DRAFT ISO 45001

Foreword

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/PC 283, *Occupational health and safety management systems*.

Introduction
0.1 Background

It is estimated by the International Labour Organization (ILO) that there are over 2.3 million deaths every year as a result of work activities, of which close to 2 million are due to ill-health, with the remainder being due to fatal accidents.

An organization is responsible for the health and safety of its workers and that of other persons under its control who are performing work on its behalf, including promoting and protecting their physical and mental health.

The adoption of an occupational health and safety (OH&S) management system can enable an organization to improve its OH&S performance in the enhancement of health and safety at work and to manage its OH&S risks.

NOTE 1   The term "occupational safety and health" ("OSH") has the same meaning as "occupational health and safety"
            ("OH&S").

NOTE 2   The term "worker" is defined to include both managerial and non-managerial persons

0.2 Aim of an OH&S management system

The purpose of an OH&S management system is to provide a framework for managing the prevention of injury and ill-health. The implementation of an OH&S management system can be a strategic decision for an organization.

An organization's activities can pose a risk of injury or ill-health, consequently it is critically important for the organization to eliminate or minimize OH&S risks by taking appropriate preventive measures. When these measures are applied by the organization through its OH&S management system (supported by the use of appropriate methods and tools, at all levels in the organization) they proactively improve its OH&S performance.

The intended outcome for an organization's OH&S management system is to prevent injury and ill-health, to improve and enhance the safety and health of its workers and the others persons under its control.

An OH&S management system can enable an organization to improve its OH&S performance by;

a) developing and implementing an OH&S policy and OH&S objectives;
b) establishing systematic processes which consider its "context" and which take into account its risks and its opportunities, its legal requirements and the other requirements to which it subscribes;
c) determining the hazards and OH&S risks associated with its activities; seeking to eliminate them, or putting in controls to minimize their potential effects;
d) establishing operational controls to manage its OH&S risks, and to comply with its applicable legal and the other requirements;
e) increasing awareness of its OH&S risks;
f) evaluating its OH&S performance and seeking to improve it;
g) establishing the necessary competencies;
h) developing a positive health and safety culture in the organization;
i) ensuring the consultation and participation of the workers.

NOTE 1   For further information on the 'context' in item b) above, refer to Annex A.4

NOTE 2   An OH&S management system can help an organization to be in conformity with applicable legal requirements; however, being in conformity with the requirements of this International Standard cannot be used as a proof of conformity to such legal requirements.

0.3 Success factors

The success of the OH&S management system depends on leadership, commitment and participation from all levels and functions of the organization.

The implementation and sustainability of an OH&S management system, its effectiveness and its ability to achieve its objectives are dependent on a number of key factors which can include:

a) top management leadership and commitment;
b) promotion of a positive health and safety culture;
c) participation of workers (and, as applicable, their representatives);

d) consultation – two way communication;

e) allocation of the necessary resources for sustainability;

f) clear OH&S policies, which are in line with the overall strategic objectives of the organization;

g) the integration of the OH&S management system into the organization's business processes;

h) the continuous evaluation and monitoring of the OH&S management system to improve OH&S performance;

i) OH&S objectives that align with the OH&S policy and reflect the organization's OH&S risks;

j) awareness of its applicable legal and other requirements;

k) identification of hazards and control of the OH&S risks.

Demonstration of successful implementation of this International Standard can be used by an organization to give assurance to workers and other interested parties that an effective OH&S management system is in place.

Adoption of this International Standard, however, will not in itself guarantee optimal outcomes.

The level of detail, the complexity, the extent of documented information, and the resources needed for an organization's OH&S management system will depend on a number of factors, such as:

— the organization's context (e.g. its number of workers, its size, its geography, its culture, its social conditions, its applicable legal and other requirements);

— the scope of its OH&S management system;

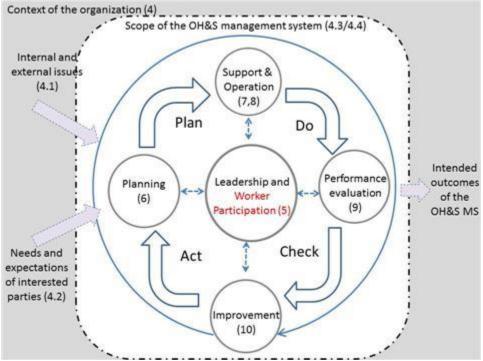— the nature of its activities, its products, its services, and its OH&S risks.

0.4 "Plan, Do, Check and Act" cycle

The basis of the OH&S management system approach applied in this International Standard is founded on the concept of "Plan, Do, Check and Act" (PDCA), which requires leadership, commitment and participation from all levels and functions of the organization.

The PDCA model demonstrates an iterative process used by organizations to achieve continual improvement. It can be applied to a management system and to each of its individual elements. It can be described as follows:

• **Plan:** establish objectives, programmes and processes necessary to deliver results in accordance with the organization's policy.

• **Do:** implement the processes as planned.

• **Check:** monitor and measure activities and processes with regard to the policy and, objectives, and report the results.

• **Act:** take actions to continually improve the OH&S performance to achieve the intended outcomes.

This International Standard incorporates the PDCA concept into a new framework, as shown in Figure 1.

Figure 1 — OH&S management system model for this International Standard

NOTE   The numbers given in brackets refer to the clause numbers in this International Standard

0.5 Contents of this International Standard

This International Standard has adopted the "high-level structure" (i.e. clause sequence, common text and common terminology) developed by ISO to improve alignment among its International Standards for management systems.

This International Standard does not include requirements specific to other management systems, such as those for quality, environmental, security, or financial management, though its elements can be aligned or integrated with those of other management systems.

Clauses 4 to 10 contain requirements that can be used to assess conformity. Annex A provides informative explanations to assist in the interpretation of those requirements.

1 Scope

This International Standard specifies requirements for an occupational health and safety (OH&S) management system, with guidance for its use, to enable an organization to provide safe and healthy working conditions for the prevention of injury and ill-health and to proactively improve its OH&S performance.

This International Standard is applicable to any organization that wishes to:

a) establish, implement and maintain an OH&S management system to improve occupational health and safety, eliminate or minimize OH&S risks and address OH&S management system nonconformities associated with its activities.
b) continually improve its OH&S performance and the fulfilment of its OH&S objectives;
c) demonstrate conformity with the requirements of this International Standard.

This International Standard is intended to be applicable to any organization regardless of its size, type and activity and applies to the OH&S risks that the organization determines it can manage, taking into account factors such as the context in which the organization operates and the needs and expectations of its workers and other interested parties.

This International Standard does not state specific criteria for OH&S performance, nor is it prescriptive about the design of an OH&S management system.

This International Standard enables an organization, through its OH&S management system, to integrate other aspects of health and safety, such as worker wellness/ wellbeing. The organization can also be required by applicable legal requirements to address such issues.

This International Standard does not address issues such as product safety, property damage or environmental impacts, beyond the risks they provide to workers.

2 Normative references

There are no normative references.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 organization

person or group of people that has its own functions with responsibilities, authorities and relationships to achieve its *objectives* (3.16)

Note 1 to entry: The concept of organization includes, but is not limited to sole-trader, company, corporation, firm, enterprise, authority, partnership, charity or institution, or part or combination thereof, whether incorporated or not, public or private.

3.2 interested party

person or *organization* (3.1) that can affect, be affected by, or perceive itself to be affected by a decision or activity related to the *OH&S management system* (3.11)

Note 1 to entry: This International Standard sets out *requirements* (3.7) with respect to *workers* (3.3) beyond their status as interested parties.

Note 2 to entry: For examples of potential interested parties see A.4.2.

3.3 worker

person performing work or work-related activities, under the control of the *organization* (3.1)

Note 1 to entry: Persons perform work or work-related activities under various arrangements, paid or unpaid, such as regularly or temporarily, intermittently or seasonally, casually or on a part-time basis.
Note 2 to entry: Workers include managerial and non-managerial persons.
Note 3 to entry: Control can include work relationships beyond recognized employment relationships, e.g. workers from external providers, and situations where the *organization* has some degree of control over the workers such as agency workers.

3.4 workplace

place where a person needs to be or to go by reason of work and which is under the control of the *organization* (3.1)
Note 1 to entry: The organization's responsibilities under the *OH&S management system* (3.11) for the workplace depends on the degree of control over the workplace.

3.5 contractor

external person(s) providing services to an *organization* (3.1) at a workplace (3.4) in accordance with agreed specifications terms and conditions
Note 1 to entry: External person(s) can include one person, a group of persons, an *organization* or a group of *organizations*.

3.6 representative

person(s) elected or appointed in accordance with national laws, regulations and practice to represent *workers'* (3.3) interests as they relate to the *OH&S management system* (3.11)

3.7 requirement

need or expectation that is stated, generally implied or obligatory
Note 1 to entry: "Generally implied" means that it is custom or common practice for the *organization* (3.1) and *interested parties* (3.2) that the need or expectation under consideration is implied.
Note 2 to entry: A specified requirement is one that is stated, for example in *documented information* (3.22).

3.8 legal requirement

requirement (3.7), established by law that is applicable to the *organization* (3.1)

3.9 legal and other requirement

legal requirements (3.8) and other legally–binding obligations and other *requirements* (3.7) to which the *organization* (3.1) subscribes that are relevant to the *OH&S management system* (3.11)

Note 1 to entry: Legally-binding obligations can include the provisions in collective agreements that relate to the health and safety of *workers* (3.3).

3.10 management system

set of interrelated or interacting elements of an *organization* (3.1) to establish *policies* (3.14) and *objectives* (3.16) and *processes* (3.23) to achieve those *objectives*

Note 1 to entry: A management system can address a single discipline or several disciplines.

Note 2 to entry: The system elements include the *organization's* structure, roles and responsibilities, planning and operation.

Note 3 to entry: The scope of a management system may include the whole of the *organization*, specific and identified functions of the *organization*, specific and identified sections of the *organization*, or one or more functions across a group of *organizations*.

3.11 occupational health and safety management system

OH&S management system

management system (3.10) or part of a *management system* used to achieve the *OH&S policy* (3.15).

Note 1 to entry: The overall objective of the *OH&S management system* is to prevent injury or ill-health to workers (3.3) and to provide safe and healthy workplace(s) (3.4). These are the intended outcomes of the *OH&S management system* .

Note 2 to entry – The terms "occupational health and safety" (OH&S) and "occupational safety and health" (OSH) have the same meaning.

3.12 top management

person or group of people who directs and controls an *organization* (3.1) at the highest level

Note 1 to entry: *Top management* has the power to delegate authority and provide resources within the *organization* provided ultimate responsibility for the *OH&S management system* (3.11) is retained.

Note 2 to entry: If the scope of the *management system* (3.10) covers only part of an *organization*, then *top management* refers to those who direct and control that part of the *organization*.

3.13 effectiveness

extent to which planned activities are realized and planned results achieved

3.14 policy

intentions and direction of an *organization* (3.1), as formally expressed by its *top management* (3.12)

3.15 occupational health and safety policy OH&S policy

policy (3.14) to prevent work-related injury and ill-health to *worker(s)* (3.3) and to provide a safe and healthy *workplace(s)* (3.4)

3.16 objective

result to be achieved

Note 1 to entry: An objective can be strategic, tactical, or operational.

Note 2 to entry: Objectives can relate to different disciplines (such as financial, health and safety, and environmental goals) and can apply at different levels (such as strategic, organization-wide, project, product and *process* (3.23)).

Note 3 to entry: An objective can be expressed in other ways, e.g. as an intended outcome, a purpose, an operational criterion, as an *OH&S objective* (3.17), or by the use of other words with similar meaning (e.g. aim, goal, or target).

~~Note 4 to entry: In the context of XXX management systems, XXX objectives are set by the organization, consistent with the XXX policy, to achieve specific results.~~

3.17 occupational health and safety objective OH&S objective

objective (3.16) set by the *organization* (3.1) to achieve specific results consistent with the *OH&S policy* (3.15)

3.18 risk

effect of uncertainty on *objectives* (3.16)

Note 1 to entry: An effect is a deviation from the expected — positive or negative.

Note 2 to entry: Uncertainty is the state, even partial, of deficiency of information related to, understanding or knowledge of, an event, its consequence, or likelihood.

Note 3 to entry: Risk is often characterized by reference to potential "events" (as defined in ISO Guide 73:2009, 3.5.1.3) and "consequences" (as defined in ISO Guide 73:2009, 3.6.1.3), or a combination of these.

Note 4 to entry: Risk is often expressed in terms of a combination of the consequences of an event (including changes in circumstances) and the associated "likelihood" (as defined in ISO Guide 73:2009, 3.6.1.1) of occurrence.

3.19 hazard

source or situation with a potential to cause human injury or ill-health

3.20 occupational health and safety risk

OH&S risk

combination of the likelihood of an occurrence of a work-related hazardous event or exposure(s), and the severity of injury or ill-health that can be caused by the event or exposures

3.21 competence
ability to apply knowledge and skills to achieve intended results

3.22 documented information
information required to be controlled and maintained by an *organization* (3.1) and the medium on which it is contained

Note 1 to entry: Documented information can be in any format and media and from any source.

Note 2 to entry: Documented information can refer to:

    a)   the *management system* (3.10), including related *processes* (3.23);

    b)   information created in order for the organization to operate (documentation);

    c)   evidence of results achieved (records).

3.23 process
set of interrelated or interacting activities which transforms inputs into outputs

3.24 procedure
specified way to carry out an activity or a *process* (3.23)

Note 1 to entry: Procedures can be documented or not.

3.25 performance
measurable result

Note 1 to entry: Performance can relate either to quantitative or qualitative findings.

Note 2 to entry: Performance can relate to the management of activities, *processes* (3.23), products (including services), systems or *organizations* (3.1).

3.26 occupational health and safety performance OH&S performance
performance (3.25) related to the *effectiveness* (3.13) of the prevention of injury and ill-health to *workers* (3.3) and the provision of safe and healthy *workplace(s)* (3.4)

3.27 outsource (verb)
make an arrangement where an external *organization* (3.1) performs part of an organization's function or *process* (3.23)

Note 1 to entry: An external *organization* is outside the scope of the *management system* (3.10), although the outsourced function or *process* is within the scope.

3.28 monitoring
determining the status of a system, a *process* (3.23) or an activity

Note 1 to entry:　　　To determine the status, there may be a need to check, supervise or critically observe.

3.29 measurement
process (3.23) to determine a value

3.30 audit
systematic, independent and documented *process* (3.23) for obtaining audit evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled
~~Note 1 to entry:　　An audit can be an internal audit (first party) or an external audit (second party or third party), and it can be a combined audit (combining two or more disciplines).~~
Note 1 ~~2~~ to entry:　　An internal audit is conducted by the organization (3.1) itself, or by an external party on its behalf.
Note 2 to entry:　　　Independence can be demonstrated by freedom from responsibility for the activity being audited and freedom from bias or conflict of interest.
Note 3 to entry:　　　"Audit evidence" is "records, statements of fact and other information which are relevant to the audit criteria and verifiable" and "audit criteria" are "set of *policies* (3.14), *procedures* (3.24) or *requirements* (3.7) used as a reference against which audit evidence is compared", as defined in ISO 19011, *Guidelines for auditing management systems.*

3.31 conformity
fulfilment of a *requirement* (3.7)

3.32 nonconformity
non-fulfilment of a *requirement* (3.7)
Note 1 to entry:　　　Nonconformity relates to *requirements* in this International Standard and additional *OH&S management system* (3.11) *requirements* that an *organization* (3.1) establishes for itself.

3.33 incident
occurrence(s) arising out of or in the course of work that could or does result in-injury or ill-health
Note 1 to entry:　　　An incident where injury or ill-health occurs is referred to by some as an "accident."
Note 2 to entry:　　　An incident where no injury or ill-health occurs is referred to by some as a "near- miss", "near-hit", "close call", or "dangerous occurrence."

3.34 corrective action
action to eliminate the cause(s) of a *nonconformity* (3.32) or an incident (3.33) and to prevent recurrence

3.35 continual improvement

recurring activity to enhance *performance* (3.25)

Note 1 to entry: Enhancing *performance* relates to the use of the *OH&S management system* (3.11) in order to achieve improvement in overall *OH&S performance* (3.26) consistent with the *OH&S policy* (3.15) and *OH&S objectives* (3.17).

Note 2 to entry: The activity need not take place in all areas simultaneously.

4 Context of the organization

4.1 Understanding the organization and its context

The organization shall determine external and internal issues that are relevant to its purpose and objectives and that affect its ability to achieve the intended outcome(s) of its OH&S management system.

4.2 Understanding the needs and expectations of workers and other interested parties

The organization shall determine:

   a) the workers and other interested parties that are relevant to the OH&S management system;
   b) the relevant needs and expectations (i.e. requirements) of these interested parties, and which of these are added to applicable legal and other requirements.

4.3 Determining the scope of the OH&S management system

The organization shall determine the boundaries and applicability of the OH&S management system to establish its scope.

When determining this scope, the organization shall ~~consider~~ :

   a) consider the external and internal issues referred to in 4.1;
   b) take into account the requirements referred to in 4.2;
   c) consider the work related activities performed.

The scope shall be available as documented information.

4.4 OH&S management system

The organization shall establish, implement, maintain and continually improve an OH&S management system, including the processes needed and their interactions, in accordance with the requirements of this International Standard to improve its OH&S performance.

5 Leadership, worker participation and consultation

5.1 Leadership and commitment

Top management shall demonstrate leadership and commitment with respect to the OH&S management system by ensuring processes are established for:

a) taking overall responsibility and accountability for the protection of worker´s health and safety and for the effectiveness of the OH&S management system;

b) ensuring that knowledge of the organization's context as well as OH&S risks and OH&S opportunities are considered when establishing the OH&S management system;

c) ensuring that the OH&S management system nonconformities and opportunities are identified and action is taken in response to improve OH&S performance;

d) ensuring that work related hazards are systematically identified, OH&S risks are evaluated and prioritized, and action is taken to achieve risk reduction to improve OH&S performance;

e) ensuring that opportunities to enhance health and safety at the workplace are systematically identified and action is taken in response to improve OH&S performance;

f) ensuring that the OH&S policy and related OH&S objectives are established and are compatible with the strategic direction of the organization;

g) ensuring the integration of the OH&S management system processes and requirements into the organization's business processes;

h) ensuring that the resources needed ~~for~~ to establish, implement, maintain and improve the OH&S management system are available;

i) ensuring that the organization establishes processes for the consultation and active participation of workers (and, as applicable, their representatives) in the establishment, implementation, maintenance, and continual improvement of the OH&S management system, identifying and removing obstacles or barriers to participation;

j) communicating the importance of effective OH&S management and of conforming to the OH&S management system requirements;

k) ensuring that the OH&S management system achieves its intended outcome(s);

l) directing and supporting persons to contribute to the effectiveness of the OH&S management system for all functions;

m) promoting continual improvement;

n) supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility;

o) promoting and leading a positive culture with regard to the OH&S management system.

NOTE   Reference to "business" in this International Standard can be interpreted broadly to mean those activities that are core to the purposes of the organization's existence.

5.2 Policy

Top management shall establish an OH&S policy that:

a) is appropriate to the purpose and context of the organization and to the nature of its OH&S risks and OH&S opportunities;

b) provides a framework for setting the OH&S objectives;

c) includes a commitment to satisfy applicable legal and other requirements;

d) includes a commitment to the control of OH&S risks through a hierarchy of control;

e) includes a commitment to continual improvement of the OH&S management system;

f) includes a commitment to worker (and, as applicable, their representatives) participation and consultation.

The OH&S policy shall:

— be available as documented information;

— be communicated to workers within the organization;

— be available to interested parties, as appropriate;

— be reviewed periodically to ensure that it remains relevant and appropriate.

5.3 Organizational roles, responsibilities, accountabilities and authorities

Top management shall ensure that the responsibilities, accountabilities and authorities for ~~relevant roles~~ relevant within the OH&S management system are assigned and communicated at all levels within the organization and retained as documented information. Workers at each level of the organization shall assume responsibility for those aspects of OH&S management system over which they have control.

Top management shall assign the responsibility and authority for:

a) ensuring that the OH&S management system conforms to the requirements of this International Standard;

b) reporting on the performance of the OH&S management system to top management.

5.4 Participation, consultation and representation

The organization shall establish a process to ensure effective participation and consultation in the OH&S management system by workers at all levels and functions of the organization by:

a) providing workers (and, as applicable, their representatives) at all levels under its direct control with the mechanisms, time and resources necessary to participate in, at a minimum, the following processes of the OH&S management system:

   1. 1) Context of the organization (see Clause 4);

   2. 2) Planning (see Clause 6);

   3. 3) Support (see Clause 7);

   4. 4) Operation (see Clause 8);

   5. 5) Performance evaluation (see Clause 9);

   6. 6) Improvement (see Clause 10).

b) providing workers (and, as applicable, their representatives) at all levels under its direct control with the mechanisms, time, training and resources necessary to be consulted in, at a minimum the process of developing the policy (see 5.2);

c) providing workers (and, as applicable, their representatives) at all levels with timely access to clear, understandable and relevant information about the OH&S management system; -

d) identifying and removing obstacles or barriers to participation and minimizing those that cannot be removed;

e) encouraging timely reporting and response to work-related hazards, OH&S risks, OH&S opportunities, incidents and nonconformities.

The organization shall ensure that, when appropriate, relevant external interested parties are consulted about matters pertinent to the OH&S management system.

NOTE 1   The reporting and investigation of incidents without delay can assist in the removal of hazards and in minimizing associated risks.

NOTE 2   Obstacles or barriers include but are not limited to lack of response to worker input or suggestions, language or literacy barriers to clear communication, reprisals (supervisory and co-worker), or any policy, practice or program that penalizes or discourages participation.(see A.7.4.2 f)).

NOTE 3   Effective participation includes, as applicable, engaging health and safety committees and representatives.

NOTE 4   Effective participation of workers (and, as applicable, their representatives) includes consultation which involves an exchange of relevant information and advice as part of the decision making process related to the OH&S management system.

NOTE 5 The provision of personal protective equipment (PPE) at no cost to workers can remove an important barrier to participation in the OH&S management system.

6 Planning

6.1 Actions to address risks and opportunities

6.1.1 General

When planning for the OH&S management system, the organization shall consider the issues referred to in 4.1 (context), the requirements referred to in 4.2 (interested parties) and 4.3 (the scope of its OH&S management system) and determine the risks and opportunities that need to be addressed to:

a)   give assurance that the OH&S management system can achieve its intended outcome(s) (including enhanced health and safety at the workplace);

b)   prevent, or reduce, undesired effects;

c)   achieve continual improvement.

The organization shall consider the effective participation in the planning process of workers (and as applicable, their representatives) and, where appropriate, other interested parties.

When determining the risks and opportunities that need to be addressed, the organization shall take into account:

a)   OH&S risks related to its hazards (see 6.1.2.2) and OH&S opportunities;

b)   applicable legal and other requirements (see 6.1.3);

c)   risks and opportunities related to the operation of the OH&S management system (see 6.1.4) that can affect the achievement of the intended outcomes.

The organization shall assess the risks and opportunities that are relevant to the intended outcome of the OH&S management system associated with changes in the organization, its processes, or the OH&S management system. In the case of planned changes, permanent or temporary, this assessment shall be undertaken before the change is implemented (see Clause 8).

The organization shall maintain documented information to the extent necessary to have confidence that the process has been carried out as planned.

6.1.2 Hazard identification and assessment of OH&S risks

6.1.2.1 General
The organization shall ensure that the processes for hazard identification and assessment of OH&S risks involve the participation of workers (and, as applicable, their representatives).

6.1.2.2 Hazard identification
The organization shall establish, implement and maintain a process for the on-going proactive identification of hazards arising in the workplace, and to workers. The process shall take into account:

a) routine and non-routine activities and situations, including consideration of
   1) infrastructure, equipment, materials, substances and the physical conditions of the workplace;
   2) hazards that arise as a result of product design including during research, development, testing, production, assembly, construction, service delivery, maintenance or disposal;
   3) human factors;
b) emergency situations;
c) people, including consideration of:
   1) those with access to the workplace and their activities, including workers, contractors and visitors;
   1. 2) those in the vicinity of the workplace who can be affected by the activities of the organization;
   2. 3) workers who perform work-related activities at a location which is not under the direct control of the organization;
d) the organization's operations and activities, including consideration of:
   1) the design of work areas, processes, installations, machinery/equipment, operating procedures and work organization, including their adaptation to human capabilities;
   2) changes in knowledge of, and information about, hazards;
   3) situations occurring in the vicinity of the workplace caused by work-related activities under the control of the organization;
   4) situations not controlled by the organization and occurring in the vicinity of the workplace that can cause injury or ill-health to persons in the workplace;
e) actual or proposed changes in the organization, its operations, processes, activities and OH&S management system;

f) past incidents, internal or external to the organization, including emergencies, and their causes.

6.1.2.3 Assessment of OH&S risks
The organization shall establish, implement and maintain a process to:

a) assess OH&S risks from the identified hazards taking into account applicable legal and other requirements, the effectiveness of existing controls and considering the hierarchy of controls set out in 8.1.2;

b) identify opportunities to eliminate or reduce OH&S risks.

The organization's methodology(ies) and criteria for assessment of OH&S risks shall be defined with respect to scope, nature and timing, to ensure it is proactive rather than reactive and used in a systematic way.

6.1.2.4 OH&S opportunities

The organizations shall establish, implement and maintain a process to identify opportunities to enhance health and safety taking into account:

a) planned changes to the organization, its processes or its activities;

b) opportunities to eliminate or reduce OH&S risks;

c) opportunities to adapt work to workers, as applicable.

6.1.3 Determination of applicable legal and other requirements

The organization shall establish, implement and maintain a process to:

a) identify and have access to up-to-date legal and other requirements that are applicable to its OH&S risks and OH&S management system;

b) determine how to apply and meet these requirements.

The organization shall maintain and retain documented information of:

— applicable legal and other requirements, ensuring this documented information is updated to reflect changes;

— how compliance with its applicable legal and other requirements will be achieved.

6.1.4 Other risks and opportunities to the OH&S management system

The organization shall establish, implement and maintain a process to assess the risks and identify opportunities related to the establishment, implementation, operation and maintenance of the OH&S management system that can occur from the issues identified in 4.1 and 4.2.

6.1.5 Planning to take action

The organization shall plan:

a) actions to address these the risks and opportunities (see 6.1.2 and 6.1.4);

b) actions to address applicable legal and other requirements (see 6.1.3);

c) actions to prepare for, and respond to, emergency situations (see 8.6);

d) how to integrate and implement the relevant actions, including the determination and application of controls, into its OH&S management system processes;
e) how to evaluate the effectiveness of these actions and respond accordingly.

6.2 OH&S objectives and planning to achieve them

6.2.1 OH&S objectives

The organization shall establish OH&S objectives at relevant functions and levels to maintain and improve the OH&S management system and to achieve continual improvement in OH&S performance (see Clause 10).

The OH&S objectives shall:

a) be consistent with the OH&S policy;

~~b) measurable (if practicable);~~ [drafting note: moved to line 705]
b) take into account applicable legal and other requirements;
c) take into account the outcome of the assessment of OH&S risks and opportunities;
d) take into account the result of any consultation with workers (and, as applicable, their representatives);
e) be measurable (if practicable);
f) be monitored;
g) be communicated (see 7.4);
h) be updated as appropriate.

~~The organization shall retain documented information on the XXX objectives~~ [drafting note: moved to line 723]

When establishing its OH&S objectives the organization shall consider best practices, technological options, financial, operational and business requirements.

The organization shall arrange for the participation of workers (and, as applicable, their representatives).

6.2.2 Planning to achieve OH&S objectives

When planning how to achieve its OH&S objectives, the organization shall determine, for each one:

a) what will be done;
b) what resources will be required;
c) who will be responsible;
d) when it will be completed;
e) how it will be measured through indicators (if practicable) and monitored including frequency;
f) how the results will be evaluated;
g) how the actions to achieve OH&S objectives will be integrated into the organization´s business processes.

The organization shall retain documented information on the OH&S objectives and plans to achieve them.

7 Support

7.1 Resources

The organization shall determine and provide the resources needed for the establishment, implementation, maintenance and continual improvement of the OH&S management system in order to enhance OH&S performance.

The organization shall determine the knowledge necessary for the operation of its OH&S management system.

This knowledge shall be maintained, and be made available to the extent necessary.

When addressing changing needs and trends, the organization shall consider its current knowledge and determine how to acquire or access the necessary additional knowledge.

7.2 Competence

The organization shall:

a) determine the necessary competence of ~~person(s) doing work under its control~~ workers that affects or can affect its OH&S performance;

b) ensure that ~~these~~ workers ~~persons~~ are competent on the basis of appropriate education, training, qualification and/or ~~or~~ experience;

c) where applicable, take actions to acquire the necessary competence, and evaluate the effectiveness of the actions taken;

d) retain appropriate documented information as evidence of competence.

Actions taken to ensure competence, shall take into account:

— the hazards identified and associated OH&S risks assessed by the organization;

— preventive and control measures resulting from the OH&S risk assessment process;

— assigned roles and responsibilities;

— individual capabilities, including experience, language skills and literacy;

— the relevant updating of the competencies made necessary by context or work changes;

— the evaluation of the competence of workers according to the determined necessary competence.

NOTE 1   Necessary competencies also include those prescribed by applicable legal and other requirements.

NOTE 2   Applicable actions can include, for example, the provision of training to, the mentoring of, or the re-assignment of currently employed persons; or the hiring or contracting of competent persons.

NOTE 3   Workers (and, as applicable, their representatives) can assist in both identifying needs and assisting in building necessary competencies.

NOTE 4   Workers (and, as applicable, their representatives) can play a key role in both identifying competencies and developing processes to achieve them.

NOTE 5   It is beneficial to provide training to all workers at no cost and during working hours.

7.3 Awareness

Persons doing work or work-related activities, regularly or temporarily, under the organization's direct and indirect control shall be aware of:

a) the OH&S policy;
b) their contribution to the effectiveness of the OH&S management system, including the benefits of improved OH&S performance;
c) the implications of not conforming with the OH&S management system requirements, including the consequences, actual or potential, of their work activities;
d) information and lessons learned concerning relevant incidents.

7.4 Information and communication

The organization shall determine the need for internal and external information and communications relevant to the OH&S management system including decisions:

a) what information to disseminate and on what it will communicate;
b) when to communicate;
c) with whom to communicate:
    1. 1) internally among the various levels and functions of the organization;
    2. 2) with contractors and other visitors to the workplace;
    3. 3) with other external or interested parties;
d) how to communicate;
e) how it will receive, maintain documented information on, and respond to relevant communications.

The organization shall define the intent to be achieved by informing and communicating, and shall evaluate whether the objectives have been met.

The organization shall take into account diversity aspects (e.g. language, culture, literacy, disability), where they exist, when considering its information and communication needs.

7.5 Documented information

7.5.1 General

The organization's OH&S management system shall include:

a) a description of the main elements of the OH&S management system, its processes and their interaction, and reference to related documented information;
b) documented information required by this International Standard;
c) documented information determined by the organization as being necessary for the effectiveness of the OH&S management system.

NOTE   The extent of documented information for an OH&S management system can differ from one organization to another due to:

— the size of organization and its type of activities, processes, products and services;
— the complexity of processes and their interactions;
— the competence of persons.

7.5.2 Creating and updating

When creating and updating documented information the organization shall ensure appropriate:

a) identification and description (e.g. a title, date, author, or reference number);
b) format (e.g. language, software version, graphics) and media (e.g. paper, electronic);
c) review and approval for suitability and adequacy, to ensure that it can be understood by the users.

7.5.3 Control of documented Information

Documented information required by the OH&S management system and by this International Standard shall be controlled to ensure:

a) it is available and suitable for use, where and when it is needed;
b) it is adequately protected (e.g. from loss of confidentiality, improper use, or loss of integrity).

For the control of documented information, the organization shall address the following activities, as applicable:

— distribution, access, retrieval and use;
— storage and preservation, including preservation of legibility;
— control of changes (e.g. version control);
— retention and disposition;
— access for workers (and, as applicable, their representatives) to documented information relevant to their working environment and health, while respecting the need for personal confidentiality.

Documented information of external origin determined by the organization to be necessary for the planning and operation of the OH&S management system shall be identified as appropriate, and controlled.

NOTE   Access can imply a decision regarding the permission to view the documented information only, or the permission and authority to view and change the documented information.

8 Operation
8.1 Operational planning and control

8.1.1 General

The organization shall plan, implement and control the processes needed to meet OH&S management system requirements, and to implement the actions determined in 6.1 Clause 6, by:

a) determining processes that are associated with identified hazard(s) where the implementation of controls is necessary to prevent or reduce the OH&S risks;
b) establishing criteria for the processes;
c) implementing the control of the processes in accordance with the criteria;
d) establishing processes to verify the effective implementation of controls;
e) keeping documented information about the controls to the extent necessary to have confidence that the processes have been carried out as planned;
f) covering situations where the absence of documented information could lead to deviations from the OH&S policy and the OH&S objectives.

8.1.2 Hierarchy of controls

The organization shall establish a process for achieving reduction in OH&S risks using the following hierarchy:

a)   eliminate the hazard;
b)   substitute with less hazardous materials, processes, operations or equipment;
c)   use engineering controls;
d)   use administrative controls including safety signs, markings, warning devices and safe system of work;
e)   use personal protective equipment.

The organization shall ensure that the OH&S risks and determined controls are taken into account when establishing, implementing and maintaining its OH&S management system.

8.2 Management of change

The organization shall plan and manage temporary or permanent changes to the OH&S management system to ensure they do not have a negative impact on OH&S performance including:

a)   the resolution of incidents and nonconformities;
b)   new products, processes or services at the design stage or re-design stage
c)   changes in knowledge or information about hazards;
d)   changes to work processes, procedures, equipment, organizational structure, staffing, products, services, contractors or suppliers;
e)   developments in knowledge and technology;
f)   changes to applicable legal or other requirements.

The organization shall establish a process for the implementation and control of planned changes. The responsibilities and authorities for managing changes and their associated OH&S risks shall be identified.

The organization shall and review the consequences of unintended changes, taking action to mitigate any adverse effects, as necessary.

8.3 Outsourcing

The organization shall ensure that outsourced processes affecting its OH&S management system are controlled. The type and degree of control to be applied to these processes shall be defined within the OH&S management system.

8.4 Procurement

The organization shall establish controls for procurement, e.g. of products, hazardous materials or substances, raw materials, equipment, or services, in order to ensure that procured items conform to its OH&S management system requirements.

8.5 Contractors

The organization shall establish processes to identify and communicate on the hazards, and to evaluate and control the OH&S risks, arising from the:

a) contractor's activities and operations to the organization's workers;
b) organization's activities and operations to the contractors' workers;
c) contractor's activities and operations to other interested parties in the workplace.

The organization shall establish and maintain processes to ensure that the requirements of the organization's OH&S management system, or at least the equivalent, are met by contractors and their workers. These processes shall include the criteria for selection of contractors.

On multi-employer workplaces, the organization shall implement a process for coordinating the relevant portions of the OH&S management system with other organizations.

8.6 Emergency preparedness and response

The organization shall assess OH&S risks associated with emergency situations and establish, implement and maintain a process to anticipate, prevent or minimize OH&S risks from potential emergencies, including:

a) the identification and planning for potential emergency situations;
b) the preparation of a planned response to emergency situations;
c) the periodic testing and exercise of emergency response capability;
d) the evaluation and revision of emergency preparedness as necessary, including after testing and in particular after the occurrence of emergency situations;
e) the provision of relevant information to all members of the organization, at all levels, on their duties and responsibilities;
f) the provision of training for emergency prevention, preparedness and response;
g) the communication of information to contractors, visitors, relevant emergency response services, government authorities, and the local community.

In all stages of the process the organization shall take into account the needs and capabilities of all relevant interested parties and ensure their involvement.

The organization shall keep up-to-date documented information for the process and on the plans for potential emergency situations.

9 Performance evaluation
9.1 Monitoring, measurement, analysis and evaluation
9.1.1 General

The organization shall determine:

 a) what needs to be monitored and measured to meet requirements of this International Standard, applicable legal and other requirements, including:

    1. — its operations with identified hazards and OH&S risks; risks, and opportunities;

    2. — operational controls;

    — progress towards the organization's OH&S objectives;

b) the criteria against which the organization will evaluate its OH&S performance;

c) the methods for monitoring**,** measurement, analysis and evaluation, as applicable, to ensure valid results;

d) when the monitoring and measuring shall be performed;

e) when the results from monitoring and measurement shall be analysed, ~~and~~ evaluated and communicated.

The organization shall ensure the participation of workers (and, as applicable, their representatives) in these activities.

The organization shall ensure that calibrated or verified monitoring and measurement equipment is used and maintained as appropriate.

~~The organization shall retain appropriate documented information as evidence of the results.~~ [drafting note: incorporated in lines 916 and 917]

The organization shall evaluate the OH&S performance, and determine the effectiveness of the OH&S management system. In particular the organization shall use the monitoring and measuring results during its evaluations.

The organization shall retain appropriate documented information as evidence of the monitoring, measurement, analysis and evaluation results.

9.1.2 Evaluation of compliance

The organization shall plan implement and maintain a process for evaluating compliance with applicable legal requirements and other requirements to which the organization subscribes (see 6.1.3).

The organization shall:

a) determine the frequency and method(s) by which compliance will be evaluated;

b) evaluate compliance and take action if needed;

c) maintain knowledge and understanding of its status of conforming with legal and other requirements.

The organization shall retain documented information as evidence of the compliance evaluation result(s).

9.2 Internal audit
9.2.1 Internal audit objectives

The organization shall conduct internal audits at planned intervals to provide information on whether the OH&S management system:

a) conforms to:

3. 1) the organization's own requirements for its OH&S management system, including the OH&S policy and OH&S objectives;

4. 2) the requirements of this International Standard;

b) is effectively implemented and maintained.

9.2.2 Internal audit process

The organization, in consultation with workers (and, as applicable, their representatives), shall:

a) plan, establish, implement and maintain an audit programme(s) including the frequency, methods, responsibilities, planning requirements and reporting, which shall take into consideration the importance of the processes concerned performance evaluation outcomes, OH&S risks, risks and opportunities, and the results of previous audits;

b) define the audit criteria and scope for each audit;

c) select competent auditors and conduct audits to ensure objectivity and the impartiality of the audit process;

d) ensure that the results of the audits are reported to relevant management, relevant workers (and, as applicable, their representatives) and relevant interested parties (7.4.1);

e) take appropriate action in line with 10.1 or 10.2;

f) retain documented information as evidence of the implementation of the audit programme and the audit results.

Note   For more information on auditing, refer to ISO 19011.

9.3 Management review

Top management shall review the organization's OH&S management system at planned intervals to ensure its continuing suitability, adequacy and effectiveness.

The management review shall include consideration of:

a) the status of actions from previous management reviews;

b) changes in
   1) external and internal issues that are relevant to the OH&S management system;
   2) applicable legal and other requirements;
   3) the organization's OH&S risks, risks and opportunities;

c) the extent to which OH&S policy and OH&S objectives have been met;

d) information on the OH&S performance, including status and trends in:
   5. 1) incidents, nonconformities, continual improvement, and corrective actions;
   6. 2) worker participation and consultation;
   7. 3) monitoring and measurement results;
   8. 4) audit results;
   9. 5) results of evaluation of compliance;
   10. 6) OH&S risks, risks and opportunities;

e) relevant communication(s) with interested parties;

f) opportunities for continual improvement;

g) the adequacy of resources for maintaining an effective OH&S management system.

The outputs of the management review shall include:

— conclusions on the continuing suitability, adequacy and effectiveness of the OH&S management system;

— decisions related to continual improvement opportunities;

— decisions on and any need for changes to the OH&S management system, including resources needs;

— actions if needed, when objectives have not been met;

— any implications for the strategic direction of the organization.

The organization shall communicate the outputs of the management review to its workers (and as applicable, to their representatives) (see 7.4.1).

The organization shall retain documented information as evidence of the results of management reviews.

10 Improvement
10.1 Incident, nonconformity and corrective action

When an incident or a nonconformity occurs, the organization shall:

a) react in a timely manner to the incident or nonconformity, and, as applicable:
1. 1) take action to control and correct it;
2. 2) deal with the consequences;

b) evaluate the need for corrective action, with the participation of workers (and, as applicable, their representatives), to eliminate the root causes of the incident or nonconformity, in order that it does not recur or occur elsewhere, by:
3. 1) reviewing the incident or nonconformity;
4. 2) determining causes of the incident or nonconformity;
5. 3) determining if similar incidents and nonconformities or causes exist, or could potentially occur;

c) review the hazard identification and the assessment of OH&S risks and risks, as appropriate (see 6.1);

d) implement any action needed including corrective action, in accordance with 8.2;

e) review the effectiveness of any corrective action taken;

f) make changes to the OH&S management system, if necessary.

Corrective actions shall be appropriate to the effects or potential effects of the incidents or nonconformities encountered.

The organization shall:

— retain documented information as evidence of:

1) the nature of the incidents or nonconformities and any subsequent actions taken;
2) the results of any corrective action, including the effectiveness of the actions taken.

— communicate the documented information to relevant workers (and, as applicable, their representatives) and relevant interested parties.

10.2 Continual improvement
10.2.1 Continual improvement objectives

The organization shall continually improve the suitability, adequacy and effectiveness of the OH&S management system to:

a) prevent occurrence of incidents and nonconformities;

b) promote a positive health and safety culture;

c) enhance OH&S performance.

10.2.2 Continual Improvement Process

The organization shall establish, implement and maintain a continual improvement process(es), in consultation with its workers (and, as applicable, their representatives), which takes into account the outputs of the activities described in:

a) Clause 4 'Context of the organization';
b) 6.1 'Actions to address risks and opportunities';
c) 6.2 'OH&S Objectives and plans to achieve them' ;
d) 7.4 'Information, communication participation and consultation';
e) 9.1 'Monitoring, measurement, analysis and evaluation';
f) 9.2 'Internal Audit';
g) 9.3 'Management review';
h) 10.1 Incident, nonconformity and corrective action.

The results of continual improvement shall be communicated to its workers (and, as applicable, their representatives).

The organization shall retain documented information as evidence of the results of continual improvement.

Annex A

(informative)

Guidance on the use of this International Standard

A.1 Scope

This International Standard outlines the requirements of a robust, credible and reliable OH&S management system. The additional text given in this Annex is strictly informative and is intended to prevent misinterpretation of the requirements contained in this International Standard. While the information in this Annex addresses and is consistent with these requirements, it is not intended to add to, subtract from, or in any way modify them. This Annex does not contain explanatory information on Clause 1.

A.2 Normative reference

There are no normative references in this International Standard. Users can refer to the documents listed in the Bibliography for further information.

A.3 Terms and definitions

In addition to the terms and definitions given in Clause 3, and in order to avoid misunderstanding, clarifications of selected concepts are provided below:

— '*Continual*' indicates duration that occurs over a period of time, but with intervals of interruption (unlike '*continuous*' which indicates duration without interruption). 'Continual' is therefore the appropriate word to use in the context of improvement;

— The word '*consider*' means it is necessary to think about but can be rejected, whereas '*take into account*' means it is necessary to think about but cannot be rejected;

— The words '*appropriate*' and '*applicable*' are not interchangeable. '*Appropriate*' means suitable (for, to) and implies some degree of freedom, while '*applicable*' means relevant or possible to apply and implies that if it can be done, it **shall** be done;

— This International Standard uses the term '*interested party*', the term '*stakeholder*' is a synonym as it represents the same concept;

— The word '*ensure*' means the responsibility can be delegated, but not the accountability to make sure that it is performed;

— '*Documented information*' is used to include both documents and records. This International Standard uses the phrase '*retain documented information as evidence of…*' to mean records, and '*shall be available as documented information*' to mean documents, including procedures. The phrase '*to retain documented information as evidence of….*' is not intended to require that the information retained will meet legal evidentiary requirements. Instead, it is intended to define the type of records that need to be retained.

Organizations can be subject to legal requirements related to the OH&S management system that mandate the use of certain terms or their meaning. In such cases, conformity to this International Standard still requires that its intent be fulfilled even when using such legally prescribed terms.

A.4 Context of the organization
A.4.1 Understanding the context of the organization

The intent of this clause is to provide a high-level understanding of the issues that can affect, either positively or negatively, the way the organization manages its responsibilities in relation to the OH&S management system for persons working under its control.

The issues of interest are those that affect the organization's ability to achieve the intended outcomes including the objectives it sets for its OH&S management system, as well as meeting its OH&S policy commitments. Issues can include conditions, characteristics or changing circumstances that can affect the OH&S management system, for example:

a) external context issues, such as:
   1. 1) the cultural, social, political, legal, financial, technological, economic and natural surroundings and market competition, whether international, national, regional or local;
   2. 2) introduction of new competitors, new technologies, new laws and the emergence of new occupations;
   3. 3) key drivers and trends relevant to the industry or sector having impact on the objectives of the organization;
   4. 4) relationships with, and perceptions and values of, its external interested parties;
   5. 5) changes in relation to any of the above.

b) internal context issues, such as:
   6. 1) governance, organizational structure, roles and accountabilities;
   7. 2) policies, objectives, and the strategies that are in place to achieve them;
   8. 3) the capabilities, understood in terms of resources and knowledge (e.g. capital, time, people, processes, systems and technologies);

9. 4) information systems, information flows and decision-making processes (both formal and informal);
10. 5) introduction of new products and equipment;
11. 6) relationships with, and perceptions and values of, internal interested parties;
12. 7) the organization's culture;
13. 8) standards, guidelines and models adopted by the organization;
14. 9) form and extent of contractual relationships;
15. 10) changes in relation to working time requirements and any of the above.

The results of the context review should be used to assist the organization in understanding and determining the scope of its OH&S management system, determining its risks and opportunities, developing or enhancing its OH&S policy, setting its OH&S objectives and determining the effectiveness of its approach to maintaining compliance with its applicable legal and other requirements.

A.4.2 Understanding the needs and expectations of workers and other interested parties

Workers (and, as applicable, their representatives) and other interested parties can be either internal or external to the organization. The organization should seek to ensure that it is aware of all relevant interested parties that can affect the OH&S management system, or which perceive themselves to be affected by it, in order to plan how to meet their needs and expectations, when relevant.

Other Interested parties to an OH&S management system can include:

a) legal and regulatory authorities (local, regional, state/provincial, national or international);
b) parent organizations;
c) suppliers, contractors and subcontractors, external providers;
d) owners, shareholders, clients, visitors, local community and neighbours of the organization;
e) customers, medical and other community services, media, academia, business associations, non-governmental organizations (NGOs);
f) health and safety organizations and occupational health-care professionals (including doctors).

Interested party needs and expectations are not necessarily requirements of the organization. It is important to distinguish between what these needs and expectations will lead to:

— mandatory requirements: laws, regulations, corporate requirements, provisions of the organization's collective agreements that relate to the health and safety of workers where they are given legal effect;
— commitment requirements: voluntary commitments to interested parties to which the organization voluntarily subscribes. It also includes rules, guides and technical references;
— other requirements to which the organization voluntarily subscribes that relate to the OH&S management system.

Needs and expectations from interested parties become obligatory requirements for an organization if that organization chooses to adopt them. Once the organization adopts them, then they become requirements and should be considered when planning and establishing the OH&S management system.

A.4.3 Scope of the OH&S management system

The scope of the OH&S management system is intended to clarify the spatial and organizational boundaries to which the system will apply, especially if the organization is a part of a larger organization at a given location. An organization has the freedom and flexibility to define its boundaries. It may choose to implement this International Standard with respect to the entire organization, or to (a) specific part(s) of the organization, as long as the top management of that part of the organization has authority for establishing an OH&S management system.

In setting the scope, the credibility of the OH&S management system will depend upon the choice of organizational boundaries. It should be noted that 4.3 requires that the organization should take into account all its activities, products or services that are within its control or influence that can impact on OH&S performance when defining the scope for its OH&S management system.

The scope should be factual and representative of the organization's operations included within its OH&S management system boundaries so that it does not mislead interested parties.

Once the organization asserts it conforms to this International Standard, the scope should be documented and where necessary made available to interested parties.

The scope of activities, products and services can extend beyond the immediate direct control of the organization (see 8.3 regarding outsourcing and 8.5 for contractors). Supply and procurement policies should address hazards and potential OH&S risks to persons in the organization and, as far as possible, impacts on persons, outsourced or subcontracted, carrying out activities or producing products or delivering services for the organization.

A.4.4 OH&S management system

The organization retains authority, accountability, and autonomy, to decide how it will fulfil the requirements of this International Standard, including the level of detail and extent to which it will:

a) integrate requirements of the OH&S management system into its various business operations, such as design & development, procurement, human resources, sales and marketing, etc.;

b) incorporate issues associated with its context (4.1) and interested party requirements (4.2) within its OH&S management system.

If this International Standard is implemented for a specific part(s), of an organization, the policies and processes developed by other parts of the organization can be used to meet the requirements of this International Standard, provided that they are applicable to the specific part(s) that will be subject to them.

A.5 Leadership, worker participation and consultation
A.5.1 Leadership and commitment

Commitment, responsiveness, active support and feedback from the organization's top management are critical for the success of the OH&S management system and therefore they have specific responsibilities for which they need to be personally involved or which they need to direct. Leadership includes communicating not only what needs to be done but why it should be done. To achieve

improved acceptance and implementation of OH&S management system processes, communication of requirements should include both "what" needs to be done and "why" it should be done.

Resources include, but are not limited to, the people, finances and infrastructure needed by the organization to establish, implement, maintain and continually improve its OH&S management system and OH&S performance.

An organization should promote a positive culture that encourages workers (and, as applicable, their representatives) to actively participate in the OH&S management system.

An organization's culture is largely determined by top management and the product of individual and group values, attitudes, perceptions, competencies and patterns of activities that determine the commitment to, and the style and proficiency of, its OH&S management system. An organization with a positive culture is characterized by communications founded on mutual trust, by shared perceptions of the importance of the OH&S management system and by confidence in the effectiveness of preventive measures.

The organization should foster a positive culture relative to its OH&S management system that promotes the elimination of any reprisals, or fear of reprisal, for worker participation, such as identification and reporting of hazards, incidents, recommending control measures, consultation with other members of the organization, and reporting issues relating to the OH&S management system to responsible authorities as required.

A.5.2 Policy

The OH&S policy is a set of principles stated as commitments in which top management outlines the long-term direction of the organization to support and continually improve its OH&S performance. The OH&S policy sets the framework for the organization to set its objectives and take actions to achieve the intended outcomes of the OH&S management system.

Clause 5.2 specifies three basic commitments for the OH&S policy: to provide a healthy and safe working environment, to satisfy applicable legal and other requirements and to continually improve its OH&S performance. These commitments are then addressed in specific requirements in other clauses to establish, implement, maintain and continually improve a robust, credible and reliable OH&S management system.

It is important to understand that the organization needs to have an appreciation for the relationship between the organization's policy commitments and the requirements for the other parts of its OH&S management system.

While all the commitments are important, some interested parties are especially concerned with the organization's commitment to satisfy its applicable legal and other requirements. In this respect it is important to acknowledge that this International Standard specifies a number of interconnected requirements related to this commitment. This includes the need to identify the applicable legal and other requirements, to ensure operations are carried out in accordance with these legal and other requirements and to evaluate conformity with the applicable legal and other requirements.

A.5.3 Organizational roles, responsibilities, accountabilities and authorities

The successful implementation of an OH&S management system calls for a commitment from all persons working under the control or influence of the organization. This commitment should begin with top management.

The organization should communicate and promote that it is the responsibility of all persons working under the organization's control or influence to prevent injuries and ill-health, not just the responsibility of those with defined OH&S management system responsibilities. In fulfilling their responsibilities, all persons in the workplace need to consider not only their own health and safety but also the health and safety of others.

Accountability means ultimate responsibility and relates to the person who is held to account if something is not done, does not work, or fails to achieve its objective.

The organization should define and communicate the responsibilities, accountability and authorities of all persons whose work relates to its OH&S management system. OH&S management system responsibilities should be assigned in appropriate areas of the organization, such as operational management (e.g. design, maintenance, manufacturing) or other staff functions (e.g. middle-management and supervisors). The resources provided by the top management should enable the fulfilment of the responsibilities assigned. The responsibilities, accountabilities and authorities should be reviewed when a change in structure of the organization occurs.

The persons assigned these roles should be competent and have sufficient access to, and encouragement from, top management authority and resources in order to keep top management informed of the status and performance of the OH&S management system and whether the OH&S management system conforms with the requirements of this International Standard. The persons assigned these roles should be entitled to report to supervisors or other managers about dangerous situations so that corrective and preventive action can be taken. They should be able to report concerns to responsible authorities as required without the threat of dismissal, discipline or other such reprisals. Such roles can be assigned to an individual, sometimes referred to as the 'management representative', shared by several individuals, or assigned to a member of top management.

Workers should have sufficient competency and authority to remove themselves from hazardous situations as necessary.

A.5.4 Participation, consultation and representation

The participation of workers (and, as applicable, their representatives) is a key factor of success for an OH&S management system.

The top management of the organization should encourage the participation of workers (and, as applicable, their representatives) in the development, implementation and maintenance of the OH&S management system, including suggestions for the improvement of the system which would lead to improvements in the organizations OH&S performance, such that they should feel safe from the threat of dismissal, discipline, or other such reprisals.

Consultation is a two-way communication process. For example, workers nearest to OH&S risks (and, as applicable, their representatives) can be asked about decisions to be taken to control those OH&S risks so they can give their opinions about them.

Participation of workers is a process of cooperation which includes consultation between managers and non –managers (and, as applicable, their representatives) in order to contribute to decision-making processes on OH&S performance measures and proposed changes. This cooperation includes workers (and, as applicable, their representatives) being given adequate information, protection from dismissal and other prejudicial measures that would prevent them from exercising their functions in the OH&S management system, and access to workers during working hours for the purpose of communicating about health and safety issues.

Means of encouraging worker participation in the OH&S management system and avoiding barriers can include:

a) the provision of information and communication regarding the scope and objectives of the OH&S management system;
b) the provision of operational information and training, including knowledge of identified hazards, hazard elimination and control strategies, and residual risks assessments;
c) creating awareness of hazards and OH&S risks;
d) improving competency;
e) the provision of adequate time and resources to accomplish the items from bullets a) to c);
f) the provision of mechanisms to foster, promote and enable effective cooperation between managers and non-managers e.g. workers' safety delegates, workers' health and safety committees, or joint health and safety committees as well as provision for the selection of representatives (through worker or union organizations) in accordance with applicable legal and other requirements;
g) providing protection from reprisals, including disciplinary or other adverse measures, for reporting, or removing themselves from situations of serious danger of imminent harm;
h) creating and maintaining a positive culture for the OH&S management system.

Removing barriers to participation, or reducing them to a minimum when removal is not possible, is essential if the OH&S management system is to be effective.

Feedback in the OH&S management system is dependent upon worker participation. The organization should make sure workers at all levels are encouraged to report hazardous situations, so that corrective and preventive action can be taken, and to report concerns to the responsible authorities. The threat of dismissal, discipline or other such reprisals can undermine this feedback process.

A.6 Planning
A.6.1 Actions to address risks and opportunities
A.6.1.1 General

The purpose of planning in the OH&S management system is to prevent undesired effects such as injury or ill-health by anticipating hazardous events and their likelihood and consequences, in order to achieve the intended outcomes of the OH&S management system. It also identifies opportunities that can offer a potential advantage or beneficial outcome such as improved OH&S performance.

Planning is not a single event but an on-going process, anticipating changing circumstances and continually identifying risks and opportunities. When planning the organization's OH&S management system, the context (4.1)

in which it will operate, the views of its workers and other interested parties (4.2) and its scope (4.3) are considered to ensure the system can identify its risks and opportunities. An initial review or gap analysis may be conducted when planning for the OH&S management system. The output from this review can be used in the planning process. This International Standard requires the organization to identify hazards and assess its OH&S risks (6.1.2), determine its applicable legal and other requirements (6.1.3), and to assess other risks and opportunities to the OH&S management system (6.1.4). This information is then used to determine how the risks and opportunities should be managed (6.1.5). Planning also includes determining how to incorporate the actions deemed necessary or beneficial into the OH&S management system through objective setting (6.2), operational control (8.1) or other parts of the OH&S management system, for example, resource provisions (7.1) and competence (7.2). The mechanism for evaluating the effectiveness of the preventive and protective measures is also planned and can include monitoring and measurement techniques (9.1), internal audit (9.2) or management review (9.3).

Changes can present both risks to workers, and opportunities to improve the performance of the OH&S management system, and need to be carefully planned before being implemented.

A.6.1.2 Hazard identification and assessment of OH&S risks
A.6.1.2.1 Hazard identification
A.6.1.2.1.1

The process for hazard identification should be on-going to reflect current, changing and future activities. This can include inputs from the review of data and reports of past incidents and ill-health, and complaints from both inside and outside the organization.

The hazard identification process helps the organization recognize and understand the hazards to workers and in the workplace, in order to assess, prioritize and eliminate or reduce the related risks to levels as low as reasonably practicable.

Hazard identification should proactively identify any source or situation (or combination of these), arising from an organization's activities, with a potential for injury, ill-health or death.

Examples of hazards include:

a) sources: powered machinery, toxic substances, radiation, workload and task control, aggressive behaviour or harassment;
b) situations: working at heights, working in confined spaces, working alone or worker fatigue.

Hazards can be categorised in many ways including: physical, chemical, biological, psychosocial, physiological; or mechanical and electrical; or based on movement and energy.

In carrying out its identification of hazards the organization should consider all of the categories detailed in the requirements. The list provided in the requirements is not exhaustive, however. It is always the responsibility of the organization to have an on-going process which identifies different hazards.

A.6.1.2.1.2

Routine activities and situations include day to day operations such as using a machine. Non-routine activities and situations are short-term, long-term or occasional activities and reasonably foreseeable situations such as extended work hours, production pressure, a small oil leak that affects the machine operator, periodic and breakdown maintenance or repair or disruption to utility services such as water, gas, electricity or sewage. Physical conditions which can cause hazards at the work location include lighting, ambient temperature, humidity and surrounding noise, proximity to other workers or condition of work surfaces. Human factors refers to such things as capabilities and limitations, skill levels and competence needs, differing levels of literacy or language fluency, familiarity with the site or activity, work overload and other

considerations such as ergonomics or individual actual or potential behaviours. An organization should look at the underlying causes when considering human behaviours that contribute to risks and hazards, such as fear of reporting incidents or concerns.

A.6.1.2.1.3
Emergency situations are unplanned or unscheduled situations that require an immediate response, for example a machine catching fire in the workplace or a natural disaster in the vicinity of the workplace or at another location where workers are performing work-related activities. It also includes situations such as civil unrest at a location at which workers are performing work-related activities, which requires their urgent evacuation.

A.6.1.2.1.4
The reference to people is intended to direct the organization to consider all those who can be directly affected by the organization's activities. For example passers-by, contractors or immediate neighbours. It also includes mobile workers, those workers who travel to perform work-related activities at another location (for example service engineers travelling to and working at a customer's site), home-based workers or those who work alone.

A.6.1.2.1.5
In relation to its operations and activities the organization should include consideration of human capabilities, such as physical stature, pregnancy or physical or mental impairment. Hazards can also be created though design, for example a machine which cannot be cleaned or maintained without working at an unsafe height or requiring work in an unsafe position or in a confined space.
Situations can occur in the vicinity of the workplace that present hazards, such as within multi-organization worksites where the activities of any one of the organizations could cause injury or ill-health to persons doing work for another organization on the worksite.
16.   Situations not controlled by the organization and occurring in the vicinity of the workplace can cause injury or ill-health to persons in the workplace for example a fire or explosion in an adjacent property or a nearby public protest which escalates into civil disobedience.

A.6.1.2.1.6
Hazards can arise from changes in an organization. These include a reduction in the number of workers, an increase of unskilled trainees, inadequate succession planning, unfamiliar or ageing equipment, temporary loss of facilities due to routine maintenance or emergency repair. The organization should also consider hazards created by the introduction of new materials, technologies or processes.

A.6.1.2.1.7
Previous incidents and their causes, both within the organization and in other organizations, locations or situations, should be considered when identifying potential hazards. Examples could include incidents involving a forklift or a particular hazardous substance.

This International Standard does not address product safety (that is, safety to end-users of products manufactured by the organization), however hazards to workers occurring during manufacture, construction or assembly of products should be considered.

A.6.1.2.2 Assessment of OH&S risks

An organization can use different methods to assess risks as part of its overall strategy for addressing different hazards or activities. Each method should be appropriate to the type of risks being considered. The complexity of assessment does not depend on the size of the organization but on the hazards associated with the activities of the organization.

The assessment(s) determines the levels of risks and enables the organization to identify appropriate controls and actions.

The purpose of the organization's OH&S management system should be to achieve safe and healthy working conditions with a level of residual risk which is as low as reasonably practicable. (Residual risk is the risk remaining after appropriate preventive and protective measures have been taken.)

A.6.1.2.3 OH&S opportunities

Examples of OH&S opportunities include moving up the hierarchy of controls towards eliminating risks; encouraging workers to report incidents in a timely manner; improving OH&S performance during planned changes such as facilities relocation, process re-design or replacement of machinery and plant; using new technologies to improve OH&S performance or extending OHS competence beyond requirements/Increasing levels of competence.

A.6.1.3 Determination of applicable legal and other requirements

A.6.1.3.1

The applicable legal and other requirements can include those based on the hazards and OH&S risks related to its activities.

A.6.1.3.2

Legal requirements can take many forms, such as:

a) legislation, including statutes, regulations and codes of practice;
b) decrees and directives;
c) orders issued by regulators;
d) permits, licences or other forms of authorization;
e) judgements of courts or administrative tribunals;
f) treaties, conventions, protocols, collective bargaining agreements.

A.6.1.3.3

Other requirements can include:

a) company requirements;
b) contractual conditions;

c) agreements with employees;
d) agreements with interested parties;
e) agreements with health authorities;
f) non-regulatory standards, consensus standards and guidelines;
g) voluntary principles, codes of practice, technical specifications, charters;
h) public commitments of the organization or its parent organization;
i) corporate/company requirements.

A.6.1.4 Other risks and opportunities to the OH&S management system

The organization should give consideration to those risks and opportunities which are not directly related to the health and safety of people and address the factors affecting the OH&S management system, its performance and intended outcomes.

An organization can use different methods to assess risks as part of its overall strategy. Each method should be appropriate to the type of risks being considered. The assessment(s) determines the levels of the risks and enables the organization to identify and prioritize appropriate controls and actions within the OH&S management system or other business processes.

Examples of these types of risks include:

a) inappropriate context analysis; outdated analysis;
b) inadequate consideration of OH&S management system requirements, change management and other health and safety issues in strategic planning and other business processes;
c) the absence of resources for the OH&S management system, whether financial, human or other;
d) an ineffective audit programme;
e) poor succession planning for key OH&S management system roles;
f) poor top management engagement in the OH&S management system activities;
g) failure to address the needs and expectations of relevant interested parties;
h) poor OH&S performance leading to reputational risks.

Examples of opportunities include:

— improving the visibility of top management's support for the OH&S management system;
— improving first response to incidents;
— conducting in-depth incident investigations;
— increasing worker participation;
— exceeding applicable legal and other requirements;
— benchmarking, including consideration of both own past performance and that of other organizations;
— collaborating in forums which focus on topics dealing with health and safety;
— improving the organization's health and safety culture.

A.6.1.5 Planning to take action

The actions planned to address the risks and opportunities identified may be managed through the OH&S management system or through other processes, such as those for business continuity, risks,

financial or human resource management, or a combination of these. Equally, the effectiveness of the actions taken may be measured through the OH&S management system or through other processes. When the assessment of risks has identified the need for controls, the planning activity determines how these are implemented in operation (see Clause 8); for example, determining whether to incorporate these controls into work instructions or into competency improvement actions. Other controls can take the form of measuring or monitoring (see Clause 9).

A.6.2 OH&S objectives and planning to achieve them
A.6.2.1 OH&S objectives

Objectives are established to improve OH&S performance. This includes reducing risks, improving health, or improving the OH&S management system's processes. Objectives may also be set to improve the well-being of workers if this is in scope for the organization's OH&S management system.

The objectives should be linked to the OH&S risks, opportunities and performance criteria which the organization has identified as having the highest priority for the achievement of the intended outcomes of the OH&S management system. Once a level of performance has been achieved and no further improvement is practicable, an objective may be set to maintain that level of performance pending new opportunities.

OH&S objectives can be integrated with other business objectives and should be set at relevant functions and levels. Objectives can be strategic, tactical and operational, and are set to achieve the intended outcomes of the OH&S management system:

a) strategic objectives can be set to improve the overall performance of the OH&S management system, for example improving the health and safety culture of the organization;
b) tactical objectives can be set at project or process level, for example noise elimination to prevent hearing loss;
c) operational objectives can be set at the activity level, for example minimizing chemical inventory stored in the workplace.

The measurement of OH&S objectives can be qualitative or quantitative. The organization is not required to establish OH&S objectives for each of the risks it determines or identifies.

A.6.2.2 Planning to achieve objectives

The organization can plan to achieve objectives individually or collectively.

The organization might need to develop more formal project plans for complex objectives with multiple tasks. In considering the means necessary for such planning, the organization should examine the resources required (financial, human, equipment infrastructure) for the tasks to be performed. The organization should assign responsibility and completion dates for individual tasks to ensure that the objective can be accomplished within the overall timeframe.

When practicable, each objective should be associated with an indicator which can be strategic, tactical and operational (see also A.9.1.2).

A.7 Support
A.7.1 Resources
Resources include human resources, natural resources, infrastructure, technology, and financial resources.

Human resources include specialized skills and knowledge.

In considering the need for resources the organization should determine the need for protective measures (such as personal protective equipment [PPE]) and the competence needs as part of a job requirement.

Infrastructure includes the organization's buildings, plant, equipment, utilities, information technology and communications systems, emergency containment systems, etc.

A.7.2 Competence
All persons working under the control of the organization need to be competent to take into account hazards and OH&S risks in their work.

The competence requirements are not limited to those doing work that have or can be exposed to OH&S risks but also those who manage a function or undertake a role which is critical to achieving the intended outcomes of the OH&S management system.

In determining the criteria of the competence for each role an organization should take into account such things as:

a)   the education, training, qualification and experience necessary to undertake the role;
b)   the work environment in which they will be working;
c)   the hazards identified and associated OH&S risks;
d)   the preventive and control measures resulting from the risks assessment process;
e)   requirements applicable to the OH&S management system;
f)   the rights and responsibilities of persons based upon applicable legal and other requirements;
g)   the importance of compliance with the OH&S policy, applicable procedures, applicable legal and other requirements;
h)   the potential consequences of compliance and noncompliance, including the impact on OH&S performance;
i)   the value of their participation in the OH&S management system (including, as applicable, their representative(s)).

Workers should be evaluated to ensure that they meet the necessary competence criteria for their roles and, where appropriate, gaps in their competence should be filled by providing additional education, training, and experiences.

Workers should be evaluated periodically to ensure that they have the required competence for their roles. An evaluation of their competence should also be carried out whenever there have been changes that can impact upon the activities undertaken in their roles.

Representatives for OH&S management systems should be competent to carry out their representative functions effectively.

A.7.3 Awareness

To ensure they work or act safely, the organization should make persons working under its control sufficiently knowledgeable of:

a) emergency processes;
b) the consequences of their actions and behaviour in relation to OH&S risks;
c) the benefits of improved OH&S performance;
d) the potential consequences of departing from requirements of the OH&S management system;
e) the need to conform to OH&S policies and good working practices;
f) any other issues that might impact on OH&S performance.

Awareness programmes should be provided for contractors, temporary workers and visitors, etc., according to the OH&S risks to which they are exposed.

A.7.4 Information and communication

The communication processes established by the organization should provide for the flow of information upwards, downwards and across the organization. It should provide for both the gathering and the dissemination of information. It should ensure that pertinent information is provided, received and understood by all relevant workers and interested parties.

When determining the need for communication with external interested parties the organization should consider both its normal operations and potential emergency situations; often external communication processes include the identification of designated contact individuals and contact numbers. This allows for appropriate information to be communicated in a consistent manner and can be especially important in emergency situations where regular updates are requested and a wide range of questions need to be answered.

A.7.5 Documented information

It is important to keep the level of complexity of the documented information at the minimum level possible to ensure effectiveness, efficiency and simplicity at the same time.

This should include documented information on action/means by the organization to achieve compliance with applicable legal and other requirements.

The provisions given in 7.5.3 include the prevention of unintended use of obsolete documents.

The control of documented information should not have the effect of, nor be for the purpose of, preventing workers from obtaining a full and complete picture of the hazards and risks of their work.

The confidentiality of personal information of individuals should be respected.

A.8 Operation
A.8.1 Operational planning and controls
A.8.1.1 General

Operational planning and controls should be established and implemented as necessary to eliminate hazards or, if impossible, to manage the OH&S risks to an acceptable level, for operational areas and activities.

When planning and developing operational controls, priority should be given to control options with higher reliability in preventing injury or ill-health, consistent with the hierarchy of controls (see 8.1.2). Operational controls can use a variety of different methods, for example:

a)   the introduction of procedures and systems of work;
b)   ensuring the competency of operators;
c)   establishing preventive / predictive maintenance and inspection programmes;
d)   specifications for the procurement of good and services;
e)   compliance to preventive regulations and manufacturer's instructions for equipment;
f)   engineering controls (physical devices such as barriers) followed by administrative controls (warnings, pictograms, alarms and signals, or access control procedures and other work instructions).

A.8.1.2 Hierarchy

The hierarchy provides a systematic way to determine the most effective and feasible method to eliminate hazards, control risks at source, adapt work to workers (e.g. by designing the phases of any project), or to reduce the OH&S risks associated with a hazard.

Controls include oversight/supervision, training, competence assessment, job planning, rotating and scheduling to minimize worker's exposure, changes to work procedures, implementation of work area protection and similar measures.

A.8.2 Management of change

Depending on the nature of an expected change, the organization should use an appropriate methodology(ies) for assessing the OH&S risks of the change. The objective of a management of change process is to minimize introduction of new hazards and risks into the work environment as changes occur, such as in technology, equipment, facilities, work practices and procedures, design specifications, raw materials, organizational staffing changes, and standards or regulations. Managing change in this clause can be an outcome of the plans developed in clause 6.1.5 (Planning for changes)

The organization should plan how to implement the change in a manner that does not increase the risks or introduce new (unforeseen) hazards (see 6.1.5).

The organization should specify and assign adequate resources for the implementation of the change. As part of the change management process, the organization should review potential changes to hazards and risks (see 6.1). The implementation of a decision to change should ensure that all affected workers are properly informed and are competent to cope with the change.

A.8.3 Outsourcing

An outsourced process is one for which:

a) the function or process is integral to the organization's functioning;
b) the function or process is needed for the OH&S management system to achieve its intended outcome;
c) liability for the function or process conforming to requirements is retained by the organization;
d) the organization and the external provider have an integral relationship, e.g. one where the process is perceived by interested parties as being carried out by the organization.

A.8.4 Procurement

Prior to procuring goods and services, the organization should identify appropriate procurement controls that take into account applicable legal and other requirements as well as any additional requirements the organization has established within the OH&S management system.

Procurement controls should be used to identify and evaluate potential OH&S risks associated with purchased products, raw materials, and other goods and related services before their introduction into the work environment. Considerations could include requirements for supplies, equipment, raw materials, and other goods and related services purchased by the organization to conform to the organization's OH&S objectives and its need for information, participation and communication (see 7.4).

The organization should verify that equipment, installations and materials are adequate before being released for use by its workers, e. g. that:

a) equipment is delivered according to specification and is tested to ensure it works as intended;
b) installations are commissioned to ensure they function as designed,;
c) materials are delivered according to their specifications;
d) any usage requirements, precautions or other protective measures are communicated and made available.

A.8.5 Contractors

The organization may delegate authority to those best capable of identifying, evaluating, and controlling health and safety risks, including to contractors. This recognizes that some contractors possess specialized knowledge, skills, methods, and means. However, this delegation does not eliminate the organization's responsibility for the health and safety of its workers.

Contractors can be specialists in maintenance, construction, operations, security, landscaping, facility upkeep, janitorial, sanitation or clean-up of production processes, and a number of other functions. Contractors can also include consultants or specialists in administrative, accounting, and other functions.

An organization can achieve coordination of its contractors' activities through the use of contracts that clearly define the responsibilities of the parties involved. An organization can use a variety of tools for managing contractors' health and safety performance, including contract award mechanisms or pre-qualification criteria which consider past health and safety performance, safety training, or health and safety capabilities, as well as direct contract requirements.

The relationships between an organization and its contractors can be both diverse and complex, and involve very different types and levels of risks. How an organization manages these relationships can vary, depending on the nature of the services provided and the risks identified. The degree of coordination should depend on factors such as the terms of the contract, the nature of the hazards and risks, the type and size of the operations, and the duration of the work on the site. When defining how it will coordinate, the organization should give consideration to the reporting of hazards between itself and its contractors, controlling worker access to hazardous areas, and procedures to follow in emergencies.

If a contractor does not have an OH&S management system, then the organization should specify how the contractor will coordinate its activities with the organization's own OH&S management system processes, such as those used for confined space entry, lockout/tagout, exposure assessment, and process safety management.

The organization should verify that contractors are capable of performing their tasks before being allowed to proceed with their work, e.g. by verifying that:

a) OH&S performance records are satisfactory;
b) qualification, experience and competence criteria for workers are specified;
c) training and other worker requirements were undertaken;
d) resources, equipment and work preparations are adequate and ready for the work to proceed.

A.8.6 Emergency preparedness and response

The organization should identify foreseeable emergencies applicable to its operations and plan its response; such emergencies can occur both during and beyond normal working hours, and can arise due to both natural and man-made causes. Identified emergencies should be assessed based on their OH&S risks. The organization should focus on proactive control measures (e.g. the reduction of ignition sources) not only on reactive risk controls, such as fire-fighting equipment and evacuation.

A.9 Performance evaluation
A.9.1 Monitoring, measurement, analysis and evaluation
A.9.1.1 General
A.9.1.1.1

Examples of what could be monitored and measured to meet:

a) **the requirements of this International Standard** are:
    17. 1) tracking progress on meeting policy commitments, achieving objectives, and continual improvement;
    18. 2) monitoring exposures to determine whether applicable legal and other requirements have been met; including the health surveillance of workers;
    19. 3) monitoring incidents, injuries, ill-health, and complaints, including status and trends;
    20. 4) providing data to evaluate the effectiveness of operational controls and emergency exercises, or to evaluate the need to modify or introduce new controls (see 8.1);
    21. 5) providing data to proactively and reactively measure the organization's OH&S performance;
    22. 6) providing data to evaluate the performance of the OH&S management system;

23. 7) providing data for the evaluation of competence (7.2).
b) **legal requirements** are:
  24. 1) an up-to-date list of legal requirements;
  25. 2) a listing of identified gaps in compliance.
c) **other requirements** can include, but are not limited to:
  26. 1) union-employer agreements;
  27. 2) standards and codes;
  28. 3) corporate and other policies, rules and regulations;
  29. 4) insurance requirements.

A.9.1.1.2

Criteria are what the organization should compare its performance against.

Examples are benchmarks against:

a) other organizations;
b) standards and codes;
c) the organization's own codes and objectives.

The organization should use the criteria to set its internal objectives for monitoring and measurement.

A.9.1.1.3

The frequency of monitoring and measurement should be appropriate to the size and nature of the organization and its OH&S performance, and to changes in OH&S risk factors.

A.9.1.1.4

Methods:

a) **Monitoring** can involve continual checking, supervising, critically observing or determining the status in order to identify change from the performance level required or expected. Monitoring can be applied to the OH&S management system, to processes or to controls. Examples include the use of interviews, reviews of documented information and observations of work being performed;
b) **Measurement** generally involves the assignment of numbers to objects or events. It is the basis for quantitative data and is generally associated with the evaluation of safety programmes and health surveillance. Examples include the use of calibrated or verified equipment to measure exposure to a hazardous substance or the counting of the required safe distance from a hazard;
c) **Analysis** is the process of examining data to reveal relationships, patterns and trends. This can mean the use of statistical operations, including information from other similar organizations, to help draw conclusions from the data. This process is most often associated with measurement activities;
d) **Evaluation** is an activity undertaken to determine the suitability, adequacy and effectiveness of the subject matter to achieve the established objectives of the OH&S management system. This activity is most often associated with monitoring activities.

Health related worker complaints, health surveillance of workers and work environment monitoring are important elements to be looked at, where appropriate, by suitable medical monitoring or follow-up of workers for early

detection of signs and symptoms of harm to health in order to determine the effectiveness of prevention and control measures.

An organization may use one or a combination of the methods above depending on the nature of the hazards inherent to the organization and the scope of its OH&S management system.

A.9.1.1.5

When monitoring and measuring is performed, it should be appropriate to the size and nature of the organization and to its OH&S performance.

The organization should ensure that frequencies of monitoring and measurement are in alignment with analysis and evaluation of its OH&S risks and risks and opportunities.

A.9.1.2

Evaluation of compliance

The organization should prioritize its actions based on the identified compliance gaps.

A.9.2 Internal audit
A.9.2.1 Internal audit objectives

An organization's own requirements for its OH&S management system audits can include its own policies, objectives, requirements, standards, risk assessment outcomes and the results of previous audits or of corrective actions.

A.9.2.2 Internal audit process

Small and medium enterprises (SMEs) can establish objectivity and independence for the internal auditor by creating processes that separate their role as an internal auditor from their normal assigned duties.

When planning its internal audits the organization should take into consideration the importance of the processes concerned to the OH&S management system. This can include items such as the impact the processes have on risk assessment outcomes.

The extent of the audit programme should be based on the size and nature of the organization, as well as the complexity and level of maturity of the OH&S management system.

A.9.3 Management review

Clarifying the terms used in relation to management review:

a) **Suitability**: The extent to which the management system fits and is right for the organization's purpose, operations, culture and business systems;

b) **Adequacy:** The extent to which the management system is sufficient in meeting the applicable requirements;

c) **Effectiveness:** The extent to which planned activities are realised and planned results achieved.

The management review topics listed in 9.3 a) to f) need not be addressed all at once. The organization should determine when and how the management review topics are addressed.

Management reviews are a critical part of the continual improvement of the management system. The purpose of these reviews is for top management to do a strategic and critical evaluation of

the performance of the management system, and to recommend improvements. This review should not be just a presentation of information, but should focus on assessing OH&S performance and identifying opportunities for continual improvement. It is up to the organization to determine appropriate measures for the effectiveness of the management system. Management reviews should include an evaluation of how well the OH&S management system is integrated with other business processes and the strategic direction of the organization.

Management reviews can include information about areas outside of the traditional health and safety arena, such as vendor and internal organizational changes and security issues. Reviews can present information in a manner (for example a scorecard) that focuses on the management system elements most in need of the attention of top management. Reviews may be conducted more frequently, to coincide with other management reviews, or to meet other business or management system needs.

A.10 Improvement
A.10.1 Incident, nonconformity and corrective action

Separate processes may exist for incident investigations and non-conformities depending on the organization's requirements.

Examples of incidents, nonconformities and corrective actions include but are not limited to:

a) **Incidents**: occupational related near-miss events, injuries, ill-health, exposures to health hazards, vehicle accidents, property and equipment damage where it can lead to OH&S risks;

b) **Non-conformities**: protective equipment not functioning properly, non-compliance to legal requirements or prescribed procedures not being followed;

c) **Corrective actions**: (as indicated by the hierarchy of controls; see 8.1.2) elimination of hazards, substitution to safe materials, design or modification to equipment or tools, development of procedures, improving the competence of affected workers, changes in frequency of use, or use of personal protective equipment.

Root cause analysis refers to the practice of exploring all the possible factors associated with an incident by asking what happened and why it happened, to provide the input for what can be done to prevent it from happening again.

When determining the cause of an incident or nonconformity, the organization should use methods or approaches appropriate to the nature of the incident or nonconformity being analyzed. This analysis can identify multiple system failures including factors related to communication, competence, fatigue, equipment or procedures.

All approaches are focused on prevention and not blame or punishment.

The scope of the root cause analysis should be appropriate to the nature of the incident or the nonconformity being analysed.

Effectiveness is the extent to which the implemented corrective actions adequately control the cause(s).

Timeliness of actions should be based on the nature of the incident or nonconformity.

Corrective actions should be appropriate to the nature of the incident or nonconformity.

Comments

A.10.2 Continual improvement

Continual improvement is meant to be a step by step approach over time and is focused on future OH&S performance.

Examples of issues to be reviewed to identify opportunities include, but are not limited to:

a) new technology;
b) good practices of other organizations;
c) suggestions from interested parties;
d) knowledge and understanding of health and safety related issues;
e) new or improved materials;
f) changes in workforce capabilities or competence.

Bibliography

[1] ISO 9001, *Quality management systems — Requirements*
[2] ISO 14001, *Environmental management systems — Requirements with guidance for use*
[3] ISO 19011, *Guidelines for auditing management systems*
[4] ISO 31000, *Risk management — Principles and guidelines*
[5] ISO 37500, *Guidance on outsourcing*
[6] ISO Guide 73, *Risk management — Vocabulary*