

US EPA ARCHIVE DOCUMENT

## TRAINING, AWARENESS, AND COMPETENCE

### Background and Exhibits

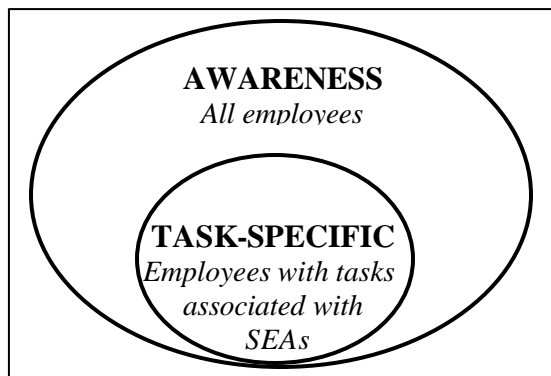
There are three excellent reasons to train employees on environmental management and your EMS:

- Legal compliance requires that certain job functions be trained;
- Every employee can have potential impacts on the environment; and
- Any employee can have good ideas about how to improve environmental management efforts.

Each person and function within your facility can play a role in environmental management. For this reason, your training program should cast a wide net. Every employee and manager should be aware of the environmental policy, the significant environmental aspects (SEAs) of their work activities, key EMS roles and responsibilities, procedures that apply to their work, and the importance of conformance with EMS requirements. Employees also should understand the potential consequences of not following EMS requirements (such as spills, releases, and fines or other penalties). The tip given by facilities that already have an EMS, is that awareness levels and implementation effectiveness are best served when the initial EMS training is stand alone (i.e., not combined with other compliance-related training).

All personnel should receive appropriate training and support to be competent at their work. Training can include both on-the-job (OJT) as well as classroom training, and should be tailored to the different needs of various levels or functions in the facility. However, training is just one element of establishing competence, which is typically based on a combination of education, training, and experience. For certain jobs (particularly tasks that can cause significant environmental aspects), you should establish criteria to measure the competence of individuals performing those tasks. For instance, a wastewater treatment operator might provide evidence of competence on the basis of having at least a high school diploma, and an up-to-date job training record (e.g., Waste Water Treatment and Disposal Refresher, Integrated Emergency Response and Spill Prevention Control and Countermeasure Plan, Storm Water Pollution Prevention Plan Training), and either one year of experience as an assistant operator or three months OJT and successful completion of a certified wastewater treatment operator training course. (Reminder: You should refer to the actual Federal, state, local requirements and company best practices that apply to your facility in defining competence criteria.)

Training is needed both in technical work and for general awareness on the part of all employees. As shown in *Exhibit 8-1: Two Areas of EMS Training*, task-specific training should be offered as a subset of general awareness training.

**Exhibit 8-1: Two Areas of EMS Training****Getting Started**

Go through the Action Steps listed below and refer to **Exhibit 8-2: Summary Checklist** for a set of steps that can help identify your training program requirements. You can probably identify some general training needs now, but you will need to return to this module to add specific technical training needs that may be identified as you proceed with the EMS. (For example, you will have specific training requirements associated with operational controls for SEAs. Training plans developed during completion of *Module 12* should be integrated with the training identified in this module.) Sample training presentations on EMS for top management and for the Cross Functional Team are provided in Appendix E – Additional Tools.

**Exhibit 8-2: Summary Checklist****TRAINING, AWARENESS, AND COMPETENCE**

- Step 1: Determine and document training needs (general awareness and task-specific) using Form EF-008.01, Training Needs Analysis—Environmental Courses Form. Identify personnel whose job functions may create a significant impact on the environment and the level of instruction needed. List the type and frequency of environmental training (internal and external to the facility) these personnel require (see **Example 8-1: Training Needs Analysis Matrix**).
- Step 2: Identify and document procedure/work instruction training needs using Form EF-008.02, Training Needs Analysis—Procedures and Work Instructions by Area/Department Form.
- Step 3: Customize the procedure provided in **Exhibit 8-3: Procedure for Environmental Training and Awareness (EP-008)** to document your process for identifying and planning environmental training and awareness at your facility. Include this customized procedure in your EMS manual (see **Exhibit 10-3: EMS Manual**).

## **Action Steps**

1. Identify all job functions that affect the environment. Small facilities may wish to identify individuals.
2. Identify the training and type of training these people currently receive that relates to environmental and health and safety concerns.
3. Determine if EMS education could be integrated with existing training or whether there should be special EMS training, at least in the beginning.
4. Identify training materials or programs available outside your facility. Some places to check include:
  - Trade associations;
  - Small Business Administration;
  - EPA;
  - State departments of environmental protections;
  - Suppliers; and
  - Consultants.

Don't overlook the need for ongoing training when experiencing employee turnover. Be sure that new employees are trained soon after they arrive.

Customize the procedure provided in ***Exhibit 8-3: Procedure for Environmental Training and Awareness (EP-008)*** and its supporting forms, Training Needs Analysis – Environmental Courses Form (EF-008.01) and Training Needs Analysis – Procedures and Work Instructions by Area/Department Form (EF-008.02), to fit your facility's environmental training and awareness needs.

**Exhibit 8-3: Procedure for Environmental Training and Awareness (EP-008)**

<b>1.0</b>	<b>Purpose</b> This procedure defines the process for identifying and planning environmental training and awareness at [Facility's Name].
<b>2.0</b>	<b>Activities Affected</b> All areas and departments
<b>3.0</b>	<b>Forms Used</b> 3.1 Training Needs Analysis—Environmental Courses (EF-008.01) 3.2 Training Needs Analysis—Procedures and Work Instructions by Area/Department (EF-008.02)
<b>4.0</b>	<b>References</b> 4.1 Procedure for Identification of Legal and Other Requirements (EP-001) 4.2 Procedure for Environmental Aspects, Objectives and Targets, and Programs (EP-003) 4.3 Procedure for Communication with Stakeholders (EP-004) 4.4 ISO 14001:1996, Element 4.4.2
<b>5.0</b>	<b>Definitions</b> None
<b>6.0</b>	<b>Exclusions</b> None
<b>7.0</b>	<b>Procedure</b> 7.1 Training 7.1.1 A training needs analysis (TNA) and training schedule shall be completed and maintained by the person(s) responsible for environmental regulatory and management system training to identify the level of instruction needed by personnel whose jobs may create a significant impact on the environment 7.1.2 The needs analysis and training schedule shall be reviewed and updated where necessary, at least annually, and when requested by the Environmental Management Representative or designee in consultation with the person(s) responsible for environmental regulatory and management system training to ensure its continuing adequacy. 7.1.3 Knowledgeable individuals with appropriate expertise and experience in environmental legal requirements, facility operations and EMS shall develop the TNA: operational environmental management; relevant environmental legal requirements for environmental training; and training provision at the [Facility's Name].

7.1.4 New, part-time, and transferred employees, as well as permanent on-site contractors, shall be included in the environmental training program.

7.1.5 The person(s) responsible for environmental regulatory and management system training shall maintain records of each individual's environmental training.

## 7.2 Awareness

Environmental awareness training shall be implemented as stipulated in the current version of the Training Needs Analysis—Environmental Courses (EF-008.01). All existing employees and full-time on-site contractors shall receive environmental awareness training during initial EMS implementation. New hires and contractors shall receive the training as part of their orientation.

## 7.3 Competence

Employee competence relevant to the EMS is determined through testing on the training material and through observation of performance by the employee's supervisor.

## 8.0 Frequency

Ongoing

## 9.0 Records

Records shall be retained consistent with the Procedure for Environmental Records (EP-005).

### Record of Revisions

Revision Date	Description	Sections Affected

**Date:**[illegible]

## Training Needs Analysis—Procedures and Work Instructions by Area/Department Form (EF-008.02)

		Production Processes					Material Loading, Unloading, Handling & Storage	Facilities & Maintenance				Other Processes		
Procedure/ Work Practice Number	Title	Packaging Area	QC Laboratory	R&D Laboratory	In-Plant Material Handling (inc. bulk material & drums)	Pressurized Reactor Operation (based on a generic process)	Raw Material Handling & Storage (EO, flammables, reactives, sulfur, other chemicals)	Waste Storage & Separation	Waste Water Treatment Plant Operations (inc. off-site transfers & emissions)	Centralized Air Pollution Control/Operations (inc. incinerator or thermal oxidizer with pretreatment)	Cooling Water System	Boiler Operation	Contractor Trailer, Storage/Welding Area	Administration

## Examples

The following, *Example 8-1: Training Needs Analysis Matrix*, is an example of a partially-completed Training Needs Analysis – Environmental Courses Form (EF-008.01) based on *Exhibit 8-3: Procedure for Environmental Training and Awareness (EP-008)*. Please note that the content of this example is not meant to be prescriptive. Instead, it is meant to provide an example of types of environmental training that might apply to specialty-batch chemical facility personnel. However, it must be tailored to suit actual requirements and best practices.

### Example 8-1: Training Needs Analysis Matrix

Date:

Course	Employees Requiring Training	Source of Training	Duration (Hours)*	Frequency*
Bulk Materials Handling	Pipe-fitters			Once every three years, each new maintenance staff
CERCLA TSCA 8 (e) Spill Reporting	Security, maintenance, and environmental personnel			
Integrated Emergency Response and Spill Prevention Control and Countermeasure Plan	Security, maintenance, and environmental personnel, Waste Water Treatment Operators			Once every three years, each new maintenance staff
Storm Water Pollution Prevention Plan and BMPs	Environmental personnel, Waste Water Treatment Operators			Once every three years, each new maintenance staff
Waste Management Plan	Waste management and environmental personnel			Once every three years, each new maintenance staff
Waste Water Treatment and Disposal (including sampling and analysis training if appropriate)	Waste Water Treatment Operators			Once every three years, each new maintenance staff

Course	Employees Requiring Training	Source of Training	Duration (Hours)*	Frequency*
Permit Monitoring and Record Keeping	Environmental personnel and other employees whose job relates to SEAs			Once, each new maintenance staff
Operation of Air Pollution Control System	Maintenance and environmental personnel			Once, each new maintenance staff
Asbestos Management	Maintenance and environmental personnel			Once, each new maintenance staff
A/C Refrigeration Servicing (Stationary)	A/C maintenance			Once, each new maintenance staff
Incident Command Training	Security and supervisors			Annually
RCRA Awareness Training	Waste Management Coordinator			Annually
EMS Lead Auditor Training	EMS Coordinator, Lead Internal Auditor			Initially
EMS Awareness Training	All employees and full-time on-site contractors			Initially and new hires as necessary
EMS Document Training (see also “Applicable Procedures by Department”)	Employees and full-time on-site contractors whose work requires knowledge of the document			Initially, new hires, and when document changes occur
EMS Implementation Training	Cross Functional Team and Environmental Management Representative			Initially
EMS Internal Auditor Training	EMS internal auditors			Initially and new auditors

\*Note that Federal, state, local requirements and company best practices should be consulted in determining training needs, including the appropriate frequency and duration of training courses.

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