12 EMS Documentation

12.1 INTRODUCTION

This section of the ISO 14001 Environmental Management Standard, Element 4.4.4, Environmental Management System Documentation, concerns the requirement to "*establish and maintain information, in paper or electronic form, to (a) describe the core elements of the management system and their interaction;*" and *(b)* "*provide direction to related documentation*."

The comparative requirement under the ISO 9001 Standard can be found in Section 4.2.1, *General*:

> The supplier shall establish, document and maintain a quality system as a means of ensuring that product conforms to specified requirements. The supplier shall prepare a quality manual covering the requirements of this International Standard. The quality manual shall include or make reference to the quality system procedures and outline the structure of the documentation used in the quality system.

As you can see in the ISO 9001 Standards, there is a very explicit requirement to prepare a quality manual covering the requirements of the ISO 9001 Standards. It seems logical to use this format to meet the requirements of the ISO 14001 Standards as well. It will be the subject of this section of the chapter to show you how this can be accomplished and how to develop one operational manual that describes both the quality and environmental management systems.

12.2 THE SCOPE OF QMS AND EMS DOCUMENTATION

Before we begin the development of the manual, it is important to first understand just what the scope of the QMS and EMS documentation entails so that we can see how they interact. The best way to do this is to go through the two standards and systematically list what documentation is required. Table 12.1 lists the ISO 14001 documentation and Table 12.2 lists the ISO 9001 information needing documentation. You will note the key words throughout both of the standards indicating the need to *record*, *identify*, and *document* various types of information. As you can see, the amount of information can be rather formidable.

As was discussed in Section 4.3, you can see why some management is reluctant to implement ISO 14001 because of the potential document burden on the organization. Taken and implemented separately, the two ISO standards can and will be a burden. However, as this book is intending to show, the integration of the two standards can very effectively diminish the amount of documents overall, especially in the area of procedures.

TABLE 12.1
ISO 14001 Documentation Requirements

Section	Documentation
4.2	• *Documented* environmental policy
	• *Records* indicating communication of policy to employees
4.3.1	• *Procedure* for identifying aspects
4.3.2	• *Procedure* for identifying and accessing legal and other requirements
4.3.3	• *Documented* objectives and targets
4.3.4	• *Documented* environmental programs
4.4.1	• *Documented* roles, responsibility and authority
4.4.2	• *Procedure* for identifying training needs
	• *Records* indicating communication of impact of work activities and consequences of departing from operating procedures
4.4.3	• *Procedure* for internal communication
	• *Procedure* for external communication
	• *Records* for consideration of external communication of significant aspects
4.4.4	• *Information* on core elements of management system
4.4.5	• *Procedure* for controlling all documents
4.4.6	• *Identification* of operations and activities associated with significant aspects
	• *Procedures* covering situations where absence could lead to deviations from policy, objectives, and targets
	• *Procedures* related to identifiable aspects of goods and services used
4.4.7	• *Procedure* to identify potential and response to emergency situations
4.5.1	• *Procedures* to monitor and measure key characteristics of operation
	• *Recording* of information to track performance, relevant operational controls, and conformance to objectives and targets
4.5.2	• *Procedure* for defining responsibility and authority for handling and investigating nonconformance, taking action to mitigate impacts, and initiating and completing corrective and preventive action
	• *Record* of any changes to documented procedures
4.5.3	• *Procedure* to establish and maintain records
	• *Document* retention times
4.5.4	• *Procedure* for audits
	• *Records* of audits
4.6	• *Records* of management reviews of:
	— Environmental management system
	— Possible changes to policy
	— Possible changes to objectives and other elements of EMS
	— Audit reports

TABLE 12.2
ISO 9001 Documentation Requirements

Section	Documentation
4.1.1	• *Documented* quality policy, objectives and commitment to quality
	• *Records* indicating communication of policy to employees
4.1.2.1	• *Documented* responsibility, authority, and interrelation of personnel
4.1.2.2	• *Identify* resource requirements
4.1.2.3	• *Identify* management representative
4.1.3	• *Records* of management reviews of:
	— Quality management system
	— Possible changes to policy
	— Possible changes to objectives and other elements of QMS
	— Audit reports
4.2.3	• *Document* how the quality requirements shall be met
4.3.1	• *Documented* procedures for contract review
4.3.3	• *Identify* how a contract is amended
4.3.4	• *Records* of contract reviews
4.4.1	• *Documented* procedure to control and verify design of product
4.4.2	• *Documented* plans of design and development activity
4.4.3	• *Identify* organizational and technical interfaces
4.4.4	• *Identify and documented* product requirements
4.4.5	• *Documented* design output
	• *Documented* reviews of design output documents
4.4.6	• *Records* of design reviews
4.4.7	• *Record* of design verification
4.5.1	• *Documented* procedure to control all documents and data
4.5.2	• *Documented* procedure identifying current document revision status
4.5.3	• *Records* of document and data changes
4.6.1	• *Documented* procedure to ensure purchased product conforms to requirements
4.6.2	• *Records* of acceptable subcontractors
4.6.3	• *Records* of purchase documents
4.6.4.1	• *Records* of product verification and release
4.7	• *Documented* procedure for control of customer-supplied product
4.8	• *Documented* procedure for identifying product receipt, delivery, and installation
	• *Documented* procedure to identify individual product or batches
4.9	• *Documented* procedures defining manner of production, installation, servicing
	• *Records* of compliance with standards/codes, etc.
	• *Records* of process parameter monitoring and controls
	• *Identification* of requirements for any process qualification

TABLE 12.2 (continued)
ISO 9001 Documentation Requirements

Section	Documentation
4.10.1	• *Documented* procedure for inspection and testing activities
4.10.2.2	• *Recorded* evidence of time exercised at subcontractor premises
4.10.2.3	• *Records* of incoming product released for urgent production
4.10.5	• *Records* providing evidence product is inspected and/or tested
4.11.1	• *Documented* procedure for control, calibration, and inspection of measuring and test equipment
	• *Records* of inspection for test software or comparative references
4.11.2	• *Identify* all inspection, measuring, and test equipment
	• *Identify* process employed
	• *Identify* inspection, measuring and test equipment calibration status
	• *Records* of calibration
	• *Records* of out of calibration
4.12	• *Identify* inspection and test status of product
4.13.1	• *Documented* procedure for handling nonconforming product
4.13.2	• *Identify* responsibility for review and authority for dispositioning nonconforming product
	• *Record* of customer acceptance of nonconforming product
4.14.1	• *Documented* procedure for implementing corrective and preventive action
	• *Records* of changes to procedures resulting from corrective and preventive action
4.15.1	• *Documented* procedure for handling, storage, packaging, preservation and delivery of product
4.16	• *Documented* procedure for identifying, collecting, indexing, access, filing, storage, maintenance, and disposition of quality records
4.17	• *Documented* procedure for internal quality audits
	• *Records* of the internal quality audits
	• *Records* of follow-up audit activities and implementation of corrective action
4.18	• *Documented* procedures for identifying training needs
	• *Records* of training
4.19	• *Documented* procedure for performing, verifying, and reporting servicing
4.20.1	• *Identify* the need for statistical techniques
4.20.2	• *Documented* procedure to implement and control the application of statistical techniques

12.3 THE OPERATIONAL MANUAL

As ISO 9001 had indicated, there is a requirement for the development of a manual that describes the elements of the QMS per the International Standards (guidance on the manuals is found in ISO 10013). This manual can be used to meet certain requirements of the Environmental Management System as well.

My intent in this section is not to provide an example of an operational manual. I do not intend to go step-by-step through each section of a quality manual and show how the environmental requirements can be integrated into it — this book provides all the examples which you will need when you begin to develop your own manual. For instance, when defining Responsibility and Authority, you need look no further than Section 9.2 for specific examples. You must be aware, however, as you develop the manual that ISO 14001 does contain certain requirements not found in ISO 9001. These distinctions have been previously discussed, but will be listed again:

- The inclusion in the policy and the discussion as to how the system will maintain *"continual improvement and prevention of pollution"*;
- The requirement to identify *"significant impacts"*;
- The requirement to *"establish and maintain (environmental management) programs for achieving its objectives and targets"*; and
- "Emergency preparedness and response."

12.3.1 The Document Directory

Before closing this section, I would like to provide an example for satisfying one of the requirements found under both of the standards — the need to "provide direction to related documentation" (ISO 14001) and to "outline the structure of the documentation used in the quality system" (ISO 9001). One of the best ways to do this is to develop and lay out what I call a "document directory." The intent of the directory is to be able to show how all of the documents within your operational system interrelate and cross reference with each other. Figure 1 shows an example of an environmental and quality document directory.

The column headings reflect certain program areas that are common to either or both ISO 14001 and ISO 9001. Below each heading are document descriptions typical to quality and environmentally related procedures. You will notice that the directory also includes any applicable regulatory requirements and/or the related International Standard.

12.4 WHAT AUDITORS WILL LOOK FOR

As stated at the beginning of this section, an ISO 14001 auditor will be much more impressed if you are able to produce an EMS Standards Manual similar to the Quality Manual, whether or not you have been able to integrate the two into an Operational Manual. Since both standards require some kind of document "road map," it is advisable to develop some form of document hierarchy or directory showing the interrelationship of the entire management document system. It is highly recommended that you start with your policy at the top and gradually dissect your system down to the basic task procedures used by operators to produce your product, then to the metrics and database.

The primary principles of your policy, whether it be just quality-related or environmentally- related, can provide the column headers for the directory. Be sure the directory includes all four document levels: (1) the Standards Manual(s); (2) top level management programs/procedures; (3) task or job procedures; and (4) data and metrics. The primary thing to remember is that "all roads must lead back to the policy!"

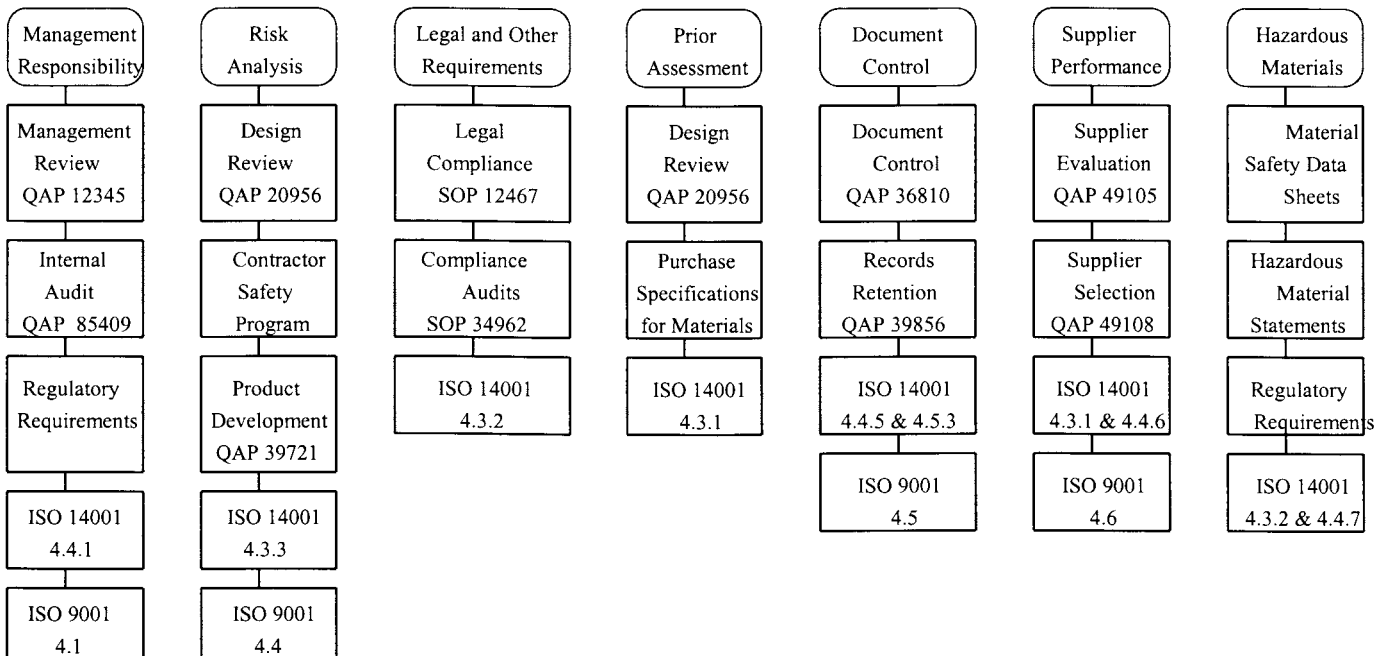

FIGURE 1. ISO 14001 and ISO 9001 directory.