

SECTION 1

PRESENTATION

This section of the workbook contains copies of presentation overheads, two to a page. Space has been provided on the right side of each page for entering important notes and comments.

Introduction to ISO 14001 Implementation

Slides

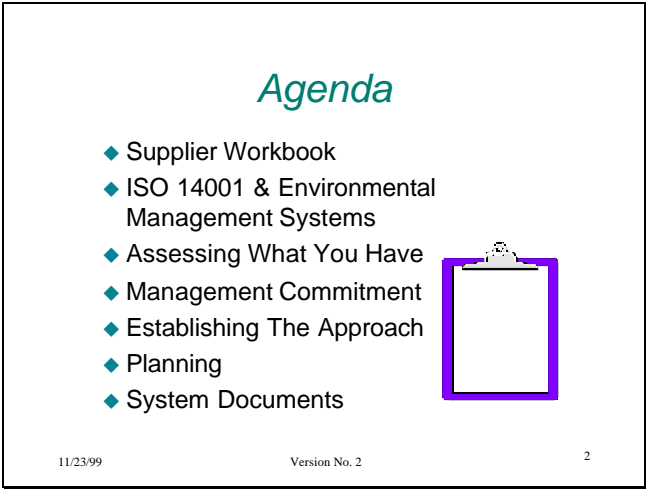
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*Introduction to ISO 14001
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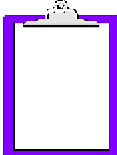


Protecting the Environment is Everyone's
Job



Agenda

- ◆ Supplier Workbook
- ◆ ISO 14001 & Environmental Management Systems
- ◆ Assessing What You Have
- ◆ Management Commitment
- ◆ Establishing The Approach
- ◆ Planning
- ◆ System Documents




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ISO 14001 Supplier Workbook

Purpose 

- ◆ Learning aid in visualizing EMS documents
- ◆ Jump start to development & implementation
- ◆ EMS Template fulfills ISO 14001 4.4.4 requirement for system documentation (i.e., EMS Manual)

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ISO 14001 Supplier Workbook

Contents 

- ◆ Presentation slides
- ◆ Launch & implementation tools
- ◆ EMS template (must be modified to address local considerations)
- ◆ Resources


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EMS Template



Contents


- ◆ EMS manual & appendices - identifies EMS documents and relationship to ISO 14001
- ◆ Environmental policy
- ◆ Aspects, objectives & targets
- ◆ Legal & other requirements
- ◆ Environmental management programs

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EMS Template

Contents

- ◆ Structure & responsibility
- ◆ Training matrix
- ◆ Procedures
- ◆ Work practices
- ◆ Master document list
- ◆ Master records list



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ISO 14001 & Environmental Management Systems




The Basics

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Birth Of An EMS Standard




- ◆ September 1996- ISO 14001 EMS finalized
 - "Environmental Management Systems- Specification With Guidance For Use"
- ◆ International Organization For Standardization 
- ◆ ISO 9001 & 9002 QMS created by same organization

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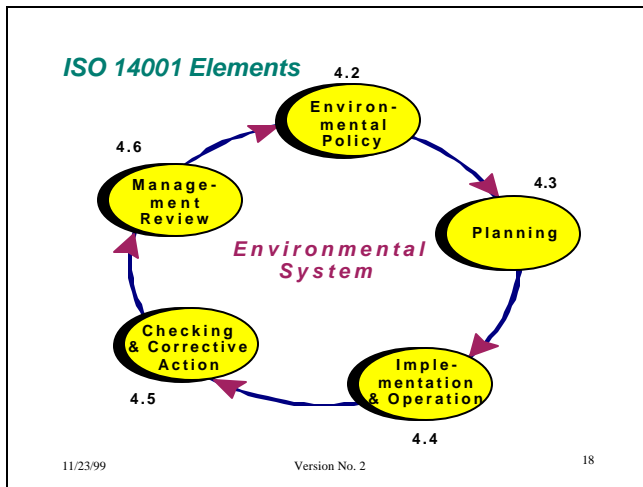


Definitions

- ◆ **Env. Management Program:** documented plan for achieving an objective & target that includes:
 - Responsibilities
 - Means
 - Time frames

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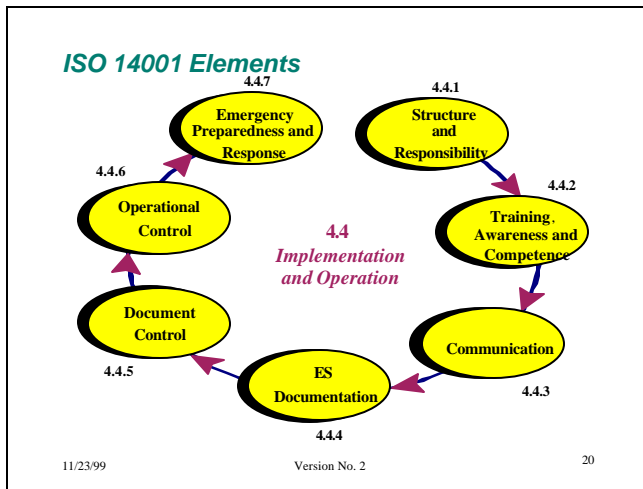


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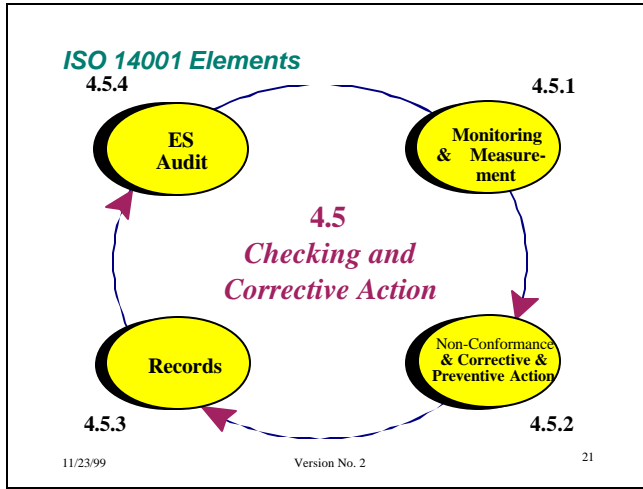


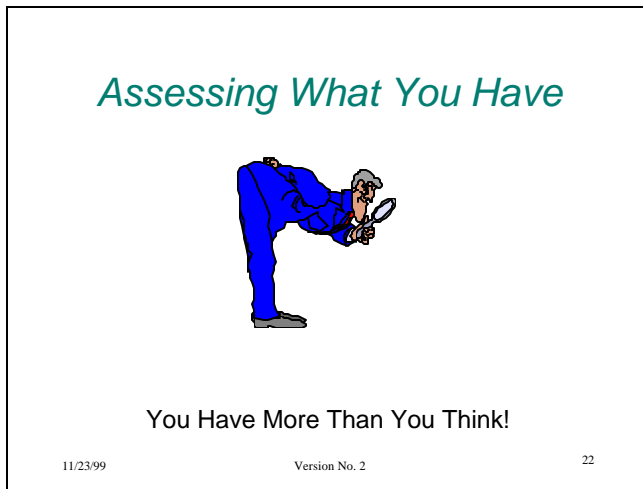


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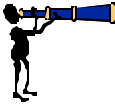
Assessing What You Have

Review Ford & Other Requirements 

- ◆ ISO 14001 registration
- ◆ Material restrictions (WSS-M99P9999-A1)
- ◆ Recyclable plastic & polymeric materials (E4)
- ◆ Packaging solutions
- ◆ Material approval - production & non-production

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Assessing What You Have

 Review What You Do Have

- ◆ Identify current management systems (Environmental, Quality, Health & Safety, etc.)
 - How were systems implemented?
 - What are the system elements?
 - What works & what doesn't?
 - Where are the opportunities?

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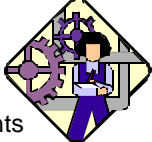
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Assessing What You Have

Review What You Do Have




- ◆ Identify operating components
 - Applicable areas & departments?
 - What processes, activities & services are in each?
 - External support?

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Assessing What You Have

Review What You Do Have



- ◆ Document key information
 - What products are made?
 - What materials are used?
 - What types of wastes & discharges are generated?
 - What sources of energy are required?


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Assessing What You Have

Determine Resource Needs 

- ◆ Resources depend on:
 - Size & complexity of facility
 - ISO 9001/2 registration
 - Applicable environmental requirements
 - Workloads

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Assessing What You Have

Determine Resource Needs 

- ◆ General assumptions
 - Development & implementation: 10 months
 - Awareness training: 45 min per employee
 - Procedure training: 15 min per procedure & employee

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Management Commitment

Management Launch Meeting

- ◆ Provide understanding of benefits, requirements & effort
- ◆ Select an EMR & CFT
- ◆ Establish registration date
- ◆ Document commitment



>Section 2: Launch & Implementation Tools<

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Management Commitment

Launch Document

- ◆ Management meeting launch guidance
- ◆ Meeting agenda
- ◆ Meeting announcement
- ◆ Commitment memorandum
- ◆ CFT roles & responsibilities



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Management Commitment

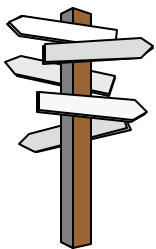


Potential Cross Functional Team Members

- Environmental
- Quality
- Engineering
- Material Handling
- Controller's Office
- Human Resources
- Maintenance
- Training
- Production
- Safety

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Establishing The Approach



Pick The Right Path

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Establishing The Approach


- ◆ Obtain management commitment
- ◆ Train Cross Functional Team (CFT) & others on ISO 14001 requirements
- ◆ Establish development & implementation plan
- ◆ Develop & implement EMS
- ◆ Obtain management approval
- ◆ Obtain registration



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Establishing The Approach

Establish Development & Implementation Plan



- ◆ Develop clear understanding of implementation path
- ◆ Establish realistic implementation schedule

>Section 2: Launch & Implementation Tools<


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Establishing The Approach

Develop & Implement System 

- ◆ Identify what you already have & use it!
- ◆ Distribute responsibilities among Cross Functional Team (CFT) and others
- ◆ CFT can't do it all!

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Establishing The Approach

Obtain Management Approval 

- ◆ Obtain approvals after completing major development & implementation milestones
- ◆ Document approvals in meeting minutes
- ◆ Obtain final approval of entire system

>Section 2: *Launch & Implementation Tools* <
>As Starting Point<

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Environmental Aspects


ISO 14001, 4.3.1 Environmental Aspects



- ◆ Organization responsible for identifying and maintaining aspects
- ◆ Include those under control or influence
- ◆ Used to set environmental objectives
- ◆ Information kept current

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Environmental Aspects



- ◆ General trash
- ◆ Spent aerosol cans
- ◆ Welding fumes
- ◆ Waste paint & solvents
- ◆ Automotive exhaust
- ◆ Paint spray emissions
- ◆ Car wash water
- ◆ Compressed air use
- ◆ Electricity
- ◆ Natural gas
- ◆ Wastewater discharge
- ◆ Storm water runoff
- ◆ Storage tanks
- ◆ Contaminated land

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Notes


Environmental Aspects

- ◆ Aspect types
 - Controlled
 - Influenced
 - Potential
 - Actual
- ◆ Environmental aspect categories
 - Used to organize aspects



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Aspect Categories



- ◆ Material use
- ◆ Air emissions
- ◆ Water use
- ◆ Energy use
- ◆ Stormwater discharges
- ◆ Storage tanks
- ◆ Wastewater discharges
- ◆ Solid & liquid waste
- ◆ Noise
- ◆ Odor
- ◆ Natural environment
- ◆ Land condition

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Identifying Aspects

- ◆ Identify all areas & departments
- ◆ Identify corresponding activities, processes & services
- ◆ Use 2 to 3 people teams (1 from area or dept.)
- ◆ For each aspect category ask:
 - do we have or could we have ...?
- ◆ Record specific aspects



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Legal and Other Requirements



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Legal & Other Requirements

ISO 14001, 4.3.2 Legal & Other Requirements


- ◆ Procedure for identifying and accessing legal & other requirements
 - Federal, provincial/state, and local regulations
 - Corporate requirements
 - Industry-specific requirements
- ◆ Applicable to environmental aspects



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Legal & Other Requirements

EP-007 Env. Regulations and Other Requirements



- ◆ Env. coordinator maintains access to & list of:
 - Federal, provincial/state & local regulations
 - Other requirements
- ◆ Env. coordinator communicates requirements to applicable areas & departments

>Section 3, Tab C: Legal & Other Requirements<

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Notes

Legal & Other Requirements

EP-009 Agency Approvals



- ◆ Env. coordinator & permit team determines need for environmental permits and develops applications
- ◆ Environmental Management Representative (EMR) communicates with regulatory agencies
- ◆ EMR communicates permit issues with management

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Environmental Legal Requirements

ASPECT	REQUIREMENT	CITATION/ SOURCE
Material Usage	GENERAL ENVIRONMENTAL REQUIREMENTS	
	Hazardous Substances and Reportable Quantities (CERCLA)	40 CFR Part 302
	Hazardous Chemical Reporting: Community Right To Know (SARA Title III)	40 CFR Part 370
	Toxic Chemical Release Reporting: Community Right To Know (SARA Title III)	40 CFR Part 372

>Section 3, Tab C: Legal & Other Requirements<


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Significant Aspects




- ◆ Aspects that can cause a significant change to the environment (significant impact)
- ◆ Change could be negative or positive
 - Example: global warming from CO₂ emissions
 - Example: wetland preservation
- ◆ Only significant aspects are further managed
- ◆ CFT evaluates aspects for significance

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Significant Aspect Criteria

EP-002 Environmental Aspects, Objectives ...



- ◆ Regulated (or other requirement)
 - Example: hazardous waste
- ◆ Potential for release
 - Example: propane from storage tank

>Section 3: EMS Template<

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Significant Aspect Criteria

EP-002 Environmental Aspects, Objectives ...

- ◆ Business plan and energy usage
 - Example: natural gas usage
- ◆ Environmental load
 - Example: plastic containers




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Significant Aspect Criteria

EP-002 Environmental Aspects, Objectives ...

- ◆ Environmental load
 - Toxicity
 - Restricted substance
 - Amounts (volume & mass of releases, resource consumption)
 - Frequency & severity



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Notes

Documentation of Aspects

EP-002 Environmental Aspects, Objectives ...




- ◆ CFT identifies aspects and significant aspects
- ◆ Rationale for significance documented
- ◆ Aspects reviewed every six months
- ◆ Process & facility changes reviewed

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Objectives & Targets

ISO 14001, 4.3.3 Objectives and Targets

- ◆ Establish and maintain objectives & targets
- ◆ Must consider:
 - Legal & other requirements
 - Significant env. aspects
 - Technological options
 - Financial, operational & bus.requirements
 - Views of interested parties



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Objective Categories

EP-002 Environmental Aspects, Objectives ...




- ◆ Objectives & targets established for all significant aspects
- ◆ CFT reviews performance of objectives & targets every 6 months

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Objective Categories

EP-002 Environmental Aspects, Objectives ...



- ◆ Control/Maintain
 - Maintain existing program
- ◆ Improve
 - Reduce usage
- ◆ Investigate/Study
 - Study the feasibility

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Notes

Objectives & Targets


- ◆ **Objective**- an environmental goal
 - e.g., Reduce energy
 - e.g., Maintain regulatory compliance
 - e.g., Study material substitution
- ◆ **Target**- amount & when goal will be met
 - e.g., 10%, rate basis, from 1994 by 2002
 - e.g., Ongoing
 - e.g., Complete by Jan. 2001



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Aspects, Objectives & Targets
Example Forms

- ◆ **Example No. 1**
 - Environmental Aspects
- ◆ **Example No. 2**
 - Environmental Aspects, Objectives & Targets
- ◆ **Example No. 3**
 - Environmental Aspects, Objectives and Targets
- ◆ **Example No. 4**
 - Significant Aspects Summary, Operational Controls



>Section 3, Tab B: Aspects, Objectives & Targets<

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Environmental Policy

ISO 14001, 4.2 Environmental Policy

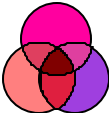


- ◆ Appropriate to the nature, scale & environmental impacts of activities, products, or services
- ◆ Commitment to continual improvement & prevention of pollution
- ◆ Commitment to comply with regulations & other requirements

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Environmental Policy

ISO 14001, 4.2 Environmental Policy



- ◆ Provides the framework for setting & reviewing environmental objectives & targets
- ◆ Documented, implemented and maintained
- ◆ Communicated to all employees
- ◆ Available to the public

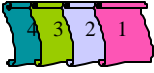
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Environmental Management Programs
Example Programs



- ◆ **Example No. 1**
 - Regulatory Compliance Program
- ◆ **Example No. 2**
 - Managed Material Program
- ◆ **Example No. 3**
 - Reduce Energy Program
- ◆ **Example No. 4**
 - Waste Minimization Program


>Section 3, Tab D: Management Programs<

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Environmental Management Programs

EP-002 Environmental Aspects, Objectives ...

- ◆ EMPs should be created to address:
 - Pollution prevention/Waste minimization
 - Energy management
 - Materials management
 - Compliance assurance




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Notes

EMS Documentation



- ◆ EMS manual
- ◆ Environmental Policy
- ◆ Roles & responsibilities
- ◆ Legal & other requirements
- ◆ Aspects
- ◆ Objectives & targets
- ◆ EMPs
- ◆ Training matrix
- ◆ Procedures & forms
- ◆ Work practices
- ◆ Master document list
- ◆ Master records list
- ◆ References

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EMS Template - Procedures

No.	Title	ISO 14001
EP-001	Formatting Environmental Procedures, Work Practices and Forms	N/A
EP-002	Environmental Aspects, Objectives and Targets, and Management Programs	4.3.1 4.3.3 4.3.4
EP-003	Environmental Management System and Regulatory Compliance Audits	4.5.4

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EMS Template - Procedures

No.	Title	ISO 14001
EP-004	Non-Conformance and Corrective and Preventive Action	4.5.2
EP-005	Environmental Management System Management Review	4.6
EP-006	Emergency Preparedness and Response	4.4.7
EP-007	Environmental Regulations and Other Requirements	4.3.2

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EMS Template - Procedures

No.	Title	ISO 14001
EP-008	Environmental Review of Projects	4.3.1
EP-009	Agency Approvals	4.4.6
EP-010	Environmental Communication	4.4.3
EP-011	Contractor Control	4.4.6

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EMS Template - Procedures

No.	Title	ISO 14001
EP-012	Environmental Document Control	4.4.5
EP-013	Environmental Records	4.5.3
EP-014	Environmental Training and Awareness	4.4.2
EP-015	Monitoring and Measurement	4.5.1

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Master Document List



>Section 3, Tab G: Master Document List<

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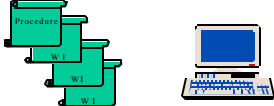
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Document Control

**Document Control Ensures
That Only Approved
Documents Are Available For
Use**




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Document Control

ISO 14001, 4.4.5 Document Control

- ◆ Develop procedure to control documents
 - Can be located
 - Reviewed, revised, & approved
 - Current versions available
 - Obsolete documents properly handled
 - Legible, dated, identifiable, and maintained



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Notes

Document Control

EP-012 Environmental Document Control




- ◆ EMR or designee maintains master documents & issues controlled copies
- ◆ CFT reviews & approves changes to EMS documents
- ◆ Documents marked "Controlled Document"
- ◆ Documents available where needed

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Records

ISO 14001, 4.5.3 Records



- ◆ Procedure for records management
- ◆ Records must be legible, identifiable, & traceable to the activity, product, or service
- ◆ Protected against damage, deterioration, or loss
- ◆ Retained for a specified period

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Records

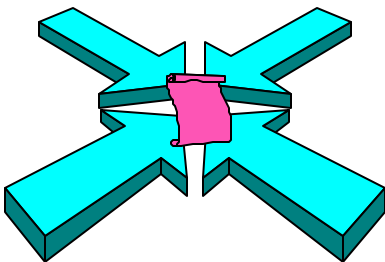
EP-013 Environmental Records



- ◆ Records retained as specified in Index of Environmental Records
- ◆ Retention consistent with legal & other requirements
- ◆ Responsible personnel access master list of records relevant to their area or department

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Index of Environmental Records



>Section 3, Tab H: Master Records List<

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Structure & Responsibility
ISO 14001, 4.4.1 Structure & Responsibility

- ◆ Define roles, responsibilities & authorities
- ◆ Provide adequate resources
 - Human resources, specialized skills, technology & financial resources
- ◆ Appoint EMR

>Section 3, Tab E: Structure & Responsibilities<

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Operational Controls
ISO 14001, 4.4.6 Operational Controls

- ◆ Identify operations & activities associated with significant aspects
- ◆ Procedure needed where absence could lead to deviations from policy, objectives & targets
- ◆ Communicate procedures to contractors where applicable

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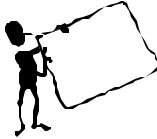
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Notes

Operational Controls

Types of Operational Controls

- ◆ Operational procedures
- ◆ Work practices
- ◆ EMPs
- ◆ Permits/Legal & other requirements
- ◆ Visual aids
- ◆ Manuals & plans

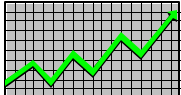


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Monitoring & Measurement

ISO 14001, 4.5.1 Monitoring & Measurement

- ◆ Procedure(s) to monitor & measure key characteristics of processes & activities
- ◆ Record information to track performance
- ◆ Calibration procedures
- ◆ Procedure for regulatory compliance audits



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Monitoring & Measurement

ISO 14001, 4.5.1 Monitoring & Measurement

- ◆ Key characteristics associated with significant aspects
 - volumes (e.g., gallons of spent paint)
 - weights (e.g., tons of metal scrap)
 - rates (e.g., number of car repairs per day)




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Monitoring & Measurement

EP-015 Monitoring & Measurement

- ◆ Internal audits monitor conformance to objectives & targets
- ◆ Environmental performance monitored per Env. Management Programs (EMPs)
- ◆ Operational controls monitored per EMPs, procedures, work practices & visual aids



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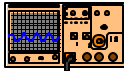
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Monitoring & Measurement

EP-015 Monitoring & Measurement



- ◆ Calibrate per manufacture's recommendations or at least annually
- ◆ Calibration & maintenance addressed in maintenance program or work practices
- ◆ Area/Department list of equipment to be calibrated & frequency

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Training

ISO 14001, 4.4.2 Training, Awareness & Competence



- ◆ Identify training needs
- ◆ Establish training procedures
 - Importance of conformance
 - Consequences of departure from procedures
- ◆ Personnel competent by education, training, and/or experience

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Training

EP-014 Environmental Training and Awareness




- ◆ Training department completes Training Needs Analysis (TNA) and training schedule, reviews at least annually and revises as necessary
- ◆ Permanent on-site contractors included in training program
- ◆ Training records maintained by Training dept.

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Training

Training Needs Matrix



- ◆ Environmental Courses
- ◆ Procedures and Work Instructions by Area / Department

>Section 3, Tab F: Training Matrix<

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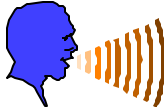
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Notes

Communications

ISO 14001, 4.4.3 Communications

- ◆ Procedure for internal and external communications
- ◆ Between various levels and functions
- ◆ Document & respond to external communications (e.g., requests for info)
- ◆ Record decision for external communication of significant aspects

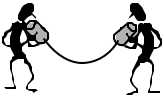


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Communications

EP-010 Environmental Communication

- ◆ CFT communicates employee concerns to management
- ◆ Area/Dept. managers communicate legal & other changes to employees
- ◆ HR Manager and EMR involved in external communication with interested parties
- ◆ Communications documented



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Emergency Preparedness & Response

ISO 14001, 4.4.7 Emergency Prep. & Response




- ◆ Procedure(s) to identify potential & respond to accidents & emergencies
- ◆ Focus on prevention & mitigation
- ◆ Process for review and modification
- ◆ Periodically test procedures, where needed

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Emergency Preparedness & Response

EP-006 Emergency Prep. & Response



- ◆ CFT identifies potential incidents semi-annually
- ◆ Emergency Response Coordinator develops and maintains emergency response methods
- ◆ Methods tested at least annually

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Emergency Preparedness & Response

EP-006 Emergency Prep. & Response

- ◆ Response activities conducted within bounds of training, procedures and regulatory expectations
- ◆ Corrective & preventative actions initiated following incidents & emergencies




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Env. Review of Projects

EP-008 Env. Review of Projects

- ◆ Initiating Activity completes Env. Checklist with appropriation request
- ◆ EMR reviews request & checklist
- ◆ EMR or designee identifies aspects
- ◆ Environmental issues resolved with Initiating Activity




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Notes


Contractor Control

EP-011 Contractor Control 

- ◆ Facility provides information to contractors to ensure awareness of EMS
- ◆ Contractors submit Method Statements to Initiating Activity prior to working on-site
- ◆ Contractors conform to EMS requirements, ensure staff awareness & maintain records

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EMS Audits

ISO 14001, 4.5.4 EMS Audits 

- ◆ Procedure to determine conformance to ISO 14001 requirements & planned arrangements
- ◆ Audits prove conformance
- ◆ Results reported to management
- ◆ Audit schedule based on importance & results of previous audits

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EMS Audits

Types of Audits

- ◆ 1st Party - Conducted by facility staff
- ◆ 2nd Party - Conducted by personnel not associated with facility (e.g., corporate staff, consultant)
- ◆ 3rd Party - Conducted by registrar or regulatory authority



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EMS Audits

EP-003 EMS & Regulatory Compliance Audits

- ◆ Quality Manager responsible for EMS audits
- ◆ Audit team independent of area being audited
- ◆ EMR responsible for compliance audits
- ◆ Nonconformances recorded on Corrective and Preventative Action Requests (CARs)
- ◆ Open CARs reported to management

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Notes

*Nonconformance & Corrective
And Preventive Action*

ISO 14001, 4.5.2 Nonconformance and
Corrective and Preventive Action




- ◆ Procedure for handling & investigating nonconformances
- ◆ Mitigate impacts and correct & prevent problems
- ◆ Modify procedures, as applicable

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*Nonconformance & Corrective
And Preventive Action*

EP-004 Nonconformance and Corrective ...



- ◆ Response to nonconformances and noncompliances:
 - ID root cause
 - Determine corrective & preventative actions
 - Implement actions & verify effectiveness

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Notes

*Nonconformance & Corrective
And Preventive Action*

EP-004 Nonconformance and Corrective ...




- ◆ Nonconformances and noncompliances identified outside audit process
- ◆ Quality Manager creates Corrective and Preventative Action Requests (CARs) for nonconformances, as appropriate
- ◆ EMR creates CARs for noncompliances

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Management Review

ISO 14001, 4.6 Management Review



- ◆ Top management (i.e., facility/plant management) reviews suitability of EMS at defined intervals
- ◆ Comprehensive & documented review
- ◆ Assess the need for changes to EMS in-line with commitment to continual improvement


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Notes

Management Review



EP-005 EMS Management Review

- ◆ Management reviews EMS annually
- ◆ EMR reports on EMS performance
- ◆ Corrective actions assigned to responsible managers
- ◆ Meeting records maintained by EMR

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Registration Process

- ◆ Certification Audit
 - Pre-assessment review
 - Main audit
- ◆ Surveillance audits
- ◆ Re-certification audit



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Registration Process

Certification Audit

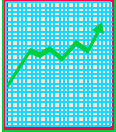


- ◆ Main audit
 - Major & minor nonconformances
- ◆ Auditors recommend, Registrar decides
- ◆ Certificate of registration good for 3 years - maybe

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Registration Process

Surveillance Audits



- ◆ At least annually
- ◆ Proof of continual EMS improvement
- ◆ Look for systemic problems
- ◆ Major nonconformance could effect re-certification

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Registration Process


Re-Certification Audits



- ◆ Every three years by Registrar's auditors
- ◆ Same approach as Certification Audit

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Protecting the Environment is
Everyone's Job,
And So Is Maintaining the EMS!



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