establishes a process for external communications regarding its EMS. The procedure is titled "4.4.3-II External Communication."

These procedures are maintained by the EMS Coordinator on-line in the Lotus Notes Database as part of the management system documentation.

4.4.4 - EMS Documentation

The EPA Region 1 EMS was developed to reflect the document structure included in ISO 14001. It includes all of the elements described in Sub clause 4.4.4 of the standard, as follows:

- 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.

4.4.5 - Document Control

EPA Region 1 follows an established procedure that describes processes for creating, approving, reviewing and maintaining EMS documents. This procedure addresses document and version control, approval and review processes, and a document retention schedule for environmental management documents. The procedure is titled "4.4.5 Document Control."

This procedure is maintained by the EMS Coordinator on-line in the Lotus Notes Database as part of the management system documentation.

4.4.6 - Operational Control

EPA Region 1 has developed guidance for determining the operational controls that are to be applied to its activities, products or services that exhibit significant environmental aspects. The procedure is titled "4.4.6 Operational Control."

This procedure is maintained by the EMS Coordinator on-line in the Lotus Notes Database as part of the management system documentation.

4.4.7 - Emergency Preparedness and Response

EPA Region 1 has developed a procedure to ensure that it established and maintains emergency plans and procedures designed to minimize or otherwise mitigate the environmental impacts associated with unexpected or accidental incidents. The procedure is titled “4.4.7 Emergency Preparedness & Response.”

This procedure is maintained by the EMS Coordinator on-line in the Lotus Notes Database as part of the management system documentation.

4.5 TRACKING PERFORMANCE AND CORRECTIVE ACTION

The EPA Region 1 EMS is periodically assessed to verify that operations continue to comply with requirements of the EMS, including the EMS Manual, procedures, EMPs, related work instructions, any applicable legal requirements and progress made toward objectives and targets. The McCormack building’s internal EMS assessments include monitoring and measurement, audits, and/or management review performed by EPA Region 1 personnel or other qualified parties.

4.5.1 - Monitoring and Measurement

Monitoring and measuring of key characteristics of operations and activities associated with significant environmental aspects may be conducted to track:

- Overall environmental performance
- Progress toward achieving objectives and targets
- Effectiveness of operational controls or
- Continual improvement

EPA Region 1 has developed a procedure that describes the process for monitoring and measuring its operations and activities that can have significant environmental impacts. The intent of such monitoring and measuring is to track environmental performance, assess implementation and effectiveness of operational controls, and evaluate achievement of environmental objectives and targets, and compliance with regulatory requirements. The procedure is titled “4.5.1 Monitoring & Measurement.”

This procedure is maintained by the EMS Coordinator on-line in the Lotus Notes Database as part of the management system documentation.

4.5.2 - Evaluation of Compliance

EPA Region 1 has an established audit procedure that periodically evaluates compliance with regulatory and other requirements. While performing internal audits of the EMS, the status of compliance with legal and other requirements is ascertained and documented. This may be achieved by reviewing the results of the most recent compliance audit and determining whether the corrective/preventive action process was effectively implemented. The procedure is titled “4.5.2 Evaluation of Compliance.”

This procedure is maintained by the EMS Coordinator on-line in the Lotus Notes Database as part of the management system documentation.

4.5.3 - Non-conformance and Corrective/Preventive Action

EPA Region 1 has developed a procedure that describes the process to ensure that the McCormack building establishes, maintains and uses a system to identify system non-conformances, or noncompliance with regulations and other requirements and to specify a corrective/preventive action process to follow to investigate the root cause, determine, implement and track corrective/preventive actions and evaluate their effectiveness. The procedure is titled “4.5.3 Non-conformance and Corrective/Preventive Action.”

This procedure is maintained by the EMS Coordinator on-line in the Lotus Notes Database as part of the management system documentation.

4.5.4 - Records Management

EPA Region 1 has developed a procedure that defines the steps that the McCormack building follows to ensure that the environmental management system (EMS) records and other environmental records are properly identified, collected and filed to allow for ready access and retrieval. The procedure is titled "*4.5.4 Records Management.*"

This procedure is maintained by the EMS Coordinator on-line in the Lotus Notes Database as part of the management system documentation.

4.5.5 - Internal Audit

EPA Region 1 has developed a procedure that defines the protocol for performing internal EMS audits. The procedure defines the processes for scheduling, conducting, and reporting periodic audits of the McCormack building EMS. EMS audits will be conducted by qualified auditors to determine whether the EMS is consistent with the requirements of ISO 14001 and if the EMS has been properly implemented and maintained. EMS audits identify deficiencies and potential vulnerabilities of the EMS. The procedure is titled "*4.5.5 EMS Audit.*"

This procedure is maintained by the EMS Coordinator on-line in the Lotus Notes Database as part of the management system documentation.

4.6 MANAGEMENT REVIEW

EPA Region 1 has developed a procedure that defines the process and primary agenda of issues to be included in the Management Review of the McCormack EMS. The Management Review is intended to provide a forum for discussion and improvement of the EMS and to provide management with the opportunity to give feedback on the EMS and its environmental improvement goals. During the Management Review, the EMS is reviewed to determine its continuing suitability, adequacy and effectiveness relative to the needs of the organization. The procedure is titled "*4.6 Management Review.*"

This procedure is maintained by the EMS Coordinator on-line in the Lotus Notes Database as part of the management system documentation.