



Implementing UPRMs Environmental Management System

UNIVERSITY OF PUERTO RICO MAYAGUEZ CAMPUS
AUGUST 1, 2008

Dr. Uroyoán Walker Ramos
Special Assistant to the Chancellor
Department of Mathematics

Eng. Maria Isabel Fernandez Gonzalez
Director
EMS Office

What is an Environmental Management System?

- Framework for understanding an organization's "environmental footprint" complying with environmental regulations, and implementing proactive pollution prevention strategies.
- Continual cycle of planning, doing, reviewing and improving processes and actions associated with the organization's responsible environmental management.

What is an Environmental Management System?

- “The part of the overall management system that includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving and reviewing the environmental policy.” **ISO14001**
- A defined and integrated system of communication, established training, responsibilities, and methods to address environmental issues and achieve environmental goals.

Benefits

- Improve and achieve consistent compliance.
- Avoid fines and expensive corrective actions due to compliance violations.
- Lower day-to-day impacts on the environment.
- Improve working conditions for students, faculty and employees.

Benefits

- Improve relations with government agencies.
- Enhance image and reputation.
- Maintain positive community relations.
- Quantify environmental performance and document trends

Developing An Environmental Management System

(1) Environmental Policy



(2) Planning

- ✓ Environmental Aspects
- ✓ Compliance
- ✓ Objectives and Targets
- ✓ Environmental Mgmt. Programs

(3) Implementation

- ✓ Roles and Responsibilities
- ✓ Training and Communication
- ✓ EMS Document Control
- ✓ Emergency Preparedness and Response

(5) Management Review

(4) Checking/ Corrective Actions

- ✓ Measurement and Monitoring
- ✓ EMS Nonconformance
- ✓ Corrective Actions
- ✓ Records
- ✓ EMS Audits

The UPRM Environmental Management System



UPRM EMS Objectives

- To develop and implement a system for managing all aspects of the life cycle of **chemical substances and materials** used at UPR-Mayaguez Campus
- To promote source reduction
- To promote pollution prevention awareness
- To promote compliance awareness

UPRM EMS Goals

- Baseline of specific hazardous materials
- Tracking system for hazardous materials – purchase to final disposition
- Evaluate and quantify efficiency of the system
- Develop, implement, evaluate and optimize the use, reuse and recycling strategies
- Develop, implement, evaluate and optimize impact minimization strategies
- Quantify and reduce waste disposal impacts
- Analyze and implement proper or safe hazardous chemicals practices
- Implement a self improvement management system

UPRM EMS Components

- Material / Waste Life Cycle Management
 - To quantify, monitor and control the usage of hazardous chemicals on campus
 - Identify and implement pollution prevention and reduction activities
 - Identify source reduction opportunities and strategies
- What are we doing?
 - Inventory Management Software *Chematix*

UPRM EMS Components

- Material Impact Management
 - To develop and implement a system for evaluating the impact of UPRM operations in the handling of hazardous chemicals
 - Formulate and implement pollution prevention and source reduction activities
 - Examples: replacement of hazardous chemicals with more environmentally friendly alternatives

- What are we doing?
 - Developing an Impact Assessment Tool and Benefit Assessment Tool for many commonly used chemicals

UPRM EMS Components

- Laboratory Material Management
 - Compliance promotion element
 - To provide training to the UPRM community members and other members of the regulated community
 - Proper handling of chemical substances
 - Identification of wastes
 - Raw materials management practices
- What are we doing?
 - Developing standard procedures for the proper management of chemical substances
 - Providing training to students, employees and faculty



Questions?

Environmental Management System Office
Sanchez Hidalgo 106
787-832-4040 x. 3022
ems@uprm.edu