

OCCUPATIONAL HEALTH AND SAFETY ASSESSMENT SERIES

Occupational health and safety management systems – Requirements

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National foreword

Publishing information

This British Standard was published by BSI. It is the official UK implementation of OHSAS 18001:2007, which supersedes OHSAS 18001:1999.

BS OHSAS 18001 will be maintained in line with any changes to OHSAS 18001, subject to the approval of BSI Technical Committee HS/1, *Occupational health and safety management*, which collated the UK comments on the second Working Draft of OHSAS 18001 and put forward its preferred position.

A list of organizations represented on this committee can be obtained on request to its secretary.

Contractual and legal considerations

In the UK, and Europe generally, there are various legal requirements for occupational health and safety that apply to the potentially harmful effects of work activities and which extend beyond the workplace to those affected by workplace activities (see Note to 3.12 on the definition of occupational health and safety). It is essential for the organization to take the matters addressed by these legal requirements into account in establishing, implementing and maintaining its OH&S management system – and in particular when identifying hazards, assessing risks and determining controls (see 4.3.1 and 4.3.2). This standard ought therefore to be read in conjunction with BS 8800 and HSG 65,¹⁾ which give good practice guidance on complying with such legal requirements in the UK.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

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¹⁾ BS 8800, *Occupational health and safety management systems – Guide*, and HSG 65, *Successful health and safety management*.

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We would also like to recognize the invaluable contribution made by those many organizations who took the time to review the working drafts of OHSAS 18001, and who submitted comments for consideration. This helped us greatly in improving the standard, and is much appreciated.

¹⁾ As the regulatory authority responsible for health and safety in Great Britain, the Health and Safety Executive would wish to make it clear that reliance on the OHSAS Standard by organizations will not absolve them from compliance with any of their legal health and safety obligations under the laws of England & Wales, and Scotland.

Foreword

This Occupational Health and Safety Assessment Series (OHSAS) Standard and the accompanying OHSAS 18002, *Guidelines for the implementation of OHSAS 18001*, have been developed in response to customer demand for a recognizable occupational health and safety management system standard against which their management systems can be assessed and certified.

OHSAS 18001 has been developed to be compatible with the ISO 9001:2000 (Quality) and ISO 14001:2004 (Environmental) management systems standards, in order to facilitate the integration of quality, environmental and occupational health and safety management systems by organizations, should they wish to do so.

This OHSAS Standard will be reviewed or amended when considered appropriate. Reviews will be conducted when new editions of either ISO 9001 or ISO 14001 are published, to ensure continuing compatibility.

This OHSAS Standard will be withdrawn on publication of its contents in, or as, an International Standard.

This OHSAS Standard has been drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

This second edition cancels and replaces the first edition (OHSAS 18001:1999), which has been technically revised.

The principal changes with respect to the previous edition are as follows.

- The importance of “health” has now been given greater emphasis.
- OHSAS 18001 now refers to itself as a standard, not a specification, or document, as in the earlier edition. This reflects the increasing adoption of OHSAS 18001 as the basis for national standards on occupational health and safety management systems.
- The “Plan-Do-Check-Act” model diagram is only given in the Introduction, in its entirety, and not also as sectional diagrams at the start of each major clause.
- Reference publications in Clause **2** have been limited to purely international documents.
- New definitions have been added, and existing definitions revised.
- Significant improvement in alignment with ISO 14001:2004 throughout the standard, and improved compatibility with ISO 9001:2000.
- The term “tolerable risk” has been replaced by the term “acceptable risk” (see **3.1**).
- The term “accident” is now included in the term “incident” (see **3.9**).
- The definition of the term “hazard” no longer refers to “damage to property or damage to the workplace environment” (see **3.6**).

It is now considered that such “damage” is not directly related to occupational health and safety management, which is the purpose of this OHSAS Standard, and that it is included in the field of asset management. Instead, the risk of such “damage” having an effect on occupational health and safety should be identified through the organization’s risk assessment process, and be controlled through the application of appropriate risk controls.

- Sub-clauses **4.3.3** and **4.3.4** have been merged, in line with ISO 14001:2004.
- A new requirement has been introduced for the consideration of the hierarchy of controls as part of OH&S planning (see **4.3.1**).
- Management of change is now more explicitly addressed (see **4.3.1** and **4.4.6**).
- A new clause on the “Evaluation of compliance” (see **4.5.2**) has been introduced.
- New requirements have been introduced for participation and consultation (see **4.4.3.2**).
- New requirements have been introduced for the investigation of incidents (see **4.5.3.1**).

This publication does not purport to include all necessary provisions of a contract. Users are responsible for its correct application.

Compliance with this Occupational Health and Safety Assessment Series (OHSAS) Standard cannot confer immunity from legal obligations.

Introduction

Organizations of all kinds are increasingly concerned with achieving and demonstrating sound occupational health and safety (OH&S) performance by controlling their OH&S risks, consistent with their OH&S policy and objectives. They do so in the context of increasingly stringent legislation, the development of economic policies and other measures that foster good OH&S practices, and increased concern expressed by interested parties about OH&S issues.

Many organizations have undertaken OH&S “reviews” or “audits” to assess their OH&S performance. On their own, however, these “reviews” and “audits” may not be sufficient to provide an organization with the assurance that its performance not only meets, but will continue to meet, its legal and policy requirements. To be effective, they need to be conducted within a structured management system that is integrated within the organization.

The OHSAS Standards covering OH&S management are intended to provide organizations with the elements of an effective OH&S management system that can be integrated with other management requirements and help organizations achieve OH&S and economic objectives. These standards, like other International Standards, are not intended to be used to create non-tariff trade barriers or to increase or change an organization’s legal obligations.

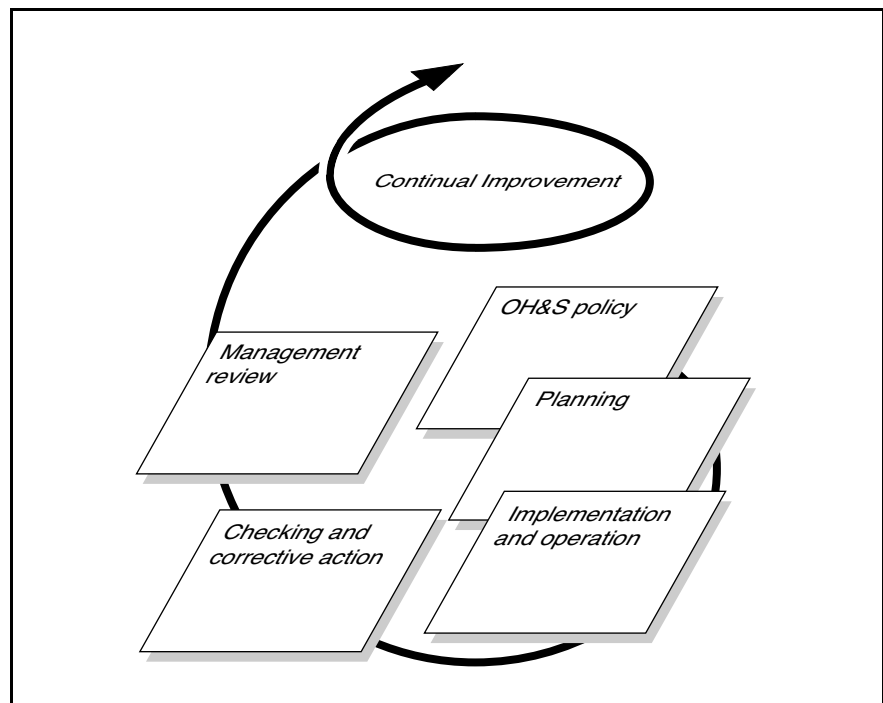
This OHSAS Standard specifies requirements for an OH&S management system to enable an organization to develop and implement a policy and objectives which take into account legal requirements and information about OH&S risks. It is intended to apply to all types and sizes of organizations and to accommodate diverse geographical, cultural and social conditions. The basis of the approach is shown in Figure 1. The success of the system depends on commitment from all levels and functions of the organization, and especially from top management. A system of this kind enables an organization to develop an OH&S policy, establish objectives and processes to achieve the policy commitments, take action as needed to improve its performance and demonstrate the conformity of the system to the requirements of this OHSAS Standard. The overall aim of this OHSAS Standard is to support and promote good OH&S practices, in balance with socio-economic needs. It should be noted that many of the requirements can be addressed concurrently or revisited at any time.

The second edition of this OHSAS Standard is focused on clarification of the first edition, and has taken due consideration of the provisions of ISO 9001, ISO 14001, ILO-OSH, and other OH&S management system standards or publications to enhance the compatibility of these standards for the benefit of the user community.

There is an important distinction between this OHSAS Standard, which describes the requirements for an organization's OH&S management system and can be used for certification/registration and/or self-declaration of an organization's OH&S management system, and a non-certifiable guideline intended to provide generic assistance to an organization for establishing, implementing or improving an OH&S management system. OH&S management encompasses a full range of issues, including those with strategic and competitive implications. Demonstration of successful implementation of this OHSAS Standard can be used by an organization to assure interested parties that an appropriate OH&S management system is in place.

Those organizations requiring more general guidance on a broad range of OH&S management system issues are referred to OHSAS 18002. Any reference to other International Standards is for information only.

Figure 1 **OH&S management system model for this OHSAS Standard**



NOTE This OHSAS Standard is based on the methodology known as Plan-Do-Check-Act (PDCA). PDCA can be briefly described as follows.

- **Plan:** establish the objectives and processes necessary to deliver results in accordance with the organization's OH&S policy.
- **Do:** implement the processes.
- **Check:** monitor and measure processes against OH&S policy, objectives, legal and other requirements, and report the results.
- **Act:** take actions to continually improve OH&S performance.

Many organizations manage their operations via the application of a system of processes and their interactions, which can be referred to as the "process approach". ISO 9001 promotes the use of the process approach. Since PDCA can be applied to all processes, the two methodologies are considered to be compatible.

This OHSAS Standard contains requirements that can be objectively audited; however it does not establish absolute requirements for OH&S performance beyond the commitments, in the OH&S policy, to comply with applicable legal requirements and with other requirements to which the organization subscribes, to the prevention of injury and ill health and to continual improvement. Thus, two organizations carrying out similar operations but having different OH&S performance can both conform to its requirements.

This OH&S 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. It is possible for an organization to adapt its existing management system(s) in order to establish an OH&S management system that conforms to the requirements of this OHSAS Standard. It is pointed out, however, that the application of various elements of the management system might differ depending on the intended purpose and the interested parties involved.

The level of detail and complexity of the OH&S management system, the extent of documentation and the resources devoted to it depend on a number of factors, such as the scope of the system, the size of an organization and the nature of its activities, products and services, and the organizational culture. This may be the case in particular for small and medium-sized enterprises.

Occupational health and safety management systems – Requirements

1 Scope

This Occupational Health and Safety Assessment Series (OHSAS) Standard specifies requirements for an occupational health and safety (OH&S) management system, to enable an organization to control its OH&S risks and improve its OH&S performance. It does not state specific OH&S performance criteria, nor does it give detailed specifications for the design of a management system.

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

- a) establish an OH&S management system to eliminate or minimize risks to personnel and other interested parties who could be exposed to OH&S hazards associated with its activities;
- b) implement, maintain and continually improve an OH&S management system;
- c) assure itself of its conformity with its stated OH&S policy;
- d) demonstrate conformity with this OHSAS Standard by:
 - 1) making a self-determination and self-declaration, or
 - 2) seeking confirmation of its conformance by parties having an interest in the organization, such as customers, or
 - 3) seeking confirmation of its self-declaration by a party external to the organization, or
 - 4) seeking certification/registration of its OH&S management system by an external organization.

All the requirements in this OHSAS Standard are intended to be incorporated into any OH&S management system. The extent of the application will depend on such factors as the OH&S policy of the organization, the nature of its activities and the risks and complexity of its operations.

This OHSAS Standard is intended to address occupational health and safety, and is not intended to address other health and safety areas such as employee wellbeing/wellness programmes, product safety, property damage or environmental impacts.

2 Reference publications

Other publications that provide information or guidance are listed in the bibliography. It is advisable that the latest editions of such publications be consulted. Specifically, reference should be made to:

OHSAS 18002, *Occupational health and safety management systems – Guidelines for the implementation of OHSAS 18001*

International Labour Organization:2001, *Guidelines on Occupational Health and Safety Management Systems (OSH-MS)*

3 Terms and definitions

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

3.1 acceptable risk

risk that has been reduced to a level that can be tolerated by the organization having regard to its legal obligations and its own **OH&S policy (3.16)**

3.2 audit

systematic, independent and documented process for obtaining “audit evidence” and evaluating it objectively to determine the extent to which “audit criteria” are fulfilled

[ISO 9000:2005, **3.9.1**]

NOTE 1 Independent does not necessarily mean external to the organization. In many cases, particularly in smaller organizations, independence can be demonstrated by the freedom from responsibility for the activity being audited.

NOTE 2 For further guidance on “audit evidence” and “audit criteria”, see ISO 19011.

3.3 continual improvement

recurring process of enhancing the **OH&S management system (3.13)** in order to achieve improvements in overall **OH&S performance (3.15)** consistent with the **organization’s (3.17) OH&S policy (3.16)**

NOTE 1 The process need not take place in all areas of activity simultaneously.

NOTE 2 Adapted from ISO 14001:2004, 3.2.

3.4 corrective action

action to eliminate the cause of a detected **nonconformity (3.11)** or other undesirable situation

NOTE 1 There can be more than one cause for a nonconformity.

*NOTE 2 Corrective action is taken to prevent recurrence whereas **preventive action (3.18)** is taken to prevent occurrence.*

[ISO 9000:2005, **3.6.5**]

3.5 document

information and its supporting medium

NOTE The medium can be paper, magnetic, electronic or optical computer disc, photograph or master sample, or a combination thereof.

[ISO 14001:2004, **3.4**]

3.6 hazard

source, situation, or act with a potential for harm in terms of human injury or **ill health (3.8)**, or a combination of these

3.7 hazard identification

process of recognizing that a **hazard (3.6)** exists and defining its characteristics

3.8 ill health

identifiable, adverse physical or mental condition arising from and/or made worse by a work activity and/or work-related situation

3.9 incident

work-related event(s) in which an injury or **ill health (3.8)** (regardless of severity) or fatality occurred, or could have occurred

NOTE 1 An accident is an incident which has given rise to injury, ill health or fatality.

NOTE 2 An incident where no injury, ill health, or fatality occurs may also be referred to as a “near-miss”, “near-hit”, “close call” or “dangerous occurrence”.

NOTE 3 An emergency situation (see 4.4.7) is a particular type of incident.

3.10 interested party

person or group, inside or outside the **workplace (3.23)**, concerned with or affected by the **OH&S performance (3.15)** of an **organization (3.17)**

3.11 nonconformity

non-fulfilment of a requirement

[ISO 9000:2005, 3.6.2; ISO 14001, 3.15]

NOTE A nonconformity can be any deviation from:

- *relevant work standards, practices, procedures, legal requirements, etc.*
- *OH&S management system (3.13) requirements.*

3.12 occupational health and safety (OH&S)

conditions and factors that affect, or could affect, the health and safety of employees or other workers (including temporary workers and contractor personnel), visitors, or any other person in the **workplace (3.23)**

NOTE Organizations can be subject to legal requirements for the health and safety of persons beyond the immediate workplace, or who are exposed to the workplace activities.

3.13 OH&S management system

part of an **organization's (3.17)** management system used to develop and implement its **OH&S policy (3.16)** and manage its **OH&S risks (3.21)**

NOTE 1 A management system is a set of interrelated elements used to establish policy and objectives and to achieve those objectives.

*NOTE 2 A management system includes organizational structure, planning activities (including, for example, risk assessment and the setting of objectives), responsibilities, practices, **procedures (3.19)**, processes and resources.*

NOTE 3 Adapted from ISO 14001:2004, 3.8.

3.14 OH&S objective

OH&S goal, in terms of **OH&S performance (3.15)**, that an **organization (3.17)** sets itself to achieve

NOTE 1 Objectives should be quantified wherever practicable.

NOTE 2 4.3.3 requires that OH&S objectives are consistent with the OH&S policy (3.16).

3.15 OH&S performance

measurable results of an **organization's (3.17)** management of its **OH&S risks (3.21)**

NOTE 1 OH&S performance measurement includes measuring the effectiveness of the organization's controls.

NOTE 2 In the context of OH&S management systems (3.13), results can also be measured against the organization's (3.17) OH&S policy (3.16), OH&S objectives (3.14), and other OH&S performance requirements.

3.16 OH&S policy

overall intentions and direction of an **organization (3.17)** related to its **OH&S performance (3.15)** as formally expressed by top management

NOTE 1 The OH&S policy provides a framework for action and for the setting of OH&S objectives (3.14)

NOTE 2 Adapted from ISO 14001:2004, 3.11.

3.17 organization

company, corporation, firm, enterprise, authority or institution, or part or combination thereof, whether incorporated or not, public or private, that has its own functions and administration

NOTE For organizations with more than one operating unit, a single operating unit may be defined as an organization.

[ISO 14001:2004, 3.16]

3.18 preventive action

action to eliminate the cause of a potential **nonconformity (3.11)** or other undesirable potential situation

NOTE 1 There can be more than one cause for a potential nonconformity.

NOTE 2 Preventive action is taken to prevent occurrence whereas corrective action (3.4) is taken to prevent recurrence.

[ISO 9000:2005, 3.6.4]

3.19 procedure

specified way to carry out an activity or a process

NOTE Procedures can be documented or not.

[ISO 9000:2005, 3.4.5]

3.20 record

document (3.5) stating results achieved or providing evidence of activities performed

[ISO 14001:2004, 3.20]

3.21 risk

combination of the likelihood of an occurrence of a hazardous event or exposure(s) and the severity of injury or **ill health (3.8)** that can be caused by the event or exposure(s)

3.22 risk assessment

process of evaluating the **risk(s)** (3.21) arising from a hazard(s), taking into account the adequacy of any existing controls, and deciding whether or not the risk(s) is acceptable

3.23 workplace

any physical location in which work related activities are performed under the control of the organization

NOTE When giving consideration to what constitutes a workplace, the **organization** (3.17) should take into account the OH&S effects on personnel who are, for example, travelling or in transit (e.g. driving, flying, on boats or trains), working at the premises of a client or customer, or working at home.

4 OH&S management system requirements

4.1 General requirements

The organization shall establish, document, implement, maintain and continually improve an OH&S management system in accordance with the requirements of this OHSAS Standard and determine how it will fulfil these requirements.

The organization shall define and document the scope of its OH&S management system.

4.2 OH&S policy

Top management shall define and authorize the organization's OH&S policy and ensure that within the defined scope of its OH&S management system it:

- a) is appropriate to the nature and scale of the organization's OH&S risks;
- b) includes a commitment to prevention of injury and ill health and continual improvement in OH&S management and OH&S performance;
- c) includes a commitment to at least comply with applicable legal requirements and with other requirements to which the organization subscribes that relate to its OH&S hazards;
- d) provides the framework for setting and reviewing OH&S objectives;
- e) is documented, implemented and maintained;
- f) is communicated to all persons working under the control of the organization with the intent that they are made aware of their individual OH&S obligations;
- g) is available to interested parties; and
- h) is reviewed periodically to ensure that it remains relevant and appropriate to the organization.

4.3 Planning

4.3.1 Hazard identification, risk assessment and determining controls

The organization shall establish, implement and maintain a procedure(s) for the ongoing hazard identification, risk assessment, and determination of necessary controls.

The procedure(s) for hazard identification and risk assessment shall take into account:

- a) routine and non-routine activities;
- b) activities of all persons having access to the workplace (including contractors and visitors);
- c) human behaviour, capabilities and other human factors;
- d) identified hazards originating outside the workplace capable of adversely affecting the health and safety of persons under the control of the organization within the workplace;
- e) hazards created in the vicinity of the workplace by work-related activities under the control of the organization;

NOTE 1 It may be more appropriate for such hazards to be assessed as an environmental aspect.

- f) infrastructure, equipment and materials at the workplace, whether provided by the organization or others;
- g) changes or proposed changes in the organization, its activities, or materials;
- h) modifications to the OH&S management system, including temporary changes, and their impacts on operations, processes, and activities;
- i) any applicable legal obligations relating to risk assessment and implementation of necessary controls (see also the NOTE to **3.12**);
- j) the design of work areas, processes, installations, machinery/equipment, operating procedures and work organization, including their adaptation to human capabilities.

The organization's methodology for hazard identification and risk assessment shall:

- a) be defined with respect to its scope, nature and timing to ensure it is proactive rather than reactive; and
- b) provide for the identification, prioritization and documentation of risks, and the application of controls, as appropriate.

For the management of change, the organization shall identify the OH&S hazards and OH&S risks associated with changes in the organization, the OH&S management system, or its activities, prior to the introduction of such changes.

The organization shall ensure that the results of these assessments are considered when determining controls.

When determining controls, or considering changes to existing controls, consideration shall be given to reducing the risks according to the following hierarchy:

- a) elimination;
- b) substitution;
- c) engineering controls;
- d) signage/warnings and/or administrative controls;
- e) personal protective equipment.

The organization shall document and keep the results of identification of hazards, risk assessments and determined controls up-to-date.

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.

NOTE 2 For further guidance on hazard identification, risk assessment and determining controls, see OHSAS 18002.

4.3.2 Legal and other requirements

The organization shall establish, implement and maintain a procedure(s) for identifying and accessing the legal and other OH&S requirements that are applicable to it.

The organization shall ensure that these applicable legal requirements and other requirements to which the organization subscribes are taken into account in establishing, implementing and maintaining its OH&S management system.

The organization shall keep this information up-to-date.

The organization shall communicate relevant information on legal and other requirements to persons working under the control of the organization, and other relevant interested parties.

4.3.3 Objectives and programme(s)

The organization shall establish, implement and maintain documented OH&S objectives, at relevant functions and levels within the organization.

The objectives shall be measurable, where practicable, and consistent with the OH&S policy, including the commitments to the prevention of injury and ill health, to compliance with applicable legal requirements and with other requirements to which the organization subscribes, and to continual improvement.

When establishing and reviewing its objectives, an organization shall take into account the legal requirements and other requirements to which the organization subscribes, and its OH&S risks. It shall also consider its technological options, its financial, operational and business requirements, and the views of relevant interested parties.

The organization shall establish, implement and maintain a programme(s) for achieving its objectives. Programme(s) shall include as a minimum:

- a) designation of responsibility and authority for achieving objectives at relevant functions and levels of the organization; and
- b) the means and time-frame by which the objectives are to be achieved.

The programme(s) shall be reviewed at regular and planned intervals, and adjusted as necessary, to ensure that the objectives are achieved.

4.4 Implementation and operation

4.4.1 Resources, roles, responsibility, accountability and authority

Top management shall take ultimate responsibility for OH&S and the OH&S management system.

Top management shall demonstrate its commitment by:

- a) ensuring the availability of resources essential to establish, implement, maintain and improve the OH&S management system;

NOTE 1 Resources include human resources and specialized skills, organizational infrastructure, technology and financial resources.

- b) defining roles, allocating responsibilities and accountabilities, and delegating authorities, to facilitate effective OH&S management; roles, responsibilities, accountabilities, and authorities shall be documented and communicated.

The organization shall appoint a member(s) of top management with specific responsibility for OH&S, irrespective of other responsibilities, and with defined roles and authority for:

- a) ensuring that the OH&S management system is established, implemented and maintained in accordance with this OHSAS Standard;
- b) ensuring that reports on the performance of the OH&S management system are presented to top management for review and used as a basis for improvement of the OH&S management system.

NOTE 2 The top management appointee (e.g. in a large organization, a Board or executive committee member) may delegate some of their duties to a subordinate management representative(s) while still retaining accountability.

The identity of the top management appointee shall be made available to all persons working under the control of the organization.

All those with management responsibility shall demonstrate their commitment to the continual improvement of OH&S performance.

The organization shall ensure that persons in the workplace take responsibility for aspects of OH&S over which they have control, including adherence to the organization's applicable OH&S requirements.

4.4.2 Competence, training and awareness

The organization shall ensure that any person(s) under its control performing tasks that can impact on OH&S is (are) competent on the basis of appropriate education, training or experience, and shall retain associated records.

The organization shall identify training needs associated with its OH&S risks and its OH&S management system. It shall provide training or take other action to meet these needs, evaluate the effectiveness of the training or action taken, and retain associated records.

The organization shall establish, implement and maintain a procedure(s) to make persons working under its control aware of:

- a) the OH&S consequences, actual or potential, of their work activities, their behaviour, and the OH&S benefits of improved personal performance;
- b) their roles and responsibilities and importance in achieving conformity to the OH&S policy and procedures and to the requirements of the OH&S management system, including emergency preparedness and response requirements (see 4.4.7);
- c) the potential consequences of departure from specified procedures.

Training procedures shall take into account differing levels of:

- a) responsibility, ability, language skills and literacy; and
- b) risk.

4.4.3 Communication, participation and consultation

4.4.3.1 Communication

With regard to its OH&S hazards and OH&S management system, the organization shall establish, implement and maintain a procedure(s) for:

- a) internal communication among the various levels and functions of the organization;
- b) communication with contractors and other visitors to the workplace;
- c) receiving, documenting and responding to relevant communications from external interested parties.

4.4.3.2 Participation and consultation

The organization shall establish, implement and maintain a procedure(s) for:

- a) the participation of workers by their:
 - appropriate involvement in hazard identification, risk assessments and determination of controls;
 - appropriate involvement in incident investigation;
 - involvement in the development and review of OH&S policies and objectives;

- consultation where there are any changes that affect their OH&S;
- representation on OH&S matters.

Workers shall be informed about their participation arrangements, including who is their representative(s) on OH&S matters.

- b) consultation with contractors where there are changes that affect their OH&S.

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

4.4.4 Documentation

The OH&S management system documentation shall include:

- a) the OH&S policy and objectives;
- b) description of the scope of the OH&S management system;
- c) description of the main elements of the OH&S management system and their interaction, and reference to related documents;
- d) documents, including records, required by this OHSAS Standard; and
- e) documents, including records, determined by the organization to be necessary to ensure the effective planning, operation and control of processes that relate to the management of its OH&S risks.

NOTE It is important that documentation is proportional to the level of complexity, hazards and risks concerned and is kept to the minimum required for effectiveness and efficiency.

4.4.5 Control of documents

Documents required by the OH&S management system and by this OHSAS Standard shall be controlled. Records are a special type of document and shall be controlled in accordance with the requirements given in 4.5.4.

The organization shall establish, implement and maintain a procedure(s) to:

- a) approve documents for adequacy prior to issue;
- b) review and update as necessary and re-approve documents;
- c) ensure that changes and the current revision status of documents are identified;
- d) ensure that relevant versions of applicable documents are available at points of use;
- e) ensure that documents remain legible and readily identifiable;
- f) ensure that documents of external origin determined by the organization to be necessary for the planning and operation of the OH&S management system are identified and their distribution controlled; and
- g) prevent the unintended use of obsolete documents and apply suitable identification to them if they are retained for any purpose.

4.4.6 Operational control

The organization shall determine those operations and activities that are associated with the identified hazard(s) where the implementation of controls is necessary to manage the OH&S risk(s). This shall include the management of change (see 4.3.1).

For those operations and activities, the organization shall implement and maintain:

- a) operational controls, as applicable to the organization and its activities; the organization shall integrate those operational controls into its overall OH&S management system;
- b) controls related to purchased goods, equipment and services;
- c) controls related to contractors and other visitors to the workplace;
- d) documented procedures, to cover situations where their absence could lead to deviations from the OH&S policy and the objectives;
- e) stipulated operating criteria where their absence could lead to deviations from the OH&S policy and objectives.

4.4.7 Emergency preparedness and response

The organization shall establish, implement and maintain a procedure(s):

- a) to identify the potential for emergency situations;
- b) to respond to such emergency situations.

The organization shall respond to actual emergency situations and prevent or mitigate associated adverse OH&S consequences.

In planning its emergency response the organization shall take account of the needs of relevant interested parties, e.g. emergency services and neighbours.

The organization shall also periodically test its procedure(s) to respond to emergency situations, where practicable, involving relevant interested parties as appropriate.

The organization shall periodically review and, where necessary, revise its emergency preparedness and response procedure(s), in particular, after periodical testing and after the occurrence of emergency situations (see 4.5.3).

4.5 Checking

4.5.1 Performance measurement and monitoring

The organization shall establish, implement and maintain a procedure(s) to monitor and measure OH&S performance on a regular basis. This procedure(s) shall provide for:

- a) both qualitative and quantitative measures, appropriate to the needs of the organization;
- b) monitoring of the extent to which the organization's OH&S objectives are met;
- c) monitoring the effectiveness of controls (for health as well as for safety);

- d) proactive measures of performance that monitor conformance with the OH&S programme(s), controls and operational criteria;
- e) reactive measures of performance that monitor ill health, incidents (including accidents, near-misses, etc.), and other historical evidence of deficient OH&S performance;
- f) recording of data and results of monitoring and measurement sufficient to facilitate subsequent corrective action and preventive action analysis.

If equipment is required to monitor or measure performance, the organization shall establish and maintain procedures for the calibration and maintenance of such equipment, as appropriate. Records of calibration and maintenance activities and results shall be retained.

4.5.2 Evaluation of compliance

4.5.2.1 Consistent with its commitment to compliance [see **4.2c**], the organization shall establish, implement and maintain a procedure(s) for periodically evaluating compliance with applicable legal requirements (see **4.3.2**).

The organization shall keep records of the results of the periodic evaluations.

NOTE The frequency of periodic evaluation may vary for differing legal requirements.

4.5.2.2 The organization shall evaluate compliance with other requirements to which it subscribes (see **4.3.2**). The organization may wish to combine this evaluation with the evaluation of legal compliance referred to in **4.5.2.1** or to establish a separate procedure(s).

The organization shall keep records of the results of the periodic evaluations.

NOTE The frequency of periodic evaluation may vary for differing other requirements to which the organization subscribes.

4.5.3 Incident investigation, nonconformity, corrective action and preventive action

4.5.3.1 Incident investigation

The organization shall establish, implement and maintain a procedure(s) to record, investigate and analyse incidents in order to:

- a) determine underlying OH&S deficiencies and other factors that might be causing or contributing to the occurrence of incidents;
- b) identify the need for corrective action;
- c) identify opportunities for preventive action;
- d) identify opportunities for continual improvement;
- e) communicate the results of such investigations.

The investigations shall be performed in a timely manner.

Any identified need for corrective action or opportunities for preventive action shall be dealt with in accordance with the relevant parts of **4.5.3.2**.

The results of incident investigations shall be documented and maintained.

4.5.3.2 Nonconformity, corrective action and preventive action

The organization shall establish, implement and maintain a procedure(s) for dealing with actual and potential nonconformity(ies) and for taking corrective action and preventive action. The procedure(s) shall define requirements for:

- a) identifying and correcting nonconformity(ies) and taking action(s) to mitigate their OH&S consequences;
- b) investigating nonconformity(ies), determining their cause(s) and taking actions in order to avoid their recurrence;
- c) evaluating the need for action(s) to prevent nonconformity(ies) and implementing appropriate actions designed to avoid their occurrence;
- d) recording and communicating the results of corrective action(s) and preventive action(s) taken; and
- e) reviewing the effectiveness of corrective action(s) and preventive action(s) taken.

Where the corrective action and preventive action identifies new or changed hazards or the need for new or changed controls, the procedure shall require that the proposed actions shall be taken through a risk assessment prior to implementation.

Any corrective action or preventive action taken to eliminate the causes of actual and potential nonconformity(ies) shall be appropriate to the magnitude of problems and commensurate with the OH&S risk(s) encountered.

The organization shall ensure that any necessary changes arising from corrective action and preventive action are made to the OH&S management system documentation.

4.5.4 Control of records

The organization shall establish and maintain records as necessary to demonstrate conformity to the requirements of its OH&S management system and of this OHSAS Standard, and the results achieved.

The organization shall establish, implement and maintain a procedure(s) for the identification, storage, protection, retrieval, retention and disposal of records.

Records shall be and remain legible, identifiable and traceable.

4.5.5 Internal audit

The organization shall ensure that internal audits of the OH&S management system are conducted at planned intervals to:

- a) determine whether the OH&S management system:
 - 1) conforms to planned arrangements for OH&S management, including the requirements of this OHSAS Standard; and
 - 2) has been properly implemented and is maintained; and
 - 3) is effective in meeting the organization's policy and objectives;

b) provide information on the results of audits to management.

Audit programme(s) shall be planned, established, implemented and maintained by the organization, based on the results of risk assessments of the organization's activities, and the results of previous audits.

Audit procedure(s) shall be established, implemented and maintained that address:

- a) the responsibilities, competencies, and requirements for planning and conducting audits, reporting results and retaining associated records; and
- b) the determination of audit criteria, scope, frequency and methods.

Selection of auditors and conduct of audits shall ensure objectivity and the impartiality of the audit process.

4.6 Management review

Top management shall review the organization's OH&S management system, at planned intervals, to ensure its continuing suitability, adequacy and effectiveness. Reviews shall include assessing opportunities for improvement and the need for changes to the OH&S management system, including the OH&S policy and OH&S objectives. Records of the management reviews shall be retained.

Input to management reviews shall include:

- a) results of internal audits and evaluations of compliance with applicable legal requirements and with other requirements to which the organization subscribes;
- b) the results of participation and consultation (see **4.4.3**);
- c) relevant communication(s) from external interested parties, including complaints;
- d) the OH&S performance of the organization;
- e) the extent to which objectives have been met;
- f) status of incident investigations, corrective actions and preventive actions;
- g) follow-up actions from previous management reviews;
- h) changing circumstances, including developments in legal and other requirements related to OH&S; and
- i) recommendations for improvement.

The outputs from management reviews shall be consistent with the organization's commitment to continual improvement and shall include any decisions and actions related to possible changes to:

- a) OH&S performance;
- b) OH&S policy and objectives;
- c) resources; and
- d) other elements of the OH&S management system.

Relevant outputs from management review shall be made available for communication and consultation (see **4.4.3**).

Annex A (informative) **Correspondence between OHSAS 18001:2007, ISO 14001:2004 and ISO 9001:2000**

Table A.1 **Correspondence between OHSAS 18001:2007, ISO 14001:2004
and ISO 9001:2000**

OHSAS 18001:2007		ISO 14001:2004		ISO 9001:2000	
—	Introduction	—	Introduction	0 0.1 0.2 0.3 0.4	Introduction General Process approach Relationship with ISO 9004 Compatibility with other management systems
1	Scope	1	Scope	1 1.1 1.2	Scope General Application
2	Normative references	2	Normative references	2	Normative reference
3	Terms and definitions	3	Terms and definitions	3	Terms and definitions
4	OH&S management system elements (title only)	4	Environmental management system requirements (title only)	4	Quality management system (title only)
4.1	General requirements	4.1	General requirements	4.1 5.5 5.5.1	General requirements Responsibility, authority and communication Responsibility and authority
4.2	OH&S policy	4.2	Environmental policy	5.1 5.3 8.5.1	Management commitment Quality policy Continual improvement
4.3	Planning (title only)	4.3	Planning (title only)	5.4	Planning (title only)
4.3.1	Hazard identification, risk assessment and determining controls	4.3.1	Environmental aspects	5.2 7.2.1 7.2.2	Customer focus Determination of requirements related to the product Review of requirements related to the product
4.3.2	Legal and other requirements	4.3.2	Legal and other requirements	5.2 7.2.1	Customer focus Determination of requirements related to the product
4.3.3	Objectives and programme(s)	4.3.3	Objectives, targets and programme(s)	5.4.1 5.4.2 8.5.1	Quality objectives Quality management system planning Continual improvement
4.4	Implementation and operation (title only)	4.4	Implementation and operation (title only)	7	Product realization (title only)

Table A.1 Correspondence between OHSAS 18001:2007, ISO 14001:2004 and ISO 9001:2000 (continued)

OHSAS 18001:2007		ISO 14001:2004		ISO 9001:2000	
4.4.1	Resources, roles, responsibility, accountability and authority	4.4.1	Resources, roles, responsibility and authority	5.1 5.5.1 5.5.2 6.1 6.3	Management commitment Responsibility and authority Management representative Provision of resources Infrastructure
4.4.2	Competence, training and awareness	4.4.2	Competence, training and awareness	6.2.1 6.2.2	(Human resources) General Competence, awareness and training
4.4.3	Communication, participation and consultation	4.4.3	Communication	5.5.3 7.2.3	Internal communication Customer communication
4.4.4	Documentation	4.4.4	Documentation	4.2.1	(Documentation requirements) General
4.4.5	Control of documents	4.4.5	Control of documents	4.2.3	Control of documents
4.4.6	Operational control	4.4.6	Operational control	7.1 7.2 7.2.1 7.2.2 7.3.1 7.3.2 7.3.3 7.3.4 7.3.5 7.3.6 7.3.7 7.4.1 7.4.2 7.4.3 7.5 7.5.1 7.5.2 7.5.5	Planning of product realization Customer-related processes Determination of requirements related to the product Review of requirements related to the product Design and development planning Design and development inputs Design and development outputs Design and development review Design and development verification Design and development validation Control of design and development changes Purchasing process Purchasing information Verification of purchased product Production and service provision Control of production and service provision Validation of processes for production and service provision Preservation of product

Table A.1 Correspondence between OHSAS 18001:2007, ISO 14001:2004 and ISO 9001:2000 (continued)

OHSAS 18001:2007		ISO 14001:2004		ISO 9001:2000	
4.4.7	Emergency preparedness and response	4.4.7	Emergency preparedness and response	8.3	Control of nonconforming product
4.5	Checking (title only)	4.5	Checking (title only)	8	Measurement, analysis and improvement (title only)
4.5.1	Performance measurement and monitoring	4.5.1	Monitoring and measurement	7.6 8.1 8.2.3 8.2.4 8.4	Control of monitoring and measuring devices (Measurement, analysis and improvement) General Monitoring and measurement of processes Monitoring and measurement of product Analysis of data
4.5.2	Evaluation of compliance	4.5.2	Evaluation of compliance	8.2.3 8.2.4	Monitoring and measurement of processes Monitoring and measurement of product
4.5.3	Incident investigation, nonconformity, corrective action and preventive action (title only)	—	—	—	—
4.5.3.1	Incident investigation	—	—	—	—
4.5.3.2	Nonconformity, corrective and preventive action	4.5.3	Nonconformity, corrective action and preventive action	8.3 8.4 8.5.2 8.5.3	Control of nonconforming product Analysis of data Corrective action Preventive action
4.5.4	Control of records	4.5.4	Control of records	4.2.4	Control of records
4.5.5	Internal audit	4.5.5	Internal audit	8.2.2	Internal audit
4.6	Management review	4.6	Management review	5.1 5.6 5.6.1 5.6.2 5.6.3 8.5.1	Management commitment Management review (title only) General Review input Review output Continual improvement

Annex B (informative)

Correspondence between OHSAS 18001, OHSAS 18002, and the ILO-OSH:2001 *Guidelines on occupational safety and health management systems*

B.1 Introduction

This annex identifies the key differences between the International Labour Organization's ILO-OSH Guidelines and the OHSAS documents, and provides a comparative assessment of their differing requirements.

It should be noted that *no areas of significant difference have been identified*.

Consequently, those organizations that have implemented an OH&S management system that is compliant with OHSAS 18001 may be reassured that their OH&S management system will also be compatible with the recommendations of the ILO-OSH Guidelines.

A correspondence table between the individual clauses of the OHSAS documents and those of the ILO-OSH Guidelines is given in **B.4**.

B.2 Overview

The two prime objectives of the ILO-OSH Guidelines are:

- a) to assist countries in the establishment of a national framework for occupational health and safety management systems; and
- b) to provide guidance to individual organizations regarding the integration of OH&S elements into their overall policy and management arrangements.

OHSAS 18001 specifies requirements for OH&S management systems, to enable organizations to control risks and to improve their OH&S performance. OHSAS 18002 gives guidance on the implementation of OHSAS 18001. The OHSAS documents are therefore comparable with Section 3 of the ILO-OSH Guidelines "*The occupational safety and health management system in the organization*".

B.3 Detailed analysis of Section 3 of the ILO-OSH Guidelines against the OHSAS documents

B.3.1 Scope

The focus of the ILO-OSH Guidelines is on workers. The focus of the OHSAS Standards, towards persons under the control of the organization and other interested parties, is broader.

B.3.2 OH&S management system models

The models picturing the main elements of an OH&S management system are directly equivalent between the ILO-OSH Guidelines and the OHSAS documents.

B.3.3 ILO-OSH Section 3.2, Worker participation

In the ILO-OSH *Guidelines*, subsection **3.2.4** recommends that: *“The employer should ensure as appropriate, the establishment and efficient functioning of a health and safety committee and the recognition of workers health and safety representatives in accordance with national laws and practice”*.

OHSAS 18001, **4.4.3**, requires the organization to establish a procedure for communication, participation and consultation, and to involve a wider spectrum of interested parties (due to the broader scope of application of the document).

B.3.4 ILO-OSH Section 3.3, Responsibility and accountability

The ILO-OSH *Guidelines* recommend in **3.3.1(h)** the establishment of prevention and health promotion programmes. There is no requirement in the OHSAS Standards for this.

B.3.5 ILO-OSH Section 3.4, Competence and training

The recommendation of the ILO-OSH *Guidelines* subsection **3.4.4**: *“Training should be provided to all participants at no cost and should take place during working hours if possible”*, is not a requirement of the OHSAS documents.

B.3.6 ILO-OSH Section 3.10.4, Procurement

The ILO-OSH *Guidelines* emphasize that safety and health requirements of the organization should be incorporated into purchasing and leasing specifications.

The OHSAS Standards address procurement by their requirements for risk assessment, identification of legal requirements and the establishment of operational controls.

B.3.7 ILO-OSH Section 3.10.5, Contracting

The ILO-OSH *Guidelines* define the steps to be taken to ensure that the organization’s safety and health requirements are applied to contractors (they also provide a summary of the actions needed to ensure that they are). This is implicit in OHSAS.

B.3.8 ILO-OSH Section 3.12, Investigation of work related injuries, ill health, diseases and incidents, and their impact on safety and health performance

The ILO-OSH *Guidelines* do not require corrective actions or preventive actions to be reviewed through the risk assessment process prior to implementation, as they are in OHSAS 18001, **4.5.3.2**.

B.3.9 ILO-OSH Section 3.13, Audit

The ILO-OSH *Guidelines* recommend consultation on the selection of auditors. In contrast, the OHSAS documents require audit personnel to be impartial and objective.

B.3.10 ILO-OSH Section 3.16, Continual improvement

This is a separate subclause in the ILO-OSH Guidelines. It details arrangements that should be taken into account for the achievement of continual improvement. Similar arrangements are detailed throughout the OHSAS documents, which consequently do not have a corresponding clause.

B.4 Correspondence between the clauses of the OHSAS documents and the clauses of the ILO-OSH Guidelines

Table B.1 Correspondence between the clauses of the OHSAS documents and the clauses of the ILO-OSH Guidelines

Clause	OHSAS	Clause	ILO-OSH Guidelines
	Introduction	— 3.0	Introduction The occupational safety and health management system in the organization
	Foreword	—	The International Labour Organization
1	Scope	1.0	Objectives
2	Reference publications	—	Bibliography
3	Terms and definitions	—	Glossary
4	OH&S management system elements (title only)	—	—
4.1	General requirements	3.0	The occupational safety and health management system in the organization
4.2	OH&S policy	3.1 3.16	Occupational safety and health policy Continual improvement
4.3	Planning (title only)	—	Planning and implementation (title only)
4.3.1	Hazard identification, risk assessment and determining controls	3.7 3.8 3.10 3.10.1 3.10.2 3.10.5	Initial review System planning, development and implementation Hazard prevention Prevention and control measures Management of change Contracting
4.3.2	Legal and other requirements	3.7.2 3.10.1.2	(Initial review) (Prevention and control measures)
4.3.3	Objectives and programme(s)	3.8 3.9 3.16	System planning, development and implementation Occupational safety and health objectives Continual improvement
4.4	Implementation and operation (title only)	—	—
4.4.1	Resources, roles, responsibility, accountability and authority	3.3 3.8 3.16	Responsibility and accountability System planning, development and implementation Continual improvement

Table B.1 Correspondence between the clauses of the OHSAS documents and the clauses of the ILO-OSH Guidelines (*continued*)

Clause	OHSAS	Clause	ILO-OSH Guidelines
4.4.2	Competence, training and awareness	3.4	Competence and training
4.4.3	Communication, participation and consultation	3.2 3.6	Worker participation Communication
4.4.4	Documentation	3.5	Occupational safety and health management system documentation
4.4.5	Control of documents	3.5	Occupational safety and health management system documentation
4.4.6	Operational control	3.10.2 3.10.4 3.10.5	Management of change Procurement Contracting
4.4.7	Emergency preparedness and response	3.10.3	Emergency prevention, preparedness and response
4.5	Checking (title only)	—	Evaluation (title only)
4.5.1	Performance measurement and monitoring	3.11	Performance monitoring and measurement
4.5.2	Evaluation of compliance	—	—
4.5.3	Incident investigation, nonconformity, corrective action and preventive action (title only)	—	—
4.5.3.1	Incident investigation	3.12 3.16	Investigation of work related injuries, ill health, diseases and incidents and their impact on safety and health performance Continual improvement
4.5.3.2	Nonconformity, corrective and preventive action	3.15	Preventive and corrective action
4.5.4	Control of records	3.5	Occupational safety and health management system documentation
4.5.5	Internal audit	3.13	Audit
4.6	Management review	3.14 3.16	Management review Continual improvement

Bibliography

- [1] ISO 9000:2005, *Quality management systems – Fundamentals and vocabulary*
- [2] ISO 9001:2000, *Quality management systems – Requirements*
- [3] ISO 14001:2004, *Environmental management systems – Requirements with guidance for use*
- [4] ISO 19011:2002, *Guidelines for quality and/or environmental management systems auditing*

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