# ENTERPRISE SERVICES

## Environmental Compliance Assistance

# ENVIRONMENTAL MANAGEMENT SYSTEM (EMS) REQUIREMENTS

*Note: This information closely reflects the ISO 14001 requirements.*

There are many models of an Environmental Management System (EMS). The Department of Energy and Environment (E&E) considers an EMS to be a flexible system designed to manage and reduce an entity's environmental impact on a continual basis. An EMS can range from a simple and streamlined system for small businesses to a complex and comprehensive system for large entities. Regardless of complexity, an EMS must identify and rank the full spectrum of an organization's environmental impact, and all of the applicable environmental regulatory and legal obligations. The EMS must be fully supported by and incorporated into the existing management structure of a company and must be appropriate to the nature, scale, and potential environmental impact of a business.

ARKANSAS DEPARTMENT OF ENERGY AND ENVIRONMENT

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## A ENVIRONMENTAL POLICY

An **environmental policy** statement should demonstrate a high level of commitment to environmental management through the establishment of guiding principles. The environmental policy should be available to the public and be communicated to all employees who work for or on behalf of the entity. The environmental policy should be appropriate to the nature and scale of the organization or business and should include all of the following:

- A commitment to environmental excellence and continual environmental improvement.
- A commitment to pollution prevention.
- A commitment to comply with applicable environmental regulations and other requirements.
- A statement acknowledging the importance of communication with employees and the public.

**Guidance:** The policy statement should be kept brief, appropriate to the scope of the EMS, and meaningful to management, employees, and to the entity as a whole. A brief description of the business or entity may be included in the policy statement. Procedures that convey how frequently a policy will be reviewed, who is responsible for reviewing the policy, how the policy is communicated to employees, and how the policy will be made available to the public should also be developed.

## B PLANNING

1. **Environmental Aspects:** Identification and prioritization of activities and the corresponding **aspects** that have or can have an **impact** on the environment.

   **Guidance:** Identifying environmental aspects and impacts can be one of the most challenging elements of an EMS. Begin by identifying activities at the facility and the corresponding environmental aspect resulting from these activities. Include day-to-day operations, infrequent operations, and activities related to potential accidents or emergencies. From this analysis, the expected or likely environmental impact can then be identified. The aspects should be ranked to identify the most significant impacts. The EMS should include procedures to identify both positive and negative, actual or potential, environmental impacts, and to ensure that the impacts and opportunities for environmental improvement are considered to determine significance and set environmental objectives.

   From the comprehensive list of environmental impacts, the next step is to develop the criteria that will be used to determine the significance of each impact. This step identifies the aspects of an entity's operations that have or may potentially have **significant impacts** on the environment.

   **Guidance:** The significant impacts will be used to develop other elements of the EMS, including setting environmental objectives and targets, developing operational procedures, training employees, and establishing monitoring and measuring programs. A consistent methodology that includes criteria such as any related legal requirements, the likelihood of occurrence, the frequency, intensity, duration and offensiveness, or concerns of interested parties or the community of potential or real environmental impacts, should be considered. Once criteria are selected, a procedure to rank or score the criteria should be developed. The ranking can be numerical or based on a rating of high, medium, or low. Regardless of the ranking or scoring system selected, it is important that each environmental impact is analyzed in a consistent way to develop a sound evaluation process.

2. **Legal and Other Requirements:** A list of **legal and other requirements** should include all applicable environmental federal, state, and local requirements related to its environmental aspects, including all applicable environmental permits and the terms and conditions contained therein. Company-specific requirements or other external requirements (e.g., community, customer, shareholders, etc.) should also be included with this list. An entity must also determine how these requirements apply to its environmental aspects.

   **Guidance:** Identifying and staying current with legal and other requirements is important to the implementation and continued improvement of the EMS. A procedure should be developed to describe how to identify any environmental requirements that are applicable to the scope of the EMS. Consider federal, state, and local requirements as well as all environmental permits, industrial codes of practice, agreements, and non-regulatory guidelines. Tables that list regulatory and other requirements, including record-keeping requirements and external regulatory inspections are helpful in tracking and staying up-to-date with legal and other requirements.

3. **Objectives and Targets:** The EMS should include **objectives** and **targets** that address environmental impacts in a definitive, systematic way. The target is a detailed performance requirement that supports a specific objective. Objectives and targets are often combined together into one procedure in the environmental management program. Each objective should be realistic, quantitative, and measurable.

   **Guidance:** When establishing objectives, consider the following: significant aspects; the environmental policy; legal and other requirements; technological options; pollution prevention opportunities; financial, operational and business requirements; and views of interested parties and/or the surrounding community.

4. **Environmental Management Program:** An **environmental management program** is a systematic way of managing environmental objectives and targets. The program should focus on continual improvement and address significant impacts of an entity's activities. The program should include a list of roles and responsibilities for implementation, maintenance, and control of the EMS.

   **Guidance:** An action plan should be developed for achieving compliance and meeting objectives and targets. The action plan should define the steps that will be taken to achieve each stated objective and target, include who is responsible for meeting the target, the timeline for achieving milestones, and the target date for completion.

## C IMPLEMENTATION AND OPERATION

1. **Structure and Responsibility:** An EMS must define **structure and responsibility**. This element defines and documents roles and responsibilities for your organization. These roles and responsibilities must be clearly communicated to appropriate personnel.

   **Guidance:** Identify all personnel responsible for activities that could have an impact on the environment. The EMS should document roles, titles, and responsibilities. Personnel responsible for serving as management for purposes of reviewing the EMS should also be included in this list.

2. **Training, Awareness, and Competence:** Successful implementation of an EMS is dependent on a program that includes employee and supply chain training and awareness. Training is needed when the EMS is first implemented; new employees are hired; employee responsibilities change; procedures change; new processes or equipment is installed; suppliers are brought on-site, or new rules, regulations, or permit conditions are put in place. The EMS should include procedures that establish and maintain environmental training needs for all employees and subcontractors who have responsibility or authority over activities that have significant environmental impacts or the potential for significant environmental impacts.

   **Guidance:** Employees (and suppliers) should be trained on relevant elements of an EMS. Training should include information on the environmental policy, the significant environmental aspects of their activities and related work instructions, objectives and targets, their EMS roles and responsibilities, the emergency action plan, and other pertinent information related to the EMS. The EMS should identify and track the training needs of each employee within the scope of the EMS. If questioned in the field, employees should be able to demonstrate competency about the EMS and their environmental responsibilities.

3. **Communication:** The EMS must include a communication plan for internal communication and external community outreach and communication. Both a process and procedure should be developed for communicating information on environmental issues and the EMS to employees and with the public, including the local community and interested groups.

   **Guidance:** Environmental leaders should maintain a community outreach and communications plan to effectively communicate the environmental impacts, objectives, and targets of your business or organization, and to address the community's perceptions and reactions to this information. Public communication and outreach activities can vary across facilities depending on the size, setting, type of operation, or other aspects. Public communication and outreach plans should include procedures for: (1) identifying and responding to community concerns; (2) informing the community of important matters that might or do affect it; and (3) reporting on the facility's environmental policy, EMS, and performance commitments. Other communication efforts might include raising environmental awareness in the community, providing or assisting with training, or education and incentive methods that focus on environmental improvement and excellence in the community. Active communication with employees and the community help to convey what an EMS is, what management's commitments are with respect to environmental issues, the benefit(s) an EMS brings to the business or organization, and progress in meeting objectives and targets. Communication plans and techniques will vary for each business or organization.

4. **Environmental Management System Documentation:** The participant must maintain documents in a manner sufficient to implement the EMS. Documentation can be maintained in paper or electronic form.

**Guidance:** The EMS documentation requirement can be met by the development of an EMS manual. The manual should detail the overall structure of the EMS and ensure that the EMS is understood and operating as designed. EMS procedures should be either referenced, if not included in the manual, or incorporated consistently into the manual. Written procedures are not required for all elements of the EMS. A separate procedures document from the manual is a cleaner and clearer approach. The following diagram depicts a common document hierarchy.


5. **Document Control:** Controlling documents is another important element of an EMS. An established **document control** process helps to track progress and improvements. A procedure that describes how documents will be controlled and identifies personnel responsible for controlling EMS documentations should be included in the EMS.

   **Guidance:** Keep the document control process simple and within easy access. Creating a master EMS document list may be helpful. Documents should be periodically reviewed and revised as necessary. Original documents should be dated and identified as the most recent version. Current versions of essential documents should be available at all locations as appropriate. One way to track documents is to use headers with pertinent tracking information. Obsolete documents should be removed from the working files, but retained when necessary for legal and/or historical record keeping purposes. Reasonable precautions should be taken to protect original documents from damage, loss, or other accidental events, such as fire or flood. Controlled documents include: the environmental policy; related procedures; and records and forms used to implement and track the EMS.

   **Operational Control:** Operation and maintenance programs for equipment and other activities that are related to legal compliance and achieving the objectives and targets in the EMS should be included as part of the EMS.

6. **Emergency Preparedness and Response:** It is important to identify the potential for and how to respond to accidents and emergency situations of environmental aspects.

   **Guidance:** The outcome should result in having documented procedures/instructions in place for emergency situations. They should be easy to reference and use, and all affected personnel should understand how to react in emergency situations. It is important to include prevention and mitigation of environmental aspects of potential accidents and emergencies. Should an emergency situation arise, it is important to review and revise procedures as applicable after the situation is controlled to ensure they are complete and accurate.

## D CHECKING AND CORRECTIVE ACTION

1. **Monitoring and Measurement:** Establish and maintain specific measurable metrics and/or goals to monitor progress toward achieving and obtaining goals. This data will be used to validate and support the EMS efforts within the organization, and also may be used for E&E's Natural State Environmental Program needs , such as publications, presentations, and information dissemination.

   **Guidance:** The outcomes must be measurable and should be linked to the environmental policy, objectives, and targets of a company or entity. Measurable goals might include: quantity of air pollution reduced or mitigated; quantity of water pollution reduced or mitigated; quantity of hazardous and solid waste reduced or mitigated; quantity of water and energy use reductions; and reduction in risk to employees and the community. For example, environmental performance might be reported in solid waste reduction in tons per year; hazardous pollutants (air, water, or waste) in pounds per year; water use reduction in gallons per year; energy use reduction in kWh per year; and air pollutant reductions (CO2, PM, and VOCs) in tons or pounds per year. Other measures might include pollution prevention performance information and community involvement measures, such as increased reporting to the community through public reports (e.g., sustainability or environmental reports), and community involvement in identifying goals of the facility.

   **a)** A program should also be in place for ensuring **equipment** used for monitoring and measuring environmental conditions is **calibrated** according to the manufacturer's recommendations.

   **b) Nonconformance and corrective and preventive action:** Establish and maintain procedures for investigating and correcting nonconformance.

   **Guidance:** Identify the cause of the nonconformance. Implement the necessary corrective action. Implement and/or modify controls necessary to avoid repetition of the nonconformance. Record any changes in written procedures resulting from the corrective action.

2. **Records:** Establish and maintain procedures to provide and require records to be kept.

   Guidance: Records should be identified, maintained, and show disposition by determining retention times. Records should be easily retrievable, legible, and traceable.

3. **Environmental Management System Audit:** Procedures to provide for regular self-initiated regulatory compliance and **EMS audits** must be included in the EMS. Both internal and external or third-party audits should be conducted on a regular basis. Effective mechanisms (procedures) should be in place to assess compliance with environmental laws, assess conformance with the procedures and systems of the EMS, assure that effective mechanisms are in place to respond promptly and adequately, and address violations of applicable environmental requirements or nonconformance of the EMS.

**Guidance:** The entire EMS needs to be audited periodically to identify any inconsistencies between the EMS requirements and actual practices and measurements. An audit is an important tool to determine if the EMS is being properly maintained and implemented. Audits will help to identify and resolve EMS deficiencies, can be used to assess regulatory compliance, and to update environmental and legal requirements in the EMS. As a rule of thumb, all parts of the EMS and compliance-related issues should be audited at least once each year. To be effective, the EMS should include: (1) audit procedures and protocols that are specific to your company and operations, (2) a schedule of appropriate audit frequencies, (3) auditor training, and (4) appropriate audit records. The internal and external EMS auditors should be trained in auditing techniques and management system concepts. Auditors should also be objective and knowledgeable of the applicable environmental regulations and of the facility operations.

**Management Review:** Establish and maintain a procedure for **management review** of the EMS.

**Guidance:** Reviews may include: (1) results from audits, (2) the extent to which objectives have been met, (3) the continuing suitability of the EMS in relation to changing conditions and information, and (4) concerns among relevant interested parties. The reviews should be documented/recorded.