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ISO 45001- Safety Management System Discussion

Abstract

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Summary of Safety Management Standards

Safety management is a topic of significant concern for many organizations. When you consider how many activities must be undertaken and overseen to execute and implement a successful organization-wide safety process, results demonstrate the investment provides clear and measurable value. Although different organizations and industries face unique risks and have distinct safety requirements, there remains a commonality in safety practices that can be managed within certain tolerances. Additionally, fundamental practices, such as risk identification and assessment, incident investigation, employee engagement, and auditing, have universal application among organizations worldwide.

To this end, a number of consensus standards have been established that provide guidance to help organizations establish internal safety management protocols. These standards provide the foundation and framework that enable organizations to model safety practices and activities. These standards provide guidance for the development, implementation, execution, and sustainment of safety management practices. These standards are often specific to the country or environment where the organization conducts its operations and in turn allows firms to address region- or country-specific regulatory expectations enabling them to tailor the standard's expectations to meet those regulations. However, this has also resulted in a plethora of standards which vary in some notable ways.

In an attempt to expand the degree of standardization of safety practices, the International Standards Organization (ISO) began working on unifying safety standards. This effort traces its roots back to the mid-2000's; however, the first formal ISO 45001 committee was not convened until 2010 and then required four years to develop the first draft standard. The ISO 45001 standard was developed to meet this objective.

The process of developing and implementing an ISO standard is a rigorous process. In 2010, key stakeholders, including industry and technical experts, members of academia, and governmental regulators from around the world assembled in a technical committee. This committee then developed the contents of the standard and generated a draft format. Once a draft of the standard was developed, it was shared in a public review process where comments are actively solicited. A final version will then be prepared. ISO members vote on the final version. If seventy-five percent (75%) of the votes are positive, the standard is published. ISO 45001 is currently in draft status pending public comment and refinement by the Technical Committee.

Safety Management Standards

Prior to the advent of ISO 45001, there were a number of other consensus safety management standards. Notably, there was the American National Standard Institute (ANSI) Z-10, the Occupational Safety and Health Assessment Series (OHSAS) 18001, and the AS/NZS 4801:2001 Occupational Health and Safety Management System. Each of these standards offers slightly different perspectives to safety management and each exists within the regulatory framework of their home country(s).

Among the commonalities among these various systems, and in common with the new ISO 45001 standard, are the following characteristics:

1. A safety and health policy that aligns with the organizational objectives
2. Factors that drive the actions of the organization; often described as the organizational context
3. Focus on the continual improvement model of "Plan", "Do", "Check" and "Act"
4. Inclusion of the need to follow appropriate governmental regulations

ANSI Z-10: 2005

This is a voluntary consensus standard developed in the United States. The primary focus is to assist organizations in minimizing their risk of occupational injuries, illness and fatalities. It provides a tool to help organizations establish and improve occupational health and safety (OH&S) performance.

Key characteristics that define ANSI Z-10 include:

- Focus on management leadership roles,
- Effective employee participation, and
- Design review and change.

ANSI Z-10 implementation assists organizations in executing occupational health and safety management system strategies; helping organizations benchmark safety procedures and practices; and identifying areas where hazard prevention and control is needed. Implementation and execution of the standard's core specifications will help companies identify areas in their management system where hazardous risk and safety weaknesses may lie. Based on the Plan–Do-Check-Act management system model, ANSI Z-10 can be incorporated into companies with an already existing OHSAS 18001, ISO 9001, or ISO 14001 system.

ANSI Z-10 is not a performance standard and does not specify how the actions identified within its specifications should be enacted. No element of ANSI Z-10 has been incorporated as law by Federal OSHA (Occupational Safety and Health Act). However, at least two States (California and Washington) reference elements of ANSI Z-10 in their Injury and Illness Prevention Program (I2P2) standards.

OHSAS 18001

OHSAS 18001 is a safety management standard developed by British Standards Institution (BSI). It is used primarily in the United Kingdom, India, and in parts of the Middle East. This standard has many elements found in ANSI Z-10 but tends to be more formal in its approach.

OHSAS 18001 aligns with ISO performance standards. Section numbering systems, requirements for documentation, training, and leadership involvement are written with similar language and framing structure in both ISO and OHSAS standards. Like many of the various ISO Standards, OHSAS 18001 is predicated on the ideas of employee engagement, safety culture, and continual improvement.

With the pending publication of ISO 45001, BSI has completed a transition plan where BSI will support the new ISO standard and assist members in changing from the OHSAS 18001 standard to the new ISO 45001 Standard. More information about their transition plan is available at the link below:

http://www.bsigroup.com/en-US/OHSAS-18001-Occupational-Health-and-Safety/ISO-45001/

It is anticipated the transition from OHSAS 18001 to ISO 45001 will take several years to complete. Additionally, organizations that have been certified as compliant with OHSAS 18001 will have the structure to transition to the newer ISO standard.

AS/NZS 4801:2001 Occupational Health and Safety Management System

AS/NZS 4801 is the occupational safety and health standard used in Australia and New Zealand. It is similar in structure to OHSAS 18001 but is adapted to the regulatory framework of these nations. A key specification of this regulatory framework requires compliance with the standard in order to qualify for government contracts. For example, in order for a construction organization to compete for contracts in either country, they must be certified in compliance with AS/NZS 4801.

ISO 45001 CHARACTERISTICS

ISO 45001 is a consensus standard and is being developed through a rigorous process as described earlier in this paper. In this section, we will endeavor to provide a description of the draft standard, discuss the performance expectations, and provide an overview of actions, processes, and procedures required for ISO 45001 alignment.

This paper is not intended as an in-depth discussion of all elements of the standard, nor does it provide suggestions regarding potential strategies for implementation. Since the standard is applicable to any organization, all of which have distinctive risk and safety profiles, it would not be prudent to offer specific strategies that might work in one organizational structure but not work in another.

The Structure of the Standard

The standard was written in customary business English. The terminology has been harmonized with other ISO standards. For example in ISO 45001 (safety), ISO 9001 (quality) and ISO 14001 (environmental) Section 4 relates to the “context of the organization”, Section 5 relates to “leadership”, and Section 6 relates to “planning”. This alignment of sections allows organizations to more easily adopt the fundamental framework used in all ISO business related performance standards.

ISO 45001 has three sections of introductory material. These sections are the introduction, the purpose, and the terms and definitions. Then, there are seven major sections that contain the actual safety content. Sections 4 through 10 within ISO 45001 are as follow:

4. Context of the Organization
5. Leadership and Worker Participation
6. Planning
7. Support
8. Operations
9. Performance Evaluations
10. Improvement

At the conclusion of the standard there is an appendix that serves as a guide to implementation for each of the sections. The appendix is almost as long as the standard itself and provides a very comprehensive set of instructions about how the different elements of the standard can be implemented.

Goals of the Standard

As with the other safety management consensus standards, the goals of ISO 45001 are to provide guidance for the development of a framework where injuries, property damage, and other loss causing incidents can be mitigated. The stated goals of ISO 45001 are:

- Develop an OH&S policy
- Have leadership demonstrate their commitment to safety
- Establish systematic processes for safety management
- Conduct hazard identification efforts
- Create operational safety controls
- Increase awareness and knowledge for employees about safety
- Evaluate OH&S performance and develop plans to improve continuously
- Establish the necessary competencies
- Create and foster an OH&S culture within the organization
- Ensure employees participate fully and meaningfully in the safety process
- Meet all legal and regulatory requirements

Methodology

At the outset, ISO 45001 explains the founding principle of PLAN, DO, CHECK, ACT (PDCA). This principle is the methodology which guides the various performance aspects of the standard. PDCA is the idea of continual improvement that was made popular by Edward Deming, often considered the father of modern quality control theory, and fosters the standard of detailed actions that provide a platform for *continual* improvement across the organization. This is a critical concept as it establishes the model for **continual**, as opposed to **continuous**, improvement.

This concept of continual improvement is repeated throughout the standard. "Continual improvement" is an umbrella concept that incorporates elements of continuous improvement. The distinction between continual and continuous improvement is a fine, but important one.

Continual Improvement is defined as "recurring activity to enhance performance". Continual does not mean continuous, so the activity does not need to take place in all areas simultaneously. **Continuous Improvement** is defined as "on-going and endless without interruption." By its very nature, business activities often have numerous starts and stops. Business activities are best managed by regular and routine evaluations. Thus the concept of *continual improvement* is better suited to an organizational environment than the concept of *continuous improvement*.

Scope

ISO 45001 provides a set of requirements for an OH&S system that will assist an organization to foster an environment that is safe and healthy. The standard is applicable to any organization regardless of size, operations, objectives, and outcomes. It includes the development of an OH&S policy that meets best practices and legal requirements. The scope of ISO 45001 includes:

1. Creation of a OH&S policy that reinforces the objectives of the organization while taking into account its internal and external contexts
2. Establishment, implementation, and maintenance of an OH&S management system
3. Continual improvement of OH&S performance
4. Assured conformity to the OH&S policy
5. Demonstration of compliance with this ISO Standard

ISO 45001 does not provide specific criteria for OH&S performance. It does allow for the integration of other similar aspects of health and safety such as wellness, non-occupational health, and wellbeing. The scope does not include ideas of product safety, public safety, environmental protections, and quality. ISO 45001 can be used in part or in total to improve OH&S management systems; however, claims of conformity with ISO 45001 are only acceptable if the standard has been completely adopted without any exclusions.

Terms and Definitions

ISO 45001 contains a large "Terms and Definitions" glossary spanning seven pages which offers key descriptions and terminologies that organizations should consider adopting into their safety lexicon, especially those that are considering or are in ISO 45001 compliance process. Standardization of this language will allow for common understanding of actions, concepts, and outcomes throughout all business units, locations, facilities, and departments of the organization.

Context of the Organization

Section 4 of ISO 45001 provides a definition of the context of the organization and explains how this context must be used to understand organizational objectives. The context of the organization is the key consideration to be taken when developing and implementing OH&S mission statement, OH&S policy statement, and objectives.

Context is defined as the purpose that the organization is attempting to achieve and the external and internal issues that will impact the ability to achieve the intended outcome. The key elements to the context of the organization include:

- Interested parties, in addition to workers (ISO 45001 defines managers, supervisors, and senior leaders as "workers")
- Needs and expectations of workers and other interested parties
- Legal requirements
- Differences in needs between managerial and non-managerial workers

When developing the OH&S management system, the organization will take into account the internal and external issues, the requirements of workers, and the work that is being performed. The context of the organization must be documented and the documentation must be available.

Leadership and Worker Participation

The terms "leadership" and "top management" are used interchangeably throughout ISO 45001. The responsibilities of leadership and top management include:

- Take overall responsibility and accountability for worker protection
- Ensure the OH&S policy relates to the context and is compatible with the strategic direction of the organization
- Integrate the OH&S management system into the larger business processes
- Provide resources for the OH&S management system
- Ensure participation by workers in the OH&S system
- Communicate the OH&S system and ensure the organization conforms to it
- Promote the OH&S system to address nonconformities and ensure continual improvement
- Create a culture that drives the organizational support for the OH&S System

Since top management is responsible for the OH&S system, the elements required to be included in the OH&S management system are detailed within the leadership and worker participation section. The elements include the written commitments for safety; framework for the OH&S system; obligations to meet legal requirements; continual improvement for OH&S performance; establishment of a risk control

strategy; and most importantly; worker involvement. The policy must be documented, communicated with workers, reviewed periodically, and available to other parties.

Other key considerations for leadership and worker participation include training, communication, worker participation support, employee engagement, and establishment of audit programs.

Planning

Section 6 describes the actions necessary to address risk and opportunity. Activity planning must take place within the context of the organization. The planning process must ensure that the OH&S management system is designed to achieve its intended outcomes and continually improve. Worker participation is cited as being a critical component in the planning phase. Additional considerations include operational risk, legal requirements, and other opportunities to improve the OH&S management system.

This section outlines the need for hazard identification by the organization for both routine and non-routine activities, emergency situations, people and behavior, work area design, work environment under the control of the organization, and situations not under organizational control. Additional points of assessment include changes to process and operations, past incidents and their causes, and social/economic factors.

The major sub-sections in Section 6 include:

- Hazard Identification
- Assessment of OH&S Risks
- Identification of OH&S Opportunities
- Determination of Legal Requirements
- Planning to Take Action
- Setting of OH&S Objectives
- Planning to Achieve Objectives

The planning phase is a comprehensive part of the ISO 45001 standard, requiring a detailed understanding of operations. By following this section, the organization can create a very deliberate and effective set-up to sustain the OH&S management system and ensure it continually improves.

Support

Section 7 of ISO 45001 discusses the resources and support needed to be successful with the OH&S management system. “Support” means that the organization has achieved a level of competence among its workers and systems to successfully drive the outcomes of the OH&S plan. It also discusses the need to establish awareness of the OH&S policy, communicate information about the OH&S management system, outline with whom the information should be shared, manage documentation including tracking of updates, and control information and ensure its accessibility and accuracy. Essentially, the support system provides an overview of how the organization must support the OH&S management system.

Operation

Section 8 forms the heart of the ISO 45001 standard and addresses the program content necessary to have a successful OH&S management system that meets the intent of the standard. The specific topics discussed in this section include:

1. General provisions: such as the means for creating and managing documentation
2. Hierarchy of controls: to utilize the most effective means of risk reduction within the organization
3. Management of change: to ensure that when planned changes occur they are managed to control risk
4. Outsourcing: to make certain risk controls are adequate for all outsourced processes
5. Procurement: to validate all incoming materials and services conform to the system requirements
6. Contractors: to communicate and control internal risks to third parties and evaluate risks they may introduce into the workplace
7. Emergency preparedness and response: to identify potential emergency risks and develop specific and customized plans with key stakeholders to minimize these risks

Performance Evaluation

Section 9, Performance Evaluation, provides an in-depth discussion regarding the criteria for evaluating the overall performance of the OH&S management system. The primary themes of this section focus on the means of process evaluation and documentation of evaluations. The importance of documentation (and how records and data are retained), as well as document dissemination, are performance themes both in ISO 45001 in general and in this section in particular.

This section tends to be more specific than some of the others and includes a detailed discussion of documentation requirements, internal audit protocols, and relevancy and applicability of measurements within the organization. The key attributes of this section include:

1. Following applicable legal requirements and documentation are followed
2. Measuring operational risks and hazards
3. Evaluating the effectiveness of operational controls
4. Establishing the timeline for conducting the measures
5. Planning for analysis, evaluation, and communication of the results
6. Calibrating and verifying the accuracy of all equipment
7. Retaining documentation of all measures
8. Auditing the OH&S Management System, the OH&S Policy, OH&S Objectives and the 45001 requirements
9. Establishing the frequency of audits and account for significant changes to the organization, performance improvements, risks, and opportunities
10. Ensuring the competency of auditors
11. Communicating findings to management, workers, and worker representatives
12. Taking action to address identified nonconformities
13. Retaining audit results as evidence of the completion of the audit
14. Reviewing audit findings and corrective actions by top management
15. Ascertaining that corrective actions, worker engagement, and opportunities for continual improvement are in place

The most important objectives of the Performance Evaluation section are ensuring the adequacy of the current OH&S management system and measuring that OH&S objectives are met. These are, essentially, the only measures of success.

Improvement

Section 10, the final major section, delineates the concept of continual improvement within the context of specific activities. Any organization wishing to adopt the principles of ISO 45001 must have a plan for addressing nonconformities in a timely manner. Organizations should take direct action to control conditions and deal with consequences. Nonconformities can be identified from investigations, audits, or other events. The corrective actions should be evaluated and the results should be documented.

To achieve continual improvement, the organization shall have an OH&S management system that:

1. Prevents the occurrence of incidents and nonconformities
2. Promotes a positive OH&S culture
3. Enhances OH&S performance

Appendix

In addition to the sections specific in ISO 45001, the standard also includes an Appendix that is the same length as the standard. The objective of the Appendix is to assist with the implementation of the standard with a stated goal to "avoid the misinterpretation of the requirements of the standard". It does not add new tasks or duties, but provides explanation and detailed discussions of existing in the standard. The Appendix expands the terms and definitions and adds key concepts that are required for ISO 45001 compliance.

A detailed discussion of all of the aspects of the appendix is beyond the scope of this paper. It has the sole purpose of providing strategies and tactics for the implementation of ISO 45001 and should be reviewed prior to making the decision about whether or not to adopt ISO 45001 as the organization's safety management standard.

Conclusions

Once fully implemented, ISO 45001 will be the "gold standard" for safety management standards. The standard is slated for publication in October, 2016. After publication there will be a two-year transition period where ISO 45001 will replace the other international safety standards.

ISO 45001 is more comprehensive than current models. It places a greater degree of specificity into areas such as leadership, culture, hazard identification, and employee involvement. In this sense, ISO 45001 is affiliating with many of the generally accepted best practices of safety management. ISO 45001 will become a universal standard that will eventually replace all other safety management standards.

If you have questions about how your organization can align their safety activities with ISO 45001, contact your Aon Risk Control Consultant.

References

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About Aon

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