

ISO 14001

Registration Process and Common Nonconformances



**NSF International
Strategic Registrations, Ltd.**

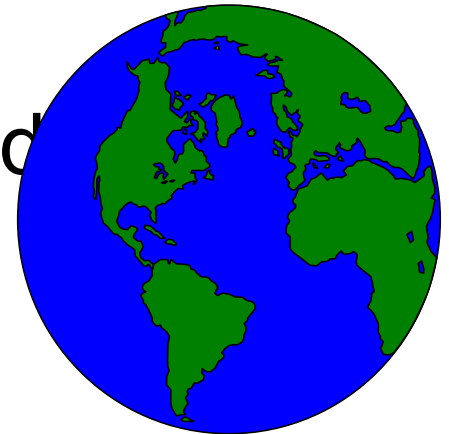


International Organization for Standardization (ISO)

ISO=Equal (Greek)

Non-governmental organization
(NGO) established in 1947,
based in Geneva, Switzerland

American National Standards
Institute (ANSI) is U.S.
representative to ISO



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History

1987 - World Commission on Environment & Development called for the development of effective environmental management systems by industries

1989 - Creation of Strategic Advisory Group on the Environment (SAGE), which recommended new ISO Technical Committee to develop standards for environmental management

1993 - ISO creates TC 207

1996 – ISO 14001 adopted

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Sub-Committees of TC 207

SC 1: EMS - UK

SC 2: Env. Auditing - Netherlands

SC 3: Env. Labeling - Australia

SC 4: Env. Performance Evaluation -
US

SC 5: Life Cycle Assessment - France

SC 6: Terms and Definitions - Norway

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ISO 14000 Standards

ISO 14000 is a series of standards, rather than a single standard.

- Environmental Management Systems
- EMS general guidelines
- Guidelines for Environmental Auditing
- Guidelines for Auditing of an EMS
- Auditing - Qualification criteria
- Life cycle assessment
- Labeling, and other matters.

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To whom do the standards apply?

The ISO 14000 standards can be applied to:

- large and small business & industry;
- service sectors (hospitals, hotels, etc.);
- government organizations;
- all types of organizations, of all sizes anywhere in the world.

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What is an EMS?

An Environmental Management System is:

- a systematic way of managing an organization's environmental aspects;
- based on the Plan-Do-Check-Act (PDCA) model;
- focused on continual improvement of systems;
- a tool to improve environmental performance.

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External Drivers for ISO 14001

Requirements from customers

- e.g. **IBM, Xerox, Bristol-Myers Squibb, Ford, GM, Honda, Volvo, and others**

Agreements with regulators

Trade barrier reduction

Enhanced public image

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Internal Drivers for ISO 14001

An EMS:

- **helps track and satisfy regulatory requirements;**
- **supports effective delegation of responsibilities;**
- **reduces disruption caused by employee turnover;**
- **establishes a framework to move beyond compliance;**
- **consolidates existing environmental, safety, and health programs into a cohesive system.**

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Becoming ISO 14001 registered

The registration body examines EMS for conformity to the ISO 14001 standard.

The EMS audit is not a compliance audit.

Registration means the organization has a documented EMS that is fully implemented and meets ISO 14001 requirements.

Registration does NOT mean that products are more environmentally friendly.

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Basic Six Step Process

Application

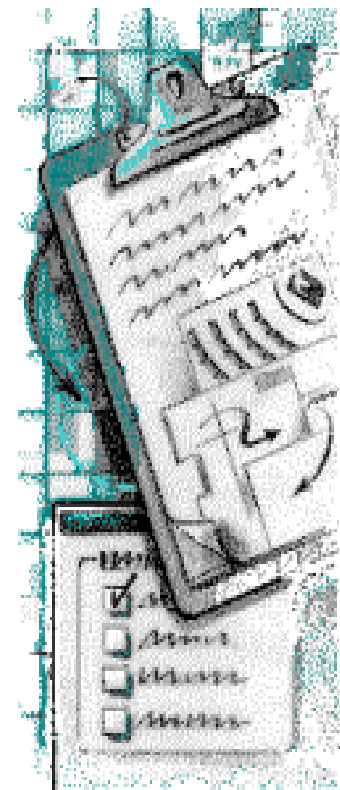
Desk Audit

On-site Readiness Review

Registration Audit

Registration Determination

Surveillance



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Step 1: Application

Determination of scope

Determination of number audit days required

Assignment of lead auditor

Determination of additional services desired

- Baseline Assessment
- Implementation Guides
- Standards and Publications
- Strategic Management Review
- Integrated Audits
- Training

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Step 2: Desk Audit

Client submits a copy of EMS manual and policies.

Lead Auditor conducts complete review of EMS documentation.

Lead Auditor identifies issues which could become nonconformances during registration audit.

Desk audit includes verification of coverage of elements required by the standard.

Desk audit and Onsite Readiness Review are used to determine preparedness to continue with registration.

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Step 3: On-site Readiness Review

Audit team meets staff and tours facilities.

Team and staff review desk audit report.

Audit team evaluates aspect identification and evaluation process.

Team conducts detailed review of procedures and work instructions.

Audit team reviews any identified issues and corrective actions.

Team conducts evaluation of EMS audit and management review functions.

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Step 4: On-site Registration Audit

Evaluation of implementation conformance and operational effectiveness of EMS

- **Does the EMS support the environmental policy?**

Extensive interviews and examination of documents to evaluate:

- **Planning**
- **Implementation and Operation**
- **Checking and Corrective action**



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Step 5: Registration Determination

Recommendation given in closing meeting:

- Recommend registration
- Recommend registration after corrective actions
- Recommend onsite re-audit

NSF-ISR management makes decision on registration.

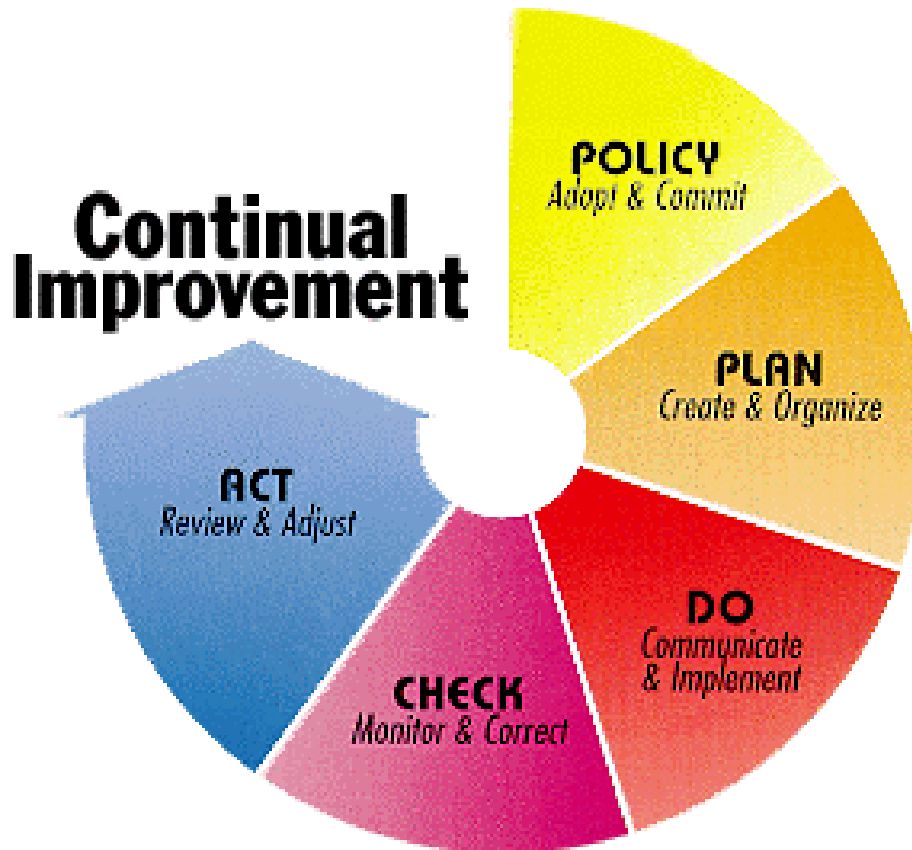
Per accreditation body requirements, the audit team does not make final decision.

Certificate is issued immediately and organization is added to public register.

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Step 6: Surveillance



All ISO 14001 elements audited over 3 years, using one of the following options:

- Annual surveillance cycle with third year re-audit required
- Semi-annual surveillance cycle with no third year re-audit required

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ISO 14001 - 17 Key Elements

Environmental Policy

– requires a publicly available, written statement, which includes

- a commitment to prevention of pollution
- a commitment to continual improvement
- a commitment to compliance with environmental laws and other applicable environmental requirements;

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4.2 Environmental Policy

Common nonconformances:

Failure to make required commitments explicit in policy statement;

Failure to include commitment to comply with other requirements to which the organization subscribes;

Inadequate communication of policy to members of the organization.

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ISO 14001 - 17 Key Elements

Environmental Aspects

- requires procedures for identification of environmental aspects of the organization's activities and determination of those which have or can have significant impacts on the environment;

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ISO 14001 - Definitions

Environmental aspect

- element of an organization's activities, products or services that can interact with the environment

Environmental impact

- any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's activities, products or services

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4.3.1 Environmental Aspects

Common nonconformances:

Failure to develop a functional process for:

- identifying environmental aspects;
- determining which can be controlled;
- determining which have or can have significant impacts on the environment.
- keeping aspects current

This constitutes a major nonconformance.

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ISO 14001 - 17 Key Elements

Legal and Other Requirements

- requires the organization to know exactly what environmental laws and other (i.e. non-regulatory) requirements apply to its activities;

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4.3.2 Legal and Other Requirements

Common nonconformances:

Incomplete awareness of requirements

Failure of the organization's procedures to maintain
currency of reference documents

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ISO 14001 - 17 Key Elements

Objectives and Targets

- requires the organization to set measurable environmental objectives and targets consistent with its environmental policy statement;

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ISO 14001 - Definitions

Environmental objective

- overall environmental goal, arising from the environmental policy, that an organization sets itself to achieve, and which is quantified where practicable

Environmental target

- detailed performance requirement, quantified where practicable...

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4.3.3 Objectives and Targets

Common nonconformances:

Inability to show consideration for:

- legal and other requirements;
- technological options;
- financial, operational and business requirements;
and views of interested parties.

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ISO 14001 - 17 Key Elements

Environmental Management Programs

- requires the organization to develop and maintain programs to achieve its environmental objectives and targets;

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4.3.4 Environmental Management Program

Common nonconformances:

Detail on means and time frames for achievement of objectives and targets not specified

Programs not being updated as facility operations change

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ISO 14001 - 17 Key Elements

Structure and Responsibility

- requires environmental management responsibilities to be clearly defined, documented, and communicated;

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4.4.1 Structure and Responsibility

Common nonconformances:

Personnel responsible for components of EMS not specified in documentation;

Structure and responsibility documentation not kept up to date with personnel changes.

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ISO 14001 - 17 Key Elements

Training, Awareness, and Competence

- requires processes to ensure that all personnel whose work can cause significant impacts on the environment are competent, through training, education and experience;

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4.4.2 Training, Awareness and Competence

Common nonconformances:

Inadequate identification of training needs;

Failure to make personnel aware of significant environmental impacts of their work activities and the potential consequences of departure from procedures;

Failure to complete training where a need has been identified.

Training of temps and new personnel

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ISO 14001 - 17 Key Elements

Communication

- **requires procedures for internal and external communication on EMS and environmental aspects;**
- **This section includes a requirement for organizations to consider processes for external communication on their EMS and environmental aspects, and record their decisions.**

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4.4.3 Communication

Common nonconformances:

Failure to document responses to external communications

Failure to document decision regarding external communication on EMS and environmental aspects

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ISO 14001 - 17 Key Elements

EMS Documentation

- requires documentation of core EMS elements;

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4.4.4 Environmental Management System Documentation

Common nonconformances:

Broken links between EMS documentation elements (e.g. references to related documents not provided or inaccurate).

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ISO 14001 - 17 Key Elements

Document Control

- requires stringent control of all documentation relating to the EMS;

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4.4.5 Document Control

Common nonconformances:

Inadequate identification of EMS documents (“all documents required by this International Standard”);

Review and retention periods not specified;

Reviews and revisions not kept up to date;

Distribution of current versions and retrieval of obsolete versions not maintained in accordance with procedures;

Document control procedures not adequately applied to documents predating implementation of EMS.

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ISO 14001 - 17 Key Elements

Operational Control

- requires identification of all activities with potential or actual significant environmental impact and procedural control to achieve conformance with the environmental policy.
- Includes control of goods and services used, e.g. contractors and suppliers.

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4.4.6 Operational Control

Common nonconformances:

Operations and activities associated with significant environmental aspects not fully identified;

Maintenance processes omitted;

Operational control procedures not fully established (e.g. not documented where required, not followed consistently, etc.);

Suppliers and contractors left out of operational control and/or aspect evaluation process, or not adequately covered;

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ISO 14001 - 17 Key Elements

Emergency Preparedness and Response

- requires identification of potential for accidents and emergency situations, and procedures for response and mitigation of resulting environmental impacts;

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4.4.7 Emergency Preparedness and Response

Common nonconformances:

Procedure not established for identifying potential for accidents and emergency situations;

Procedures not reviewed following accidents;

Emergency preparedness and response procedures not periodically tested.

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ISO 14001 - 17 Key Elements

Monitoring and Measurement

- requires procedures to measure key environmental aspects for progress toward meeting objectives and targets
- requires procedures for evaluating compliance with regulatory requirements;

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4.5.1 Monitoring and Measurement

Common nonconformances:

Key characteristics of significant environmental impact-related activities not identified, leading to problems with developing measurement and monitoring procedures;

Periodicity not set for monitoring and measurement procedures;

Processes for tracking environmental performance versus targets and control requirements not adequately defined in monitoring and measurement procedures;

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4.5.1 Monitoring and Measurement

Common nonconformances:

Monitoring equipment not calibrated and/or records not kept in accordance with ISO 14001;

Procedure for periodically evaluating compliance with relevant environmental legislation and regulations not documented in accordance with ISO 14001 section 4.4.5 (e.g. using an existing permit);

Procedure for evaluating compliance does not adequately cover evaluation of compliance.

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ISO 14001 - 17 Key Elements

Nonconformance and Corrective and Preventive Action

- requires procedures for taking preventive and corrective action on any EMS nonconformances and supports continual improvement of the system;

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4.5.2 Nonconformance and Corrective and Preventive Action

Common nonconformances:

Nonconformances and corrective action follow-up are not tracked and handled in accordance with the organization's procedures;

Nonconformances and corrective action follow-up are not handled in the time frames specified by the organization;

Certain types of nonconformance (e.g. registration & surveillance audit) are not taken into account during procedure development.

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ISO 14001 - 17 Key Elements

Records

- **requires procedures for handling and disposition of environmental records;**

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4.5.3 Records

Common nonconformances:

Environmental records not adequately identified by the organization, leading to other nonconformances;

Retention times for environmental records not established and/or recorded;

Records maintenance procedures not followed.

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ISO 14001 - 17 Key Elements

EMS Audit

- **requires the organization to periodically audit itself for conformance with the requirements of its EMS;**

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4.5.4 EMS Audit

Common nonconformances:

EMS audit procedures don't meet ISO 14001 content requirements (e.g. frequency, methodologies, and responsibilities and requirements for conducting audits and reporting results);

EMS audits not conducted in accordance with the organization's procedure(s) - Major nonconformance;

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ISO 14001 - 17 Key Elements

Management Review

- requires top management to periodically review the EMS for effectiveness in achieving the intent of the environmental policy and identify the need for changes to the system.

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4.6 Management Review

Common nonconformances:

Management review not conducted - Major nonconformance;

Periodicity for management review not set or met;

Management review documentation does not reflect consideration of those items specified in section 4.6 (e.g. suitability, adequacy and effectiveness of EMS, possible need for changes to policy, objectives and other elements of the EMS, audit results, etc.).

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For More Information

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