ISO 14001 Environmental Management Systems
A Systematic Approach To Environmental Management

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Capri 1
ISO 14001 Environmental Management Systems

A systematic approach to environmental management

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Our Certified Technical Professionals

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• Professional/Registered Geologists (PG/RG)
• Associates in Risk Management (ARM)
• Certified Professional Environmental Auditor
• Registered Environmental Assessors (REA)
Course Introduction

► What is ISO?
► ISO 14001 standard overview.
► Introduction of Environmental Management System (EMS).
► Organization approach
► Benefits of ISO 14001 EMS
► Legal and other requirements in EMS
► Future of ISO 14001
What is ISO?
What is ISO?

- International Organization for Standardization (ISO)
- ISO develops International Standards. Founded in 1947, and since then have published over 19,500 ISO standards covering almost all aspects of technology and business.
- ISO develops standards required by the market place.
ISO 14001: What it does for an Organization.

► Minimize harmful effects on the environment caused by its activities.
► Identify applicable regulatory requirements.
► Achieve continual improvement of its environmental performance.
The Overall Aim of ISO 14001 Standard

To support environmental protection and prevention of pollution.

ISO 14001:2004

- Developed in the mid 1990s
- Used by facilities worldwide
- Protect the environment and prevent pollution.
Introduction of Environmental Management System
Environmental Management System

- Awareness
- Commitment
- Responsibility
Environmental Management System

- Accidents
- Lack of attention
- Negligence
- Lack of training
EMS under ISO 14001 Standard

The standard guides organizations to a clean environmental operation.

ISO 14001:2004

- Set performance criteria
- Specify operating conditions
EMS under ISO 14001 Standard

The standard guides organizations to a clean environmental operation.

Each facility is responsible for controlling its own environmental impacts.
Environmental Management System

The purpose of an EMS is to:

• To coordinate environmental operations

• To see that environmental objectives are integrated into operational goals
Environmental Management System

- **Plan**: Pollution Prevention, Protecting the Environment
- **Do**: Execute the Plan, Document
- **Check**: Improve Your Performance
- **Act**: Continual Improvement
Continual Improvement
Top management defines the environmental policy and their environmental commitment for:

- Pollution prevention
- Waste reduction
- Decreased consumption
- Conformance
Environmental Management System

Planning

- Environmental aspects and impacts
- Legal and other requirements
- Objectives, target and programs
4.3.1 Environmental Aspects

Understand Environmental Aspects (What is important?)

Significant Environmental Aspects

Typical considerations for significance include:

- Regulations or legislation
- Views of interested parties
- Type of environmental impact
- Scope
- Probability (likelihood) or frequency (ongoing/intermittent)
- Consequences or who/what is affected

Key Elements of an EMS

- Environmental Management System
- Environmental Policy
- Legal and other requirements
- Objectives, targets and programs
- Resources, roles, responsibility and authority
- Competence, training and awareness,
- Communication
- Documentation
- Control of documents
- Operational control
- Emergency preparedness and response
- Monitoring and measurement
- Evaluation of compliance
- Non conformance and corrective and preventive action
- Control of records
- Internal audit
- Management review
4.3.2 Legal and Other Requirements

Understand Legal and Other Requirements (What is mandatory?)

An organization must identify legal and other requirements regarding their environmental aspects/impacts.

Key Elements of an EMS

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4.3.3 Objectives, Targets and Programme(s)

Objectives
What will be accomplished?
• Objectives must be consistent with…
  • Environmental Policy
  • Commitment to prevention of pollution
  • Compliance with legal and other requirements
  • Commitment to continual improvement

Target
How much or to what extend?

Program
Who, How or When will it get done?
Environmental Management System

Implementation

- Resources, roles, responsibility and authority
- Competence, training and awareness
- Communication
- Documentation
- Control of Documents
- Operational Controls
- Emergency preparedness and response
4.4.1 Resources, Roles, Responsibility and Authority

Resources Include:
► Human resources, specialized skills, organizational infrastructure, technology, and financial resources

Roles, Responsibility and Authority:
► Should be documented and communicated

Top Management Appoints a “Management Representative(s) to:
► Ensure EMS meeting requirements
► Report to top management on performance of EMS
4.4.2 Competence, Training and Awareness

Focus on Competence

- Awareness (every employee)
- Auditing
- Operational Control/Work Instruction (jobs associated with significant environmental impacts)
4.4.6 Operational Control

“Identify and plan operations associated with significant environmental aspects...in order to ensure they are carried out under specified conditions, by”

- Documented procedures where needed.
- Establishing procedures related to significant aspects of goods and services used by the organization.
- Communicating applicable procedures and requirements to suppliers including contractors.
4.4.7 Emergency Preparedness and Response

Identify potential accidents and emergency situations that have an impact on the environment

An organization must establish procedures to:

► Identify the potential for and respond to accidents and emergencies

► Prevent and mitigate the environmental impacts

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Monitoring and measuring
Evaluation of compliance
Non Conformity, corrective and preventive action
Control of records
Internal Audit
Measurement and Evaluation Can Reveal

- Non-conformances
- Faulty operations or work practices
Why do EMS problems occur?

► Poor communication

► Faulty or missing procedures

► Equipment malfunction (lack of maintenance)

► Lack of training

► Lack of understanding (of requirements)

► Failure to enforce rules

► Corrective actions fail to address root causes of problems
Top management shall periodically review the EMS. The review focuses on:

- Current level of environmental performance.
- Proposed improvements, changes, and new projects.
- Approvals and recommendations.
EMS Model

- Management Review
- Environmental Policy
- Continual Improvement
- Checking & Corrective Action
- Implementation & Operation
- Planning
Certification – Process

APPLICATION
AUDIT 1
AUDIT 2
CERTIFICATION
SURVEILLANCE
Organization Approach

Move Forward with Confidence
Over 80 years experience in freight transport.
LAN Cargo Services

- **Freight Forwarders and Personal Shipments**: pets, relocation and parcel.

- **General Cargo**: Non-perishable goods that require special treatment.

- **Perishables**: Cargo that maintains its original state for a short period, for example seeds, fruits, vegetables, fresh flowers, meats, among others.
LAN Cargo Services

► **Dangerous Goods:** Cargo that requires special attention and must comply with various governmental requirements to be transported by air.

► **Pharmaceuticals:** A comprehensive service that minimizes the time that the cargo is outside of the cold chain.

► **Live Animals:** All kinds of animals are transported on domestic and international routes, following the highest standards of quality.
LAN Cargo Services

- **Charters and Special Projects:** For customers that require a full or partial aircraft to ship cargo to places not regularly operated or those that need a more flexible schedule.

- **Courier:** Provides preferential priority boarding on flights for customers specializing in parcel delivery.

- **Special Solutions:** Find information on cargo or difficult to handle cargo, mail and; transportation of human remains.
Sustainability In LAN Cargo and Its Affiliates

Developed their own environmental policy in accordance to the commitments of the airline industry as supported by the International Air Transport Association.
Sustainability In LAN Cargo and Its Affiliates

These policies are based on four pillars:

1. Technological Investments
   - Fleet Upgrades
   - Noise Reduction
   - Installation of Winglets
Sustainability In LAN Cargo and Its Affiliates

2. Improvement of Operational Efficiency

- E-Freight
- Recycling of plastics
- LEAN Project
3. Building and Using an Efficient Infrastructure

► Energy Efficiency
4. Other Economic Measures

- Measuring Carbon Footprint
- Green Aviation Partners
- CO₂ Emissions Calculator
- Sustainability Report
Implementation in Miami of the EMS

- Much of what the EMS needs may be already on in place
- Exiting management processes
Implementation in Miami of the EMS

- Let’s Carpool!
- Cell Phone Donation Program
- Business Video Conference
- Recycling Program
Implementation in Miami of the EMS

Work Instructions
Implementation in Miami of the EMS

Records and top management commitment
Implementation Challenges?

- Cultural change, avoidance of the unknown.
- Developing awareness from all functional areas.
- Involving Top Performers and Managers.
- Obtaining and maintaining commitment.
- Maintain over time. (Focus on continual improvement to address the problems)
- High perceived cost and underestimation of benefits.
- Inadequate resources.
Who Should do the Implementation?

► The EMS implementation requires help and commitment from all the staff of the company. It is very important to have an Implementation leader, an Implementation internal team, and a Consultant provider.

► Implementing an EMS is going to be something that requires a real commitment from one or more key staff, and a smaller commitment from many staff in your organization.
Who should do the implementation?

Top management should communicate to all employees the importance of:

- Making the environment an organizational priority
- Integrating EMS throughout the organization
- Looking at problems as opportunities
Supporting EMS elements

- Identify and develop documents and records required.
- Conduct training needs assessment.
- Establish procedures or document procedures.
- Identify and develop required measuring and monitoring programs.
- Compliance audit.
- Review and take corrective action.
- Conduct management review.
Benefits of ISO 14001 EMS
The Benefits of ISO 14001

► Improved environmental performance
► Fewer accidents
► Improve public image
► Enhanced customer trust
► Meet customer requirements
The Benefits of ISO 14001

► Authenticity of ISO certification
► Reinforces or reorients market position
► Reduces the cost of waste management
► Provides an international advantage
► Limits legal liability
The Benefits of ISO 14001

► ISO standards are internationally accepted, unlike some EMS standards

► Legitimates an organization’s environmental efforts
The Benefits of ISO 14001

Market Positioning

► Reinforce
  • Reiterate adherence to environmentally friendly standards

► Reorient
  • Strategic shift to clearly signal a new alliance with sustainable practices
The Benefits of ISO 14001

Waste Management Costs

- Effectively managing waste drives efficiency
- Reduces the need for government regulation
- Reduces regulatory compliance costs
- Fewer expenses for disposing of toxic waste
The Benefits of ISO 14001

International Advantage

► Internationally competitive at a reduced cost

► May align subsidiaries with parent company’s environmental goals

► Strengthens international business relationships

► Provides access to new international markets
Limiting Legal Liability

► Continual assessment of legal exposure reduces the likelihood of heavy legal penalties

► Improved corporate image among regulators, customers, and the public

► An environmental disaster response system reduces economic and environmental damage
Legal and Other Requirements and the EMS
Who Are the Regulators and Enforcers Protecting the Environment?
4.3.2 Legal and Other Requirements

Understand Legal and Other Requirements (What is mandatory?)

An organization must identify legal and other requirements regarding their environmental aspects/impacts.
Legal and Other Requirements

Air Quality

Clean Water

Waste Control
Legal and Other Requirements

- Federal Clean Air Act
- Federal Clean Water Pollution Act
- Solid Waste Disposal Act (Resource Conservation and Recovery Act)
- Comprehensive Environmental Compensation & Liability Act (CERCLA)
- Federal Facility Compliance Act
- Federal Insecticide, Fungicide and Rodentine Act (FIFRA)
- Hazardous Material Transportation Act
- Marine Protection, Research and Sanctuaries Act
- National Environmental Policy Act (NEPA)
- Oil Pollution Act (OAA)
- Safe Drinking Water Act (SDWA)
- Superfund Amendments and Reauthorization Act (SARA)
- Toxic Substance Control Act (TSCA)
- Used Oil Recycling Act
### 4.3.3 Legal and Other Requirements

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### FEDERAL
- Title 40 CFR – Protection of the Environment

### STATE
- Air Pollution Control
- Chapter 62– Florida Administrative Code
- Waste Management Rules (AST, Hazardous Waste, Used Oil Management)
- Soil & Groundwater Cleanup Target Levels
- Surface Water and Wetlands Rules

### LOCAL
- Development of Cleanup Target Levels (CTLs) for Chapter 24, Code of Miami-Dade County
- South Florida Water Management District
4.5.2 Evaluation of Compliance

Compliance evaluation with legal and with other requirements.

Consistent with its commitment to compliance, the organization shall establish, implement and maintain a procedure(s) periodically evaluating compliance with applicable legal requirements.

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  - Internal audit
  - Management review
Future of ISO 14001
Use of high level structure may be the most significant change.

It is unclear what other changes will survive the multiple working drafts.

It is clear that there will be no reduction or diminution in the requirements of ISO 14001.
Future of ISO 14001

ISO 14001 Revision prompts greater focus on Environmental Compliance

► Revision will result in a higher demand for regulatory compliance services

► Move toward integrating a more proactive approach to legal compliance

► Required to demonstrate knowledge and understanding of their legal compliance status.
Contact Information

If you would like more information, please contact me.

THANK YOU!

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