



**U.S. AIR FORCE**

# **U.S. Air Force General Awareness Training On Environmental Management System (EMS)**





# EMS

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## Introduction

The learning objectives of this training are for students to:

- Gain a general understanding of environmental management systems (EMS)
- Understand the Air Force's environmental management vision
- Review examples of AF environmental aspects and impacts
- Describe EMS responsibilities of AF personnel and how it applies to their day-to-day job

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## Introduction

Why develop and implement an EMS?

- EMS is required by the following drivers:
  - Executive Order 13423—Strengthening Federal Environmental, Energy, and Transportation Management
  - Executive Order 13514—Federal Leadership in Environmental, Energy, and Economic Performance
  - DODI 4715.17—Environmental Management Systems
  - AFI 32-7001 Environmental Quality Program



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## What is an EMS?

EMS is the overarching management system that drives continuous improvement for all environmental programs. It requires using a consistent methodology to provide a well-defined structure for addressing the impacts of an organization's activities, products, and services on the environment

### Facts and Characteristics:

- Everyone has a role in their installation's EMS
- Uses a Plan, Do, Check, Act approach
- Focuses on continual improvement
- Based on the internationally recognized ISO 14001 EMS standard
- Used to accomplish core goals of mission sustainability, pollution prevention and environmental compliance

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## What is ISO 14001?

ISO 14000 is the generic term for the series of international standards for environmental management. The specific standard for an Environmental Management System (EMS) is ISO 14001

- The ISO 14001 Standard was developed in response to increased concern over industry's impact on the environment. Today there are more than 6,000 companies world wide that have adopted the ISO 14001 Standard - over 350 of these companies are in the United States
- The Department of Defense conducted a pilot study of the value of ISO 14001 based EMSs back in 1998-1999. In Apr 2000 Exec Order 13148 was signed requiring EMSs in all federal facilities. EO 13148 was later replaced by EO 13423. The AF formally adopts ISO 14001 as the model for its EMS program in AFI 32-7001, "Environmental Quality"

ISO 14001 has 17 elements that must be present for an EMS to be in conformance

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## What is ISO 14001?

- 17 Performance Elements of ISO 14001

1. Environmental Policy
2. Environmental Aspects
3. Legal and Other Requirements
4. Objectives, Targets, & EMPs
5. Resources, Roles, & Responsibility
6. Training and Awareness
7. Communication
8. Documentation
9. Document Control
10. Operational Controls
11. Emergency Preparedness & Response
12. Monitoring and Measurement
13. Evaluation of Compliance
14. Corrective & Preventative Action
15. Control of Records
16. Internal Assessments
17. Management Review

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## In Summary -- What is an EMS?

- Is about environmental stewardship of an entire installation
- Is about management practices and planning
- Is NOT a computer system!



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## Common Installation EMS Cycle

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- **Step 1 – Develop Policy**
- **Step 2 – Plan**
  - Identify environmental aspects and impacts & develop objectives
  - Set goals
- **Step 3 – Do (Implement)**
  - Establish operational procedures & controls
  - Train personnel on procedures
- **Step 4 – Check**
  - Assess compliance & management system effectiveness thru internal & external audits
  - Monitor performance
- **Step 5 – Act**
  - Management Review
  - Identify required change
  - Environmental, Safety and Occupational Health (ESOH) Council directs change





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## Successful EMS Starts with You!

Keys to a successful EMS:

- Top leadership commitment
- Focus on continual improvement
- Flexibility
- Compatibility with organizational culture
- Employee awareness and involvement



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## What are the most important things you need to know about EMS?

- The installation's environmental policy
- The environmental impacts of your job & the requirements you need to follow to stay in compliance with the law!
- How your organization supports the environmental goals of your installation
- Who to contact if you have a question -- (your unit environmental coordinator or your installation's Environmental Function)



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### Green AFB Environmental Policy Statement



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## ***Knowledge Check: What is an EMS?***

Read each question then select the best answer.

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### Which of the following does NOT describe EMS?

- A** A system of computers with specialized software that all program managers can access.
- B** A framework that allows an organization to consistently control the effects its operations or processes may have on the environment and to continually improve its business practices.
- C** A continual cycle of planning, implementing, reviewing and improving the processes and actions that an organization undertakes to meet its organizational and environmental goals.
- D** Establishes a management framework by which an organization's impacts on the environment can be systematically identified and reduced.

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## Which of the following are characteristics of a successful EMS?

- A** Top leadership commitment, Focus on continual improvement, Flexibility, Compatibility with organizational culture, Employee awareness and involvement
- B** Employee awareness only
- C** A larger staff to document, monitor, and measure all environmental aspects
- D** A static system that provides document controls

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**Which of the following reflects the correct sequence of phases in the EMS process model used by the Air Force?**

- A** Planning, Checking, Implementing, Acting
- B** Checking, Implementing, Planning, Acting
- C** Implementing, Planning, Checking, Acting
- D** Planning, Implementing, Checking, Acting

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## What forms the groundwork of the AF EMS?

### Environmental Aspects

- Activities, products or services that can interact with the environment

### Environmental Impacts

- Any change (complete or partial) to the environment, whether adverse or beneficial, resulting from the AF's functional mission or activities

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# Environmental Aspects / Impacts



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### Travis AFB Environmental Aspects & Impacts

ASPECTS	IMPACTS
<b>Natural Resources</b>	Endangered and Threatened species; land use limitations; mission impact
<b>Hazardous Waste</b>	Volume/cost of waste generated; regulatory oversight/vulnerability
<b>Drinking Water</b>	Potential degradation of drinking water supply, distribution, storage, treatment
<b>Solid Waste</b>	Diminishing capability of local landfills to receive waste



## EMS Targets & Objectives

- Developed by each installation to address top-ranked environmental issues
- Should be measurable and achievable
- Designed to reduce risk, pollution, compliance burden, costs
  - Should control or reduce negative environmental impacts
  - Improve positive impacts

Figure W-9 Air Force Solid Waste Diversion Rate

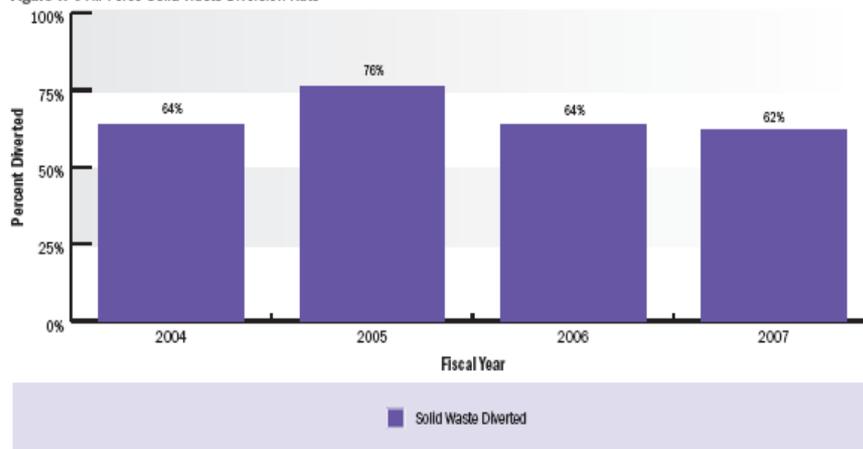
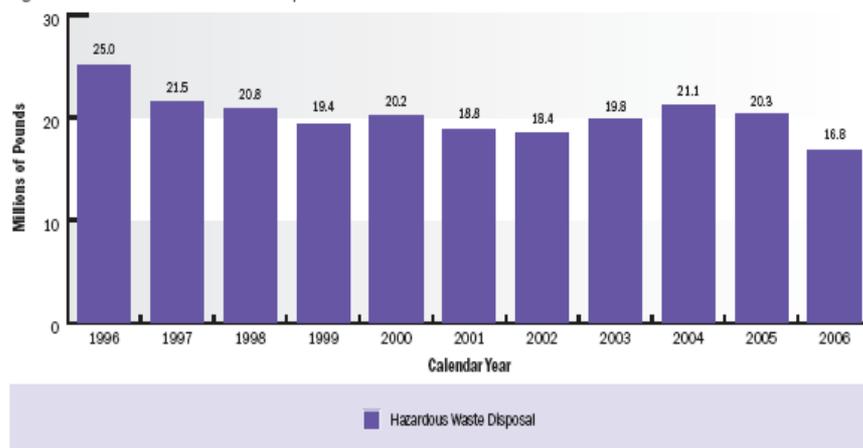


Figure W-10 Air Force Hazardous Waste Disposal





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### Installation EMS Action Plans

- Specific action plans outlining how identified environmental objectives will be achieved
- Outline the who, what, when, where, how

**Title:** Reduce electricity use      **EMP #:** 811      **Date:** AFCEE - Brooks City Base, RSO/916

**Lead EMP:** None      **POC Name:**      **POC Email:**      **POC Phone:** 318-531-XXXX

**Issue Date:** 18 Mar 03      **ECB:** Ongoing with annual reviews      **Last Review Date:**      **Review Cycle:**      **Overall goal, broad enough to cover multiple activities, products or processes or total electrical consumption and costs.**

**Environmental Objectives:** See Report/Impact Inventory

**Material Resources:**      **GHG:**      **Energy Consumption:**

**Personnel:**      **Facility Manager/ODA/AFCEE employees/Contracted AFCEE O&M/AFCEE employees/Contracted employees**

**Tracking:**      **Personnel:**      **Facility Manager/ODA/AFCEE employees/Contracted AFCEE O&M/AFCEE employees/Contracted employees**

Item	POC	Start	ECB
1. Total electricity use	Tang Hernandez	1 May 03	1 Jun 03
2. Total electricity use and appliances energy	Jake Glass	1 May 03	1 Jun 03
3. Total energy of applicable AFCEE facilities in major number of quarters and personnel appliances in major number of quarters	Jake Glass and Tang Hernandez, Jody and Ruthann, HP, Hall PMO, Ikt, TDC, Jerg - TDW, Joke - HMR, Joke	1 Jun 03	1 Jul 03
4. Total energy of applicable AFCEE facilities in major number of lights, monitors, etc. see left on in the eq, and utility personnel see TDW or on lease - Monthly audits, then drop in quarterly	Tang Hernandez, Jody and Ruthann, HP, Hall PMO, Ikt, TDC, Jerg - TDW, Joke - HMR, Joke G - TDA, Heed POCs from each HQ/OL	1 Jun 03	1 Jul 03
5. Total energy of applicable AFCEE facilities in major number of lights, monitors, etc. see left on in the eq, and utility personnel see TDW or on lease - Monthly audits, then drop in quarterly	Tang Hernandez, Jody and Ruthann, HP, Hall PMO, Ikt, TDC, Jerg - TDW, Joke - HMR, Joke G - TDA, Heed POCs from each HQ/OL	1 Jun 03	1 Jul 03



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## Why is EMS important to the Air Force?

EMS is mandated because there are many benefits:

- Enables AF to identify goals & ensure continual improvement
- Reduce environmental impacts in day-to-day operations
- Proactive management can result in cost savings
- Ensures funds and manpower are focused on highest risk priorities
- Provides consistency during personnel turnover
- AF ISO 14001 conformance & self-declaration = credibility

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## ***Knowledge Check: Why is EMS Important?***

Read each question then select the best answer.

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**An EMS is important for many reasons.  
Which of the following were presented as benefits  
of implementing an EMS?**

- A** It provides and opportunity to assess how your organization manages environmental risks and how to find better and more cost-effective solutions
- B** Provides consistency during personnel turnover
- C** It enables compliance with President's Executive Order 13423
- D** A single computer system to collect all data

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## Senior Leadership EMS Roles and Responsibilities

- Provide strategic vision
- Commits to compliance, prevention of pollution and continuous improvement
- Allocate resources
- Assigns responsibilities
- Review system effectiveness / adequacy
- Ensure deficiencies are corrected
- Direct change when required

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## All Personnel's Roles and Responsibilities

- Know your installation's environmental policy
- Know your organization's role in achieving and maintaining the installation's EMS (organizational specific environmental aspects, goals, and environmental management plans)
- Recognize the environmental impacts of your job
- Identify and correct problems
- Reduce environmental footprint
- Suggest ways to improve

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### What's My Role?

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- Flight Line Worker
  - Use solvents that are less volatile
  - Recycle shop towels
  - Properly segregate wastes
- Office Worker
  - Use duplex printing when printing documents
  - Focus more on electronic copies instead of hard copies
  - Carpool to work

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# ***Knowledge Check: EMS Roles & Responsibilities***

Read each question then select the best answer.

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**Only senior leadership and the environmental office need to understand what an EMS is and what their responsibilities are.**

- A True.
- B False.

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### Where would you find the latest EMS Information?

- A** EMS Playbook on CE Portal (insert web link)
- B** AFI 32-7001
- C** Unit environmental coordinator and base environmental office
- D** AFCEE EMS webpage [www.afcee.af.mil](http://www.afcee.af.mil)
- E** EMS webpage [www.emsresponder.com](http://www.emsresponder.com)

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# **Congratulations!**

## ***You've Completed EMS Training***

Click 'done' for your certificate

### **Links**

[Executive Order 13423](#)

[Executive Order 13514](#)

[EMS Manual](#)

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# Certificate of Completion

HERE BY CERTIFIES THAT

---

PRINT NAME

**HAS SUCCESSFULLY COMPLETED THE  
U.S. AIR FORCE ENVIRONMENTAL MANAGEMENT SYSTEM  
AWARENESS TRAINING**

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APPROVED BY



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DATE