

# **WHAT EVERY EMPLOYEE NEEDS TO KNOW ABOUT THE ISO 14001:2015**

**A Pocket Guide to the Basics**

Fourth Edition

Written by Harold J. Steudel, Ph.D., P.E.  
and Terry Mann of Steudel and Mann, LLC

## **Steudel & Schultz, LLC**

2481 Evans Road

McFarland, Wisconsin 53558

Phone: (608) 219-0885

Fax: (608) 838-8985

[www.isopocketguides.com](http://www.isopocketguides.com) • E-mail: [info@isopocketguides.com](mailto:info@isopocketguides.com)

Copyright © 2000-2017 Harold J. Steudel

Any reproduction of any part of this publication without the written permission of Steudel & Schultz, LLC is strictly prohibited.



Printed on recycled paper with vegetable-based ink.

## **THE ISO 14001 STANDARD**

What exactly is ISO 14001?.....	4
What does being “registered” mean? .....	5
Why would my organization want to be registered?.....	5
Overview of the Seven Clauses in ISO 14001:2015.....	6
The Plan-Do-Check-Act (PDCA) Model .....	9
How does this Standard fit in with the requirements of ISO 9001?.....	10

## **THE DOCUMENTATION SYSTEM**

What are the different types of documentation?.....	11
How is the documentation system structured?.....	13
What’s the value of all this documentation?.....	16
How will the documentation system affect me and my job?.....	16
What’s my role in improving the documentation system?.....	17

## **THE REQUIREMENTS OF THE "NEW" AEROSPACE STANDARD**

What does each clause mean?.....18

*A reference section for the clauses of ISO 14001:2015*

## **THE AUDIT PROCESS**

What's the purpose of audits?.....41

What are auditors looking for? ..... 42

How do I prepare for audits? ..... 43

How do I answer an auditor's questions? .....44

What if we don't pass the registration audit? .....45

How often are we going to be audited? .....46

# THE ISO 14001 STANDARD

---

## **WHAT EXACTLY IS ISO 14001?**

ISO 14001 is an international standard containing requirements for establishing and maintaining a company's Environmental Management System (EMS) - the structure (policies, procedures, documentation, etc.) a company has in place to manage environmental impacts and regulatory compliance and to enhance environmental performance.

This standard can be applied to almost any company — from product manufacturers to service providers; it is not specific to any product or industry.

Rather than simply dictate specifications for your final product — what you produce — ISO 14001 focuses further “upstream” on the processes — or how you produce. ISO 14001 requires a documented system for controlling the environmental effects of the processes you use to develop and produce your products and services. The basic premise behind ISO 14001 is that there are certain elements every management system must have in place in order to ensure that industry's negative effects on the environment are minimized.

ISO 14001 was developed and is maintained by the International Organization for Standardization, an organization that includes representatives from over 100 countries throughout the world. The latest version of the Standard (ISO 14001:2015) was approved as an American National Standard by the American Society for Quality (ASQ) on September 10, 2015.

## **WHAT DOES BEING “REGISTERED” MEAN?**

Companies may be “registered” (or “receive certification”) to ISO 14001 by applying to a registrar and paying a registration fee. A registrar is a company that will audit your company’s environmental management system to see if it is meeting the requirements of the ISO 14001 Standard. If so, your company will be registered to ISO 14001. Surveillance audits will then occur at regular intervals to ensure that the environmental management system continues to be maintained and improved.

## **WHY WOULD MY ORGANIZATION WANT TO BE REGISTERED?**

A major reason that many companies want to become registered is that their customers and shareholders are demanding it. Registration to ISO 14001 reassures your customers that you have an environmental management system with the capability to provide products and/or services while minimizing any negative effects on the environment. Some of the other benefits a company might expect to see include:

- Competitive advantages in marketing an improved “environmentally kind” image.
- Improved performance with regard to environmental legislation and regulations.
- Savings due to reduction of waste.
- Improved community support and employee loyalty due to the environmental policy.
- A greater focus on continual improvement.
- Better communication company-wide.
- Reduced operational costs and facility performance improvements.
- Better documentation (see “What’s the value of all this documentation?”).

And, all of the above changes can lead to higher levels of financial security for the company and its employees.

## **OVERVIEW OF THE SEVEN CLAUSES IN ISO 14001:2015**

ISO 14001:2015 contains seven primary clauses defining requirements for the environmental management system (Clauses 1, 2, and 3 are introductory in nature and do not contain any requirements for registration):

**Context of the organization (Clause 4)**, includes requirements for:

- Understanding the needs and expectations of interested parties, compliance (legal/regulatory) obligations, and both the internal and external issues that could affect your company's environmental performance.
- Defining the boundaries and scope of your company's EMS.

**Leadership (Clause 5)**, includes requirements for top management to:

- Provide leadership and commitment to the success of the EMS.
- Establish and communicate your company's environmental policy and objectives.
- Provide resources necessary for the EMS and promote continual improvement.
- Define and communicate the roles, responsibilities, and authorities of all people comprising the EMS.

**Planning (Clause 6)**, includes EMS requirements for:

- Assessing risk and opportunities to achieve the intended performance and improvement, and prevent (or reduce) undesired results.
- Determining potential emergency situations.
- Determining the company's activities, products, or services that can interact with the environment and cause a change to the environment (known as environmental aspects and impacts).

# THE DOCUMENTATION SYSTEM

---

## WHAT ARE THE DIFFERENT TYPES OF DOCUMENTATION?

It's likely that one of the major changes your company will go through is to expand and improve its documentation system. ISO 14001:2015 has several requirements for specific documented information, and also requires documented information where the company determines it to be necessary for the effective operation of the EMS.

ISO 14001:2015 is less prescriptive than the previous editions, and no longer requires that a company have documentation in the form of a manual, procedures, work instructions, and records. Although no longer specifically required, many companies will continue to use this structure since each type of document serves a different and useful purpose:

### 1. Management System Manual

The MS manual describes your company's structure and scope, the environmental policy, its approach to meeting environmental requirements, its documentation structure, and the policy and responsibilities of management for meeting the requirements of the various clauses of the standard. The MS manual is typically not more than 20 to 40 pages long, and there's usually one section in the manual for each clause of the Standard. The MS manual is usually written with the direct involvement of top management and input from managers at all levels of the company. The manual can address the requirements of multiple international standards, like ISO 9001 for quality, ISO 14001 for the environment, and OHSAS 18001 for occupational health and safety.

## **2. Procedures**

Procedures describe the steps each person or department must follow to meet the policies described in the MS manual. Procedures specify who does what, when (and possibly where) it is done, and what documentation is used (such as work instructions) or produced (such as records) as a result of the activity. They are usually written with the help of the “process owners” and “doers” of the process (those who are most involved in managing and performing the task). An example of this type of documentation is the procedure that describes the steps to follow when actual or potential nonconformities are identified.

## **3. Work Instructions**

Work instructions differ from procedures in that they cover the very specific “how-to” instructions for certain tasks specified in the much broader procedures. Work instructions contain detailed instructions in the form of written statements, diagrams, checklists, etc., and are also usually written by the “process owners” and “doers” of the process. A checklist that provides the detailed steps for proper disposal of chemicals would be an example of a work instruction.

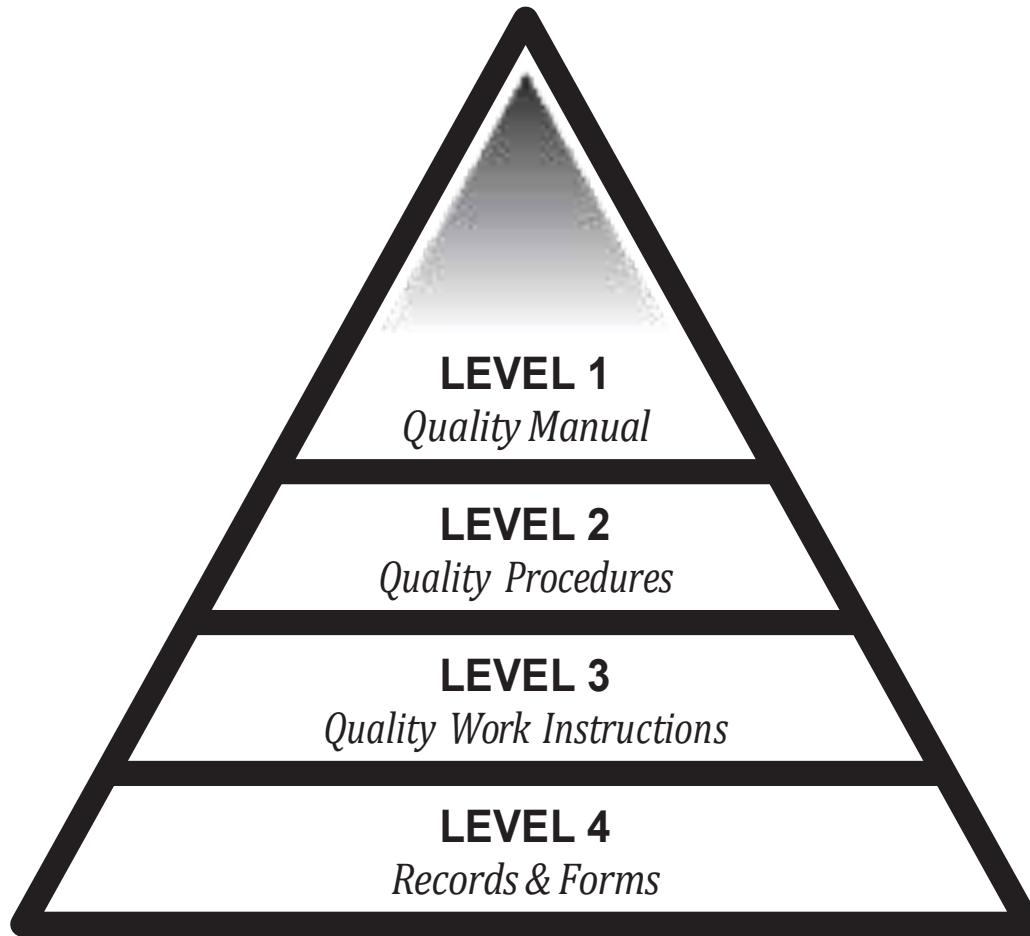
## **4. Records**

Records provide evidence that environmental (and other) requirements were met, and that the company’s management system was implemented correctly. Examples of records include emission reports, purchasing and shipping documents, audit reports, and employee training records.



## HOW IS THE DOCUMENTATION SYSTEM STRUCTURED?

You can visualize the structure of management system documentation as a pyramid with four levels:



LEVEL **1**

ADDRESSES QUALITY POLICY, ORGANIZATIONAL STRUCTURE, MANAGEMENT RESPONSIBILITIES, ETC.

LEVEL **2**

GIVE ACTIVITY "STEPS" AND ASSIGNED RESPONSIBILITIES ADDRESSING **WHO** DOES **WHAT**, **WHEN**, AND **WHAT DOCUMENTATION**

LEVEL **3**

DETAIL METHODS AND GUIDELINES ADDRESSING **HOW** TO PERFORM THE TASK

LEVEL **4**

CONTAIN EVIDENCE AND CONTROL MECHANISMS TO SHOW COMPLIANCE AND RESULTS

# CLAUSE

# 6

# PLANNING

---

## CLAUSE 6.1 ACTIONS TO ADDRESS RISKS AND OPPORTUNITIES

**Essence of the clause:** Planning how to operate the EMS needs to consider the mission and strategic direction of the company, the needs and expectations of interested parties, and the risks (including potential emergency situations) and opportunities present. The overall goal is to plan actions that will achieve environmental compliance and prevent or minimize any undesirable effects.

**Who's most involved:** Top management (of almost every department).

Your company must have a process to identify the aspects of its current and planned new products, services, and other activities that could have significant impacts on the environment over their entire life cycle (known as environmental aspects). These significant environmental aspects must be documented, communicated throughout the company, kept up to date over time, and taken into account in the EMS. These aspects are an important input to the development of the company's environmental objectives.

A process must also be in place to ensure that all environmental compliance obligations (legal and otherwise) are identified, and to address how these requirements relate to the company. The information on these requirements needs to be accessible to those who are establishing, implementing, and maintaining the EMS.

# CLAUSE

# 8

# OPERATION

---

## CLAUSE 8.1 OPERATION PLANNING AND CONTROL

**Essence of the clause:** Once your company has identified the different ways that it can affect the environment, it must identify, plan, and control the associated processes to minimize their impact on the environment.

**Who's most involved:** Engineering, Purchasing and Production or Operations Departments.

Operational planning and control includes documenting procedures and work instructions to the extent necessary, stating operating criteria, and maintaining these key operations in a manner that supports the environmental policy and goals. Where appropriate, the procedures need to be communicated to suppliers and subcontractors.

Consistent with the environmental risks, aspects, regulatory requirements, and objectives, this planning and control needs to be considered in design and development, purchasing, production, and delivery activities.

Planned changes need to be controlled and unintended changes need to be reviewed to minimize the environmental consequences.

Your company needs to consider providing information to affected parties about the potential environmental impacts associated with the transportation, use, treatment and disposal of its products and services.

# CLAUSE

# 10

# IMPROVEMENT

---

## CLAUSE 10.3 CONTINUAL IMPROVEMENT

**Essence of the clause:** Your company must continually improve the EMS to enhance environmental performance, and its overall effectiveness in making your company more successful.

**Who's most involved:** Top managers and personnel of almost every department.

Your company must continually improve by integrating the:

- Environmental policy (clause 5.2).
- Environmental objectives (clause 6.2).
- Monitoring, Measurement, Analysis and Evaluation processes (clause 9.1).
- Internal Audit process (clause 9.2).
- Management Review process (clause 9.3).
- Corrective Action process (clause 10.2).

By effectively planning and committing to these processes as part of the Plan-Do-Check-Act Model (see page 8), your company will depend less and less on reacting to problems (“fire-fighting”), and more on proactive improvements.

# THE AUDIT PROCESS

---

## WHAT'S THE PURPOSE OF AUDITS?

Registration to the ISO 14001 Standard requires that your company go through two types of audits periodically:

- Third-party audits (audits by your registrar), and
- Internal audits (self-audits by your company).

The general purpose of both types of audits is to determine whether your company has developed and implemented an environmental management system that:

- Meets the requirements in the defined documentation and the ISO 14001 Standard, and
- Is implemented and maintained so as to be effective in managing environmental performance.

There are some key differences between the two types of audits, however.

- The **third-party audit** has a pass/fail result — the registrar's auditors are there to determine whether your company should become (or stay) registered to ISO 14001. These auditors will tell you what's wrong with the system, but they are not there as consultants. They will not really tell you "how" to fix the problems.
- The **internal audit** looks for ways to make the EMS work better for everyone, and tries to catch problems before your customer, your registrar, or an outside agency does. In the internal audit situation, employees should feel free to ask the auditors for help and to point out areas that may have problems.

You'll find that auditing continues to be an important way of life for the company, essentially "closing the loop" of the environmental management system and providing a means for continual improvement.

