



## ENVIRONMENTAL MANAGEMENT SYSTEMS: FREQUENTLY ASKED QUESTIONS

**Background:** Voluntary environmental management system (EMS) standards have been developed by industry groups and consensus standards bodies. Many of these standards have recently been "synchronized" with the emerging Environmental Management System Standard, ISO 14001, developed by the International Organization for Standardization (ISO). An EMS approach is designed to assist management in improving the effectiveness of environmental activities.

**References:**

1. ISO 14001, *"Environmental Management Systems -- Specification with guidance for use,"* International Organization for Standardization, 1996.
2. ISO 14004, *"Environmental Management Systems -- General guidance on principles, systems, and supporting techniques,"* International Organization for Standardization, 1996.
3. *"Code of Environmental Management Principles,"* Federal Facilities Enforcement Office, USEPA, (August 1996).
4. *"ISO 14000: International Environmental Management Standards,"* EPA Standards Network Fact Sheet, May 1995.
5. Executive Order 12856, *"Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements,"* August 1993.

### What is an Environmental Management System?

An Environmental Management System (EMS) is "that part of the overall management system which includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the environmental policy." This definition is from the International Organization for Standardization's emerging international EMS standard, ISO 14001. ISO 14001 is also a specification standard. That is, it can be used to register sites or organizations conforming to it.

### What are the elements of the ISO 14001 standard?

The standard includes five elements already familiar to DOE site managers. Indeed, sites may already have all the following EMS elements:

- *Policy.* Top management needs to clearly define the organization's environmental policy. This written policy statement can apply to facilities, sites, and programs, appropriate to the scale of operation and impact of activities governed by the policy. Format and length can vary, but the policy must commit the

organization on some key issues: pollution prevention, continuous improvement, and compliance with relevant environmental legislation and regulations. It must provide a framework for setting and reviewing goals. Finally, the policy needs to be communicated to all employees and the public.

- *Planning.* Planning begins with identifying environmental "aspects" of activities the organization controls (i.e., the components of those activities that are likely to interact with the environment) and understanding how those aspects impact the environment. Management then sets goals and targets for reducing identified impacts and develops managerial programs for achieving them, including a mechanism for identifying applicable legal and other requirements.
- *Implementation and Operation.* This element encompasses defining roles and responsibilities, developing programs for training and awareness, establishing avenues for communication inside and outside the organization, maintaining documentation, and planning for operational control and emergency response.



- *Checking and Corrective Action.* An organization must measure its performance — against its own targets and objectives, its operational controls, and its compliance with relevant laws and regulations. Specifically, an EMS must define how non-conformance with the ISO standard will be handled and how corrective measures will be taken.
- *Management Review.* To build in continuous improvement, top management must periodically review the system and address needed changes.

**Why should DOE, which is not a private corporation, adopt an EMS approach?**

Environmental Management Systems can add significant value for DOE in a variety of ways. For example, they can:

- provide a cost-effective corporate environmental framework;
- reduce risks of regulatory non-compliance by systematically tracking applicable requirements;
- provide a basis for discussing flexibility in regulatory interpretations;
- help maintain stakeholder confidence by demonstrating reliable environmental protection;
- provide a basis for self-correction, and mitigating fines and penalties if non-compliance does occur;
- integrate the principles and cost-savings of pollution prevention throughout DOE activities;
- help sites and programs focus on the most important environmental aspects of their activities;
- provide an integrating framework for ES&H activities (e.g., Voluntary Protection Program, National Environmental Policy Act);
- facilitate deployment of new technologies at sites;
- provide a basis for "benchmarking" DOE with private sector operations;
- provide vision and stability for staff members and decision makers in turbulent times;
- demonstrate responsibility, accountability, and continuous improvement in managing DOE sites and programs; and
- demonstrate environmental leadership across the federal system.

Specific sites, with their unique missions, history, conditions, and programs, will realize different sets of benefits.

**How does an EMS affect environmental compliance?**

Implementing an EMS does not alter the basic obligation to comply with applicable requirements or the requirements themselves. Moreover, Environmental Management Systems do not by themselves guarantee compliance. Instead, they focus on improving the effectiveness of the management system itself. Though compliance is already a requirement, an EMS provides ways to make achievement of that end more sustainable and predictable.

An EMS is designed to continuously improve the management of environmental activities at a facility. For example, an EMS requires a mechanism for systematically identifying applicable legal requirements. In DOE's rapidly changing environment, this can help avoid gaps and lapses in compliance when requirements change or new activities or contractors are added. An EMS can also help identify compliance activities no longer needed when missions change. Over time, this may result in considerable savings.

**How does the EMS approach fit with "Work Smart" standards?**

Work Smart standards identify requirements applicable to specific activities, while the EMS provides the overall management framework within which the activities will be conducted. Thus an EMS can be used to deploy or amplify the effectiveness of other ES&H initiatives such as the Work Smart standards.

**How does DOE intend sites to implement EMS?**

Most DOE sites already have most — if not all — the elements needed for adopting an EMS. One possible exception is the environmental policy statement endorsed by top management, which early benchmarking efforts show as frequently missing.

Sites choosing to implement an EMS approach can leverage their existing programs, and their existing planning and management strategies. That is, DOE elements can adopt the common architecture of an EMS approach but leverage their existing resources in light of unique missions, conditions, budgets, risks, and other considerations. They can then focus on cost-effective continuous improvement.

### **How can EMS fit with contract reform?**

EMS is compatible with and supportive of performance-based contract reform. It provides a framework for managing environmental aspects of operations that can be performance-specified, enabling sites and programs to increase their cost-effectiveness in acquiring contract support.

Both DOE and contractors may find it valuable to incorporate appropriate language regarding EMS implementation into contracts. For example, the recent contract award at Hanford incorporated performance incentives for the Fluor Daniel team to implement an EMS that is "consistent with the principles" of ISO 14001. Conformity will be demonstrated through self-assessment.

### **How can DOE implement EMS when budgets are being cut?**

Studies of private firms have shown that proper implementation of EMS can help managers work smarter, faster, cheaper and "do more with less." Improved management leads to more efficient and effective performance, and will allow greater control over environmental support costs.

### **How will facilities know when they're done implementing an EMS?**

The "implementation" of an EMS will be completed when the EMS becomes part of a facility's standard management practice (i.e., "how we do business"). However, successfully implementing an EMS includes ongoing review and continuous improvement. Recognizably improved performance, based on facility or program goals and objectives, will be the best measure of successful implementation.

### **What about certification/registration?**

Third-party certification/registration may help improve credibility, but is not required to demonstrate conformance with the ISO standard. On the other hand, sites or programs may decide to require contractors to become registered or recognize value for registration in competitive awards.

The certification/registration process, similar to an audit, is conducted by an accredited third party. This external review provides independent validation that an organization or facility conforms to a standard.

Facilities conforming to an EMS standard like ISO 14001 can go through a certification/registration process or self-declare their conformity. A decision to choose self-declaration or third-party registration will need to include considerations such as the cost and the expected responses from stakeholders and regulators.

### **How can I get more information?**

EH-41 is providing a series of Fact Sheets, workshops, and technical assistance to sites and programs. In addition, EH-41 is collaborating with EPA's Federal Facilities Enforcement Office and Voluntary Standards Network to produce a *Primer on Environmental Management Systems for Federal Facilities*. For further information, contact Larry Stirling at (202) 586-2417.