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Draft Indian Standard

GUIDELINES FOR IMPLEMENTATION OF OCCUPATIONAL HEALTH SAFETY MANAGEMENT SYSTEM IN AGENCIES DEALING WITH SOLID WASTE MANAGEMENT

(ICS 13.100, 03.100.70)

Occupational Safety and Health Sectional Committee, CHD 08	**Last Date for Comments** : **09 July 2024**

Occupational Safety and Health Sectional Committee, CHD 08

FOREWORD

(*Formal Clause shall be added later*)

This standard provides guidance for agency dealing with solid waste management on the establishment, implementation, maintenance and improvement of a robust, credible and reliable occupational health and safety management system. The guidance provided is intended for an agency seeking to manage its Occupational Health and Safety (OH&S) responsibilities in a systematic manner that contributes to the implementation of National Policy on Safety Health and Environment at Workplace by Government of India.

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GUIDELINES FOR IMPLEMENTATION OF OCCUPATIONAL HEALTH SAFETY MANAGEMENT SYSTEM IN AGENCIES DEALING WITH SOLID WASTE MANAGEMENT

1 SCOPE

This standard provides guidelines to agency dealing with solid waste management 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 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 OHSMS Standard by:
   i) Making a self-determination and self-declaration, or
   ii) Seeking confirmation of its conformance by parties having an interest in the agency/stake holders
   iii) Seeking confirmation of its self-declaration by a party external to the agency.

2 REFERENCES

IS No.	*Title*
IS 3786 : 1983	Methods for computation of frequency and severity rates for industrial injuries and classification of industrial accidents.
IS/ISO 14001 : 2004	Environmental management systems — Requirements with guidance for use
IS 14489 : 2018	Occupational health and safety audit — Code of practice
IS/ISO 45001 : 2018	Occupational health and safety management systems — Requirements with guidance for use.

3 TERMS AND DEFINITIONS

For the purposes of this document, the terms and definitions given below shall apply.

3.1 Accident — Unplanned/Undesired event giving rise to death, ill health, injury, damage or other losses to personnel or property.

3.2 Acceptable Risk — Risk that has been reduced to a level that can be tolerated by the agency having regard to its legal obligations and its own OH&S policy.

3.3 Agency — Urban local body, outgrowths in urban agglomerations, census towns as declared by the Registrar General and Census Commissioner of India.

3.4 Audit — A systematic, independent and a documented process for obtaining evidence and evaluating it objectively to determine the extent to which defined criteria are fulfilled.

NOTE— The word ‘independent’ here does not necessarily mean external to the agency.

3.5 Continual Improvement — Recurring process of enhancing the OH&S management system, to achieve improvements in overall OHS performance

3.6 Corrective Action — Action to eliminate the cause of a detected nonconformity or other undesirable situation

3.7 Document — Information and its supporting medium

3.8 Hazard —A source or a situation with a potential to cause harm in terms of human injury or ill health, damage to property, damage to the environment or a combination of these.

3.9 Hazard Identification — The process of recognizing a hazard in existence and defining its characteristic/impact.

3.10 Health — Identifiable, adverse physical or mental condition arising from and/ or made worse by a work activity and /or work related situation.

3.11 Incident — Event that give rise to an accident or has the potential to lead to an accident.

NOTE — An incident where no ill health, injury, damage or loss occurs is also referred to as near-miss'. The term incident' includes 'near-misses',

3.12 Interested Party (Stake Holder/Interested Party) — Individual or group concerned with or affected by the OH&S performance of an agency.

3.13 Non-Conformity — Non-fulfilment of a requirement.

3.14 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.

3.15 Occupational Health and Safety Management System — A set of interrelated or interacting elements to establish OH&S Policy and objectives, and to achieve those objectives.

3.16 Occupational Health and Safety Objectives — Overall goals in terms of OH&S performance, arising from the OH&S policy that an agency sets itself to achieve, which is quantified where practicable.

3.17 Occupational Health and Safety Performance — Measurable results of an agency's management of its OH&S risks

3.18 Occupational Health and Safety Policy — Overall intentions and direction of an agency in relation to its overall OH&S performance as formally expressed by top management.

3.19 Occupational Health and Safety Target — A detailed performance requirement quantified wherever practicable pertaining to the agency that arises from the health and safety objectives and that needs to be met in order to achieve those objectives.

3.20 Occupational Health Surveillance — Monitoring the health of people to detect signs or symptoms of work related ill health so that steps can be taken to eliminate, or reduce the probability of further deterioration.

3.21 Preventive Action — Action to eliminate the cause of a potential nonconformity or other undesirable potential situation

3.22 Procedure —A specified way to carry out an activity or a process.

3.23 Record — Document stating results achieved or providing evidence of activities performed

3.24 Rehabilitation — The managed process of maintaining injured or ill employees in, or returning them to suitable employment.

3.25 Risk — The combination of frequency, or probability of occurrence and consequence of a specified hazardous event.

3.26 Risk Analysis — A systematic use of available information to determine how often specified events may occur and magnitude of their likely consequences.

3.27 Risk Assessment — The overall process of estimating the magnitude of risk and deciding whether the risk is tolerable.

3.28 Safety — State in which the risk of harm to persons or damage to property is limited to a tolerable level.

3.29 Solid Waste Management (SWM) — A purposeful systematic control of the generation, storage, collection, transport, processing and disposal of solid waste.

3.30 Tolerable Risk — Risk that has been reduced to a level that can be endured by the agency having regards to its legal obligations and its own OH&S Policy.

3.31 Aerobic Composting — It means a controlled process involving microbial decomposition of organic matter in the presence of oxygen.

3.32 Anaerobic Digestion — It means a controlled process involving microbial decomposition of organic matter in absence of oxygen.

3.33 Authorisation — It means the permission given by the State Pollution Control Board or Pollution Control Committee, as the case may be, to the operator of a facility or urban local authority, or any other agency responsible for processing and disposal of solid waste.

3.34 Biodegradable Waste —It means any organic material that can be degraded by micro-organisms into simpler stable compounds.

3.35 Bio-Methanation —It means a process which entails enzymatic decomposition of the organic matter by microbial action to produce methane rich biogas;

3.36 Brand Owner — It means a person or company who sells any commodity under a registered brand label.

3.37 Buffer Zone — It means zone of no development to be maintained around solid waste processing and disposal facility, exceeding 5 TPD of installed capacity. This will be maintained within total and area allotted for the solid waste processing and disposal facility.

3.38 Bulk Waste Generator — It means and includes buildings occupied by the Central government departments or undertakings, State government departments or undertakings, local bodies, public sector undertakings or private companies, hospitals, nursing homes, schools, colleges, universities, other educational institutions, hostels, hotels, commercial establishments, markets, places of worship, stadia and sports complexes having an average waste generation rate exceeding 100 kg per day.

3.39 Census Town — It means an urban area as defined by the Registrar General and Census Commissioner of India.

3.40 Combustible Waste — It means non-biodegradable, non-recyclable, non-reusable, non-hazardous solid waste having minimum calorific value exceeding 1500 kcal/kg and excluding chlorinated materials like plastic, wood pulp, etc;

3.41 Composting — It means a controlled process involving microbial decomposition of organic matter;

3.42 Contractor — It means a person or firm that undertakes a contract to provide materials or labour to perform a service or do a job for service providing authority;

3.43 Co-processing — It means use of non-biodegradable and non-recyclable solid waste having calorific value exceeding 1500 k/cal as raw material or as a source of energy or both to replace or supplement the natural mineral resources and fossil fuels in industrial processes;

3.44 Decentralised Processing — It means establishment of dispersed facilities for maximizing the processing of biodegradable waste and recovery of recyclables closest to the source of generation so as to minimize transportation of waste for processing or disposal;

3.45 Disposal — It means the final and safe disposal of post processed residual solid waste and inert street sweepings and silt from surface drains on land to prevent contamination of ground water, surface water, ambient air and attraction of animals or birds;

3.46 Domestic Hazardous Waste — It means discarded paint drums, pesticide cans, CFL bulbs, tube lights, expired medicines, broken mercury thermometers, used batteries, used needles and syringes and contaminated gauge etc., generated at the household level;

3.47 Door To Door Collection — It means collection of solid waste from the door step of households, shops commercial establishments, offices, institutional or any other non-residential premises and includes collection of such waste from entry gate or a designated location on the ground floor in a housing society, multi storied building or apartments, large residential, commercial or institutional complex or premises;.

3.48 Dry Waste — It means waste other than bio-degradable waste and inert street sweepings and includes recyclable and non-recyclable waste, combustible waste and sanitary napkin and diapers, etc.

3.49 Dump Sites — It means a land utilised by local body for disposal of solid waste without following the principles of sanitary land filling;

3.50 Extended Producer Responsibility— (EPR) means responsibility of any producer of packaging products such as plastic, tin, glass and corrugated boxes, etc., for environmentally sound management, till end-of-life of the packaging products.

3.51 Facility — It means any establishment wherein the solid waste management processes namely segregation, recovery, storage, collection, recycling, processing, treatment or safe disposal are carried out.

3.52 Handling—It includes all activities relating to sorting, segregation, material recovery, collection, secondary storage, shredding, baling, crushing, loading, unloading, transportation, processing and disposal of solid wastes.

3.53 Inerts — It means wastes which are not bio-degradable, recyclable or combustible street sweeping or dust and silt removed from the surface drains.

3.54 Incineration— It means an engineered process involving burning or combustion of solid waste to thermally degrade waste materials at high temperatures;

3.55 Informal Waste Collector — It includes individuals, associations or waste traders who are involved in sorting, sale and purchase of recyclable materials;

3.56 Leachate — It means the liquid that seeps through solid waste or other medium and has extracts of dissolved or suspended material from it;

3.57 Local Body — It means and includes the municipal corporation, nagar nigam, municipal council, nagarpalika, nagar Palikaparishad, municipal board, nagar panchayat and town panchayat, census towns, notified areas and notified industrial townships with whatever name they are called in different States and union territories in India;

3.58 Materials Recovery Facility — (MRF) means a facility where non-compostable solid waste can be temporarily stored by the local body or any other entity mentioned in rule 2 or any person or agency authorised by any of them to facilitate segregation, sorting and recovery of recyclables from various components of waste by authorised informal sector of waste pickers, informal recyclers or any other work force engaged by the local body or entity for the purpose before the waste is delivered or taken up for its processing or disposal;

3.59 Non-Biodegradable Waste — It means any waste that cannot be degraded by micro-organisms into simpler stable compounds.

3.60 Operator of a Facility — It means a person or entity, who owns or operates a facility for handling solid waste which includes the local body and any other entity or agency appointed by the local body;

3.61 Primary Collection — It means collecting, lifting and removal of segregated solid waste from source of its generation including households, shops, offices and any other non-residential premises or from any collection points or any other location specified by the local body;

3.62 Processing — It means any scientific process by which segregated solid waste is handled for the purpose of reuse, recycling or transformation into new products;

3.63 Recycling — It means the process of transforming segregated non-biodegradable solid waste into new material or product or as raw material for producing new products which may or may not be similar to the original products;

3.64 Refused Derived Fuel — (RDF) means fuel derived from combustible waste fraction of solid waste like plastic, wood, pulp or organic waste, other than chlorinated materials, in the form of pellets or fluff produced by drying, shredding, dehydrating and compacting of solid waste ;

3.65 Residual Solid Waste — It means and includes the waste and rejects from the solid waste processing facilities which are not suitable for recycling or further processing;

3.66 Sanitary Land Filling — It means the final and safe disposal of residual solid waste and inert wastes on land in a facility designed with protective measures against pollution of ground water, surface water and fugitive air dust, wind-blown litter, bad odour, fire hazard, animal menace, bird menace, pests or rodents, greenhouse gas emissions, persistent organic pollutants slope instability and erosion.

3.67 Sanitary Waste — It means wastes comprising of used diapers, sanitary towels or napkins, tampons, condoms, incontinence sheets and any other similar waste.

3.68 Secondary Storage — It means the temporary containment of solid waste after collection at secondary waste storage depots or MRFs or bins for onward transportation of the waste to the processing or disposal facility.

3.69 Segregation — It means sorting and separate storage of various components of solid waste namely biodegradable wastes including agriculture and dairy waste, non-biodegradable wastes including recyclable waste, non-recyclable combustible waste, sanitary waste and non-recyclable inert waste, domestic hazardous wastes, and construction and demolition wastes.

3.70 Service Provider— It means an authority providing public utility services like water, sewerage, electricity, telephone, roads, drainage, etc.

3.71 Solid Waste — It means and includes solid or semi-solid domestic waste, sanitary waste, commercial waste, institutional waste, catering and market waste and other non-residential wastes, street sweepings, silt removed or collected from the surface drains, horticulture waste, agriculture and dairy waste, treated bio-medical waste excluding industrial waste, bio-medical waste and e-waste, battery waste, radio-active waste generated in the area under the local authorities and other entities

3.72 Sorting —It means separating various components and categories of recyclables such as paper, plastic, cardboards, metal, glass, etc., from mixed waste as may be appropriate to facilitate recycling;

3.73 Stabilising — It means the biological decomposition of biodegradable wastes to a stable state where it generates no leachate or offensive odours and is fit for application to farm land ,soil erosion control and soil remediation;

3.74 Street Vendor —It means any person engaged in vending of articles, goods, wares, food items or merchandise of everyday use or offering services to the general public, in a street, lane, side walk, footpath, pavement, public park or any other public place or private area, from a temporary built up structure or by moving from place to place and includes hawker, peddler, squatter and all other synonymous terms which may be local or region specific; and the words "street vending" with their grammatical variations and cognate expressions, should be construed accordingly;

3.75 Transfer Station — It means a facility created to receive solid waste from collection areas and transport in bulk in covered vehicles or containers to waste processing and, or, disposal facilities;

3.76 Transportation — It means conveyance of solid waste, either treated, partly treated or untreated from a location to another location in an environmentally sound manner through specially designed and covered transport system so as to prevent the foul odour, littering and unsightly conditions;

3.77 Treatment — It means the method, technique or process designed to modify physical, chemical or biological characteristics or composition of any waste so as to reduce its volume and potential to cause harm;

3.76 Vermi Composting — It means the process of conversion of bio-degradable waste into compost using earth worms.

3.77 Waste Generator — It means and includes every person or group of persons, every residential premises and non-residential establishments including Indian Railways, defence establishments, which generate solid waste;

3.78 Waste Hierarchy — It means the priority order in which the solid waste is to should be managed by giving emphasis to prevention, reduction, reuse, recycling, recovery and disposal, with prevention being the most preferred option and the disposal at the landfill being the least.

3.79 Waste Picker —It means a person or groups of persons informally engaged in collection and recovery of reusable and recyclable solid waste from the source of waste generation the streets, bins, material recovery facilities, processing and waste disposal facilities for sale to recyclers directly or through intermediaries to earn their livelihood).

4 CONTEXT OF THE LOCAL BODY

4.1 Understanding the Local Body and its Context

4.1.1 In order for a local body dealing with management of solid waste to establish, implement maintain and continually improve an Occupational health and safety management system, it should determine the context within which it operates. The context includes the external and internal issues, including occupational health and safety concerns relevant to its purpose and that affect its ability to achieve the intended outcomes of the Occupational health and safety management system.

4.1.2 The term intended outcome means what the local body intends to achieve by implementing its Occupational health and safety management system. Intended outcomes may include enhancement of Occupational health and safety performance, fulfilment of compliance obligations, achievement of Occupational health and safety objectives, provision of safe working conditions, and improvement of its image and reputation. The local bodies are influenced by external and internal issues, such as the availability of resources and the involvement of their employees.

4.1.3 The context of the local body can include the local body's complexity, structure, activities and their geographical locations. For a local body for management of solid waste, conditions can be existing or subject to gradual change, whereas an event can involve a sudden change, which is typically explained by an extreme situation. Preparing for, and managing the consequences of, such conditions and events supports operational continuity.

4.1.4 A local body implementing or improving its Occupational health and safety management system or integrating its Occupational health and safety management system within its solid waste management processes should review its context in order to gain knowledge of the relevant issues that can affect the Occupational health and safety management system. The review can include the following key areas:

a) Identification of the relevant external and internal issues, which relate to the local body's solid waste management activities
b) Consideration of how these issues can affect the local body's purpose and ability to achieve the intended outcomes of its Occupational health and safety management system;
c) Understanding of how(a) and(b) can be addressed in planning (*see* **6.1.1**);
d) Identification of opportunities to improve its Occupational health and safety performance (*see* **10.3**).

4.1.5 Practical Help Boxes 1 to 3 provide examples of considerations for determining external issues, internal issues and work area conditions, including events.

4.1.6 *Practical Help Box1: External issues*.

4.1.6.1 *Considerations can include*.

a) Political: type of political system in place, e.g. democracy, dictatorship, level of political interference, willingness of politicians to exercise power effectively;
b) Economic: availability of utilities, such as fuel, gas and water, infrastructure and transportation, including housing, road, rail, sea and airports;
c) Financial: recognized financial system, availability and access to financial resources;
d) Supply chain management: supplier availability, capacity and capability, level of technology and community requirements;
e) Social: ethnic values, gender issues, bribery and corruption, availability of workforce, access to education and medical facilities, level of workforce education and levels of criminal activity;
f) Cultural: indigenous burial or sacred sites, heritage buildings/property, availability of specific resources, such as herbal/medicinal plants, craft materials, food used in a cultural context for ceremonial purposes, religious system and aesthetic values;
g) Market and public demands.
h) Current and future market trends for SWM services,;
j) Technological: availability and access to technology relevant to the SWM activities;
k) Legislative: the legislative framework within which the local body operates;

NOTE — Legislative framework includes statutory, regulatory and other forms of legal requirements.

4.1.6.2 External sources of information that can contribute to the local body's knowledge of external issues can include:

a) Public, suppliers and partners;
b) Housing societies
c) Business councils, chambers of commerce;
d) Government bodies;
e) Consultants;
f) Academic research;
g) Local news media;

h) NGOs, local community groups.

4.1.7 *Practical Help Box 2 : Work Area Conditions, Including Events*

4.1.7.1 Work area condition that can affect the local body's activities can include, for example climatic temperature change or weather conditions that can prevent the local body from carrying out operations safely. An example of events could be flooding as a result of extreme weather, which can affect the local body's activities such as storage of waste or products in order to prevent occupational exposure.

4.1.7.2 Consideration of some of the following sources of information can assist the local body to identify its work area conditions including events:

a) Meteorological, geological, hydrological and ecological information;
b) Historical disaster information related to the local body's location of activities
c) Reports from previous audits, assessments or reviews, initial gap analysis.
d) Workplace monitoring data
e) Work place permits or licence applications
f) Reports on emergency situations and incidents.
g) Workers medical examination reports and health records

4.1.8 *Practical Help Box 3 : Internal issues*

4.1.8.1 *Considerations can include*:

a) Local body governance and structure:
b) National and contractual governance frameworks, including registration and reporting; type of structure including hierarchical, matrix, flat, project based; joint ventures and contracted services; roles and responsibilities and authorities.
c) Legal compliance status and trends
d) Policies, objectives and strategies - purpose, vision, other objectives and strategies, and resources that are needed to achieve them.
e) Capacity and capability- local body's capacity, capability and knowledge in terms of resources and competence, (for example, capital, time, people, language, processes, systems and technologies, and their maintenance).
f) Information systems- information flows and decision-making processes (both formal and informal) and the time taken for their completion;
g) Relationships with, and perceptions and values of, internal interested parties;
h) Management systems and standards - strengths and weaknesses of existing management system(s) of the local body, and guidelines and procedures adopted by the local body, such as those for quality, safety and health;
j) Local body's style and culture: public or private company, management and leadership style, open or closed culture, and decision-making processes;
k) Contracts: form, content and extent of contractual relationships.

4.1.9 Methods that can be used to examine relevant internal factors include gathering information related to the current management system as considered above, including interviews with persons previously or currently working under the local body's control, and review of internal and external communications.

4.1.10 The process used by a local body to develop an understanding of its context should result in knowledge that can be used by the local body to guide its efforts to plan, implement and operate its Occupational health and safety management system in management of solid waste. The process should be approached in a practical manner that adds value to the local body and yields a general, conceptual understanding of the most important issues. It can be useful to document and periodically update the process and its results as needed.

4.1.11 The results can be used to assist the local body in:

a) Setting the scope of its Occupational health and safety management system;
b) Determining its risks and opportunities that need to be addressed;
c) Developing or enhancing its Occupational health and safety policy
d) Determining the effectiveness of its approach to fulfil its compliance obligations.

4.2 Understanding the Needs and Expectations of Interested Parties

4.2.1 *General*

a) Interested parties are also part of the context in which a local body operates and should be considered when the local body is reviewing its context. Determining interested parties and developing a relationship with them enables communication, which can lead to the potential for building mutual understanding, trust and respect. This relationship need not be formal.

b) The local body should determine its interested parties and their needs and expectations, relative to their occupational health and safety management system. The local body can benefit from a process that identifies the relevant needs and expectations of relevant interested parties, in order to determine those that it has to comply with and those it chooses to comply with (i.e. its compliance obligations). The methods used and resources applied can vary depending on, for example, the size and nature of the local body, the finances available, the risks and opportunities that need to be addressed and the local body's experience with regard to occupational health and safety management in solid waste management.

c) The local body is expected to gain a general (i.e. high-level, not detailed) understanding of the expressed needs and expectations of those internal and external interested parties that have been determined to be relevant, so that the knowledge gained can be considered when determining its compliance obligations.

4.2.2 *Determining Relevant Interested Parties*

Interested parties can be internal or external to a local body. The local body determines which interested parties are relevant to the local body's occupational health and safety management system in management of solid waste. Interested parties can change over time and can depend on the sector or industry or the geographic location in which the local body operates. Changes in the internal or external issues that are part of the local body's context can also result in a change in interested parties.

4.2.3 *Determining Relevant Needs and Expectations of Interested Parties*

A local body should determine the relevant needs and expectations of its relevant interested parties as an input towards the design of the occupational health and safety management system. Examples of interested parties and their needs and expectations are provided in Practical Help Box 4 as per Table 1. It is important to identify not only those that are obligatory and stated, but also those that are generally implied (i.e. expected as normal). Relevant interested parties, those that have been identified as having a role in the context, may have some needs that are not relevant to the local body's occupational health and safety management system and thus not all their needs are necessarily considered.

Table 1 Practical Help Box 4- Examples of Interested Parties and Their Needs and Expectations

(*Clause* 4.2.3)

Sl No.	**Relationship**	**Examples of interested parties**	**Examples of needs and expectations**
(1)	(2)	(3)	(4)
i)	By responsibility	Public	Expect socially acceptable performance, honesty and integrity
ii)	By influence	Non-governmental local body's (NGO)	Need the local body's co-operation to achieve NGO's OHS and other goals
iii)	By proximity	Neighbours, Community	Expect the local body to manage its risks and opportunities that can affect their well-being
iv)	By dependency	Employees, Waste-collectors	Expect to work in a safe and healthy working conditions.
v)	By contractual dependency	Contractors, processors	Safe and healthy working conditions, protective measures
vi)	By representation	Collaborators	Need collaboration on OHS issues

vii)	By authority	Regulatory or statutory agencies	Expect demonstration of legal compliance

4.2.4 *Determining Compliance Obligations*

a) A local body should determine which of the interested parties needs and expectations it has to comply with and then which of the remaining needs and expectations it chooses to adopt which becomes its compliance obligations. This broad level knowledge can contribute to an understanding of its compliance obligations as further detailed in **6.1.3**.

b) There is no single approach to determining needs and expectations. The local body should use an approach that is appropriate to its scope, nature and scale and is suitable in terms of detail, complexity, time, cost and availability of reliable data.

c) The local body can determine the needs and expectations of its relevant interested parties through other processes or for other purposes.

d) Where requirements are set by a regulatory body, the local body should gain broad knowledge of those broad areas of legislation that are applicable, such as air quality standards, discharge limits, waste disposal regulations, licencing requirements for operating the facility, safety and health of workers, working conditions, road traffic rules etc.

e) In the case of voluntary commitments, the local body should gain the broad knowledge of the relevant needs and expectations such as public requirements, voluntary codes, and agreements with community, groups or public authorities. This knowledge enables the local body to understand the implications these can have on the achievement of the intended outcomes of the occupational health and safety management system.

4.2.*5* *Use and Application of the Needs and Expectations of Interested Parties*

The outputs from **4.2.1** and **4.2.4** can assist in setting the scope of the local body's occupational health and safety management system. Establishing its occupational health and safety policy, determining its hazards and risks, compliance obligations, and risks and opportunities that need to be addressed by the local body. These are considerations when establishing its occupational health and safety objectives. The local body can find it useful to document this information to facilitate its use to meet other elements in this standard.

4.3 Determining the Scope of the Occupational Health and Safety Management System

a) The top management of the local body dealing with management of solid waste, retains the freedom and flexibility to define the scope of the occupational health and safety management system. The local body should understand the extent of control or influence that it can exert over activities. It is critical to the success of the occupational health and safety management system and to the credibility of the local body's reputation to ensure that the scope is not defined in a way that excludes activities, services or facilities that have or can have significant hazards and risks, or in a way that evades its compliance obligations, or misleads interested parties. An inappropriately narrow or exclusive scope could undermine the credibility of the occupational health and safety management system with its interested parties and reduce the local body's ability to achieve the intended outcomes of its occupational health and safety management system. The scope is a factual and representative statement of the local body's operations and processes related to solid waste management included within its occupational health and safety management system boundaries.

b) Although the scope is limited to solid waste management activity of local body, the top management on the higher level of the local body can retain responsibility for directing and supporting the occupational health and safety management system.

c) The local body should consider externally-provided activities, products and services when determining the scope of the occupational health and safety management system. Local body can have control of externally provided activities, products and services, which have or can have significant occupational health and safety impacts through the local body's leadership, or local body can have influence over them by contractual arrangement or other agreement. The local body should maintain the scope as documented information and make it available to interested parties through various means such as written description, webpage, or posting a public statement of its conformity.

4.4 Occupational Health and Safety Management System

4.4.1 *General*

4.4.1.1 Occupational health and safety management system should be viewed as an organizing framework that should be continually monitored and periodically reviewed to provide effective direction for a local body's response to changing external and internal issues. A commonly used model for a management system is referred to as the Plan-Do- Check-Act (PDCA) approach and same to be followed for OHSMS, for more information on the PDCA model, *see* Practical Help Box 5.

4.4.1.2 *Practical help box 5 — the occupational health and safety management system model*

PDCA is an ongoing, iterative process that enables a local body to establish, implement and maintain it occupational health and safety policy and continually improve its occupational health and safety management system in order to enhance occupational health and safety performance in relation to solid waste management. The steps of this on-going process are as follows:

a) Plan :
- i) Understand the context including needs and expectations of the interested parties (*see* **4**)
- ii) Determine the scope of (*see* **4.3**) and implement the occupational health and safety management system (*see* **4.4**)
- iii) Ensure leadership and commitment from top management (*see* **5.1**)
- iv) Establish an occupational health and safety policy (*see* **5.2**)
- v) Assign responsibilities and authorities for relevant roles (*see* **5.3**)
- vi) Identify hazards and associated risks and opportunities (*see* 6.**1.2**)
- vii) Identify and have access to compliance obligations(*see* **6.1.3**)
- viii) Determine risks and opportunities that need to be addressed related to bullets 1), 6) and 7) above (*see* **6.1.1**)
- ix) Plan to take actions to address risks and opportunities determined in 8) above and evaluate effectiveness of these actions (*see* **6.1.4**)
- x) Establish occupational health and safety objectives (*see* **6.2.2**) and define indicators and process to achieve them (*see* **6.2.3** and **6.2.4**)

b) Do
- i) Determine the resources required to implement and maintain the OH&S management system (*see* **7.1**);
- ii) Determine the necessary competence of person(s) and ensure these persons have the competency (*see* **7.2**) and awareness (*see* **7.3**) as determined;
- iii) Establish, implement and maintain the processes needed for internal and external communications (*see* **7.4**);
- iv) Ensure an appropriate method for creating and updating (*see* **7.5.2**) and controlling (*see* **7.5.3**) documented information;
- v) Plan, implement and control operational control processes needed to meet the OH&S management system requirements (*see* **8.1**);
- vi) Determine potential emergency situations and the necessary response (*see* **8.2**);

c) Check
- i) Monitor, measure, analyse and evaluate OH&S performance (*see* **9.1.1** and **9.1.2**);
- ii) Evaluate fulfilment of compliance obligations (*see* **9.1.2**);
- iii) Conduct periodic internal audits (*see* **9.2**);
- iv) Review OH&S management system to ensure continuing suitability, adequacy and effectiveness (*see* **9.3**);

d) Act
- i) Take action to deal with nonconformity (*see* **10.2**);
- ii) Take action to continually improve the suitability, adequacy and effectiveness of the OH&S management system to enhance OH&S performance (*see* **10.3**).

4.4.2 Establishing, Implementing, Maintaining and Continually Improving OH&S Management System

4.4.2.1 To achieve the intended outcomes, the local body should establish, implement, maintain and continually improve OH&S management system. The benefits include enhanced OH&S performance derived from the knowledge gained in **4.1** and **4.2** when establishing, implementing and maintaining the OH&S management system. If developing a complete OH&S management system for all the activities of solid waste management all at once is considered difficult, a phased approach could offer several advantages.

4.4.2.2 The local body retains the authority and accountability, to determine the way in which it satisfies the OH&S management system requirements. An example of phased implementation is shown in Annex A.

5 LEADERSHIP

5.1 Leadership and Commitment

5.1.1 Top management's commitment, accountability and leadership are vital for the successful implementation of an effective OH&S management system, including the capability to achieve intended outcomes. Top management should therefore take accountability for the effectiveness of the OH&S management system and ensure that its intended outcomes are achieved. Top management's commitment means providing physical and financial resources, as well as direction. It includes active involvement that supports the OH&S management system and communicates the importance of effective OH&S management.

5.1.2 *Top Management's Commitment Should Ensure That the OH&S Management System*:

a) is not managed in isolation, or separately from the core strategy of solid waste management
b) is considered when strategic decisions relating to solid waste management are made;
c) is aligned with core objectives of solid waste management;
d) benefits from the appropriate level of resources (*see* **7.1**), provided in a timely and efficient manner;
e) receives the appropriate involvement from across the levels and functions of local body
f) provides real value to the local body;
g) Continually improves and remains successful in the long term.

5.1.3 The OH&S policy and OH&S objectives are aimed at meeting the OH&S component of the strategic plans related to solid waste management and form the basis for its OH&S management system. Top management has the potential to realize greater value by considering the OH&S performance of its activities, when planning or reviewing its strategy. For example, the opportunity for improving the OH&S performance of a building or product is greater OH&S criteria are considered at the design stage rather than deferring it until the construction or manufacturing stage.

5.1.4 The OH&S management system will be more effective and enduring if it is intrinsic to the strategic direction of the local body related to solid waste management and integrated into other processes.

5.1.5 Top management should communicate the importance of effective OH&S management and conformance to the OH&S management system requirements through direct involvement or delegation of authority, as appropriate. The communication can be formal or informal, and can take many forms, including visual and verbal.

5.1.6 Top management should support others in the local body in relevant management roles so they in turn can apply leadership to their own area of responsibility, relative to the OH&S management system. This can allow the value of top management's leadership and commitment to disseminate down through the local body. By demonstrating leadership and commitment, top management is able to direct and support employees of the local body and others doing work under its control to achieve its intended outcomes.

5.1.7 The local body is in a good position to achieve its OH&S objectives and identify opportunities for improvement when top management creates a culture that encourages people, at all levels, to actively participate in the OH&S management system.

5.2 Occupational Health and Safety Policy

5.2.1 The OH&S policy should provide a framework for establishing OH&S objectives, as it provided strategic direction to the local body, and set the level of OH&S responsibility and performance required, against which subsequent actions can be judged. The OH&S policy establishes the principles of action for the local body.

5.2.2 The OH&S policy should be specific to the local body and appropriate to its purpose and the context in which it operates. The OH&S policy should include the commitment of the local body to fulfil its compliance obligations and its commitments related to prevention of injuries & illnesses, and continual improvement.

5.2.3 When developing its OH&S policy, the local body should consider:

a) Its vision, mission, core values and beliefs;
b) Guiding principles;
c) The needs and expectations of, and communication with, interested parties;

d) The internal and external issues that are relevant to the OH&S management system,
e) Coordination with other policies (e.g. Quality, OH&S);
f) The actual and potential effects on its activities from external work related conditions, including events.

5.2.4 The responsibility for establishing the OH&S policy rests with the top management. The OH&S policy should be maintained as documented information and be consistent with, and can be included in or linked with, other policy documents, such as those associated with quality, environment and social responsibility. Top management is responsible for implementing the OH&S policy and for providing input to the formulation and modification of the OH&S policy. The OH&S policy should be communicated to all persons working under the control of the local body and should be made available to interested parties. The local body can decide to make the OH&S policy available in an unrestricted manner, such as posting it on a website, or it can make it available, as appropriate, after information about the identity, needs and expectations of the interested party is provided, or upon request.

5.3 Roles, Responsibilities and Authorities

5.3.1 Successful establishment, implementation and maintenance of the OH&S management system and improvement of OH&S performance depend on how top management defines and assigns responsibilities and authorities within the local body. (*see* Practical Help Box 9).

5.3.2 Top management should assign (a) representative(s) or function(s) with sufficient authority, awareness, competence and resources to:

a) Ensure the establishment, implementation and maintenance of the OH&S management system at all applicable levels relating to solid waste management of the local body;
b) Report back to top management on the OH&S management system, including OH&S performance and its opportunities for improvement.

5.3.3 These responsibilities and authorities can be combined with other functions or responsibilities. Top management should ensure that responsibilities and authorities of persons working under its control whose work affects the OH&S management system are defined and communicated, as appropriate, to ensure effective implementation of the OH&S management system. The OH&S management system responsibilities should not be seen as confined to the OH&S function and can include other functions, such as design, procurement, engineering, quality, and environment. The resources provided by the top management should enable the fulfilment of the responsibilities assigned. The responsibilities and authorities should be reviewed when a change in structure of the local body occurs.

6 PLANNING

6.1 Actions to Address Risks and Opportunities

6.1.1 *General*

6.1.1.1 Planning is critical for determining and taking the actions needed to ensure the OH&S management system can achieve its intended outcomes. The planning process can help a local body to identify and focus its resources on those areas that are most important for protecting safety and health of workers. It can also assist the local body in fulfilling its compliance obligations and other OH&S policy commitments, and establishing and achieving its OH&S objectives.

6.1.1.2 The local body should have process (es) to determine risks and opportunities that needs to be addressed. The process starts with applying an understanding of the context in which the local body operates, including issues that can affect the intended outcomes of the OH&S management system (*see* **4.1**) and relevant needs and expectations of interested parties, including those the local body adopts as compliance obligations (*see* **4.2**). Along with the scope of the OH&S management system, these become inputs that should be considered in determining the risks and opportunities that need to be addressed. Information generated in the planning process is an important input for determining operations that have to be controlled. This information can also be used in the establishment and improvement of other parts of the OH&S management system, such as identifying training, competency, monitoring and measurement needs.

6.1.1.3 The OH&S management system provides value for the local body and its interested parties by addressing risks and opportunities. A robust, credible and reliable OH&S management system can support the long-term

viability of the local body. Without managing its risks and opportunities that need to be addressed, the local body may not achieve its intended outcomes nor be able to respond to OH&S conditions, including events.

6.1.1.4 Issues that should be taken into account include compliance obligations, views of interested parties and other sources of risks and opportunities that need to be addressed, such as OH&S conditions, including events.

6.1.1.5 There are three possible sources of risks and opportunities that need to be addressed in order to give assurance that the OH&S management system can achieve its intended outcomes, prevent or reduce undesired effects, and achieve continual improvement:

a) Hazards (*see* **6.1.2**);
b) Compliance obligations (*see* **6.1.3**);
c) Other issues and requirements identified in **4.1** and **4.2**.

6.1.1.6 The local body has the freedom to choose its approach when determining risks and opportunities that need to be addressed. For example, the local body can:

a) Identify hazards, compliance obligations and other issues and requirements, and then determine associated risks and opportunities that need to be addressed for each of these; or
b) Integrate the determination of risks and opportunities that need to be addressed into its identification of critical hazards, and apply a similar approach to the other sources of risks and opportunities that need to be addressed; or
c) Follow an alternative approach where two or more of the sources of risks and opportunities that need to be addressed are considered in combination.

6.1.1.7 The local body can use existing processes for determining risks and opportunities that need to be addressed. The approach chosen may involve a simple qualitative process or a full quantitative assessment (for example, applying criteria in a decision matrix), depending on the context in which the local body operates.

6.1.1.8 The resulting risks and opportunities that need to be addressed are inputs for planning actions (*see* **6.1.4**), for establishing the OH&S objectives (*see* **6.2**) and for controlling relevant operations in order to prevent injuries and illnesses and other undesired effects (*see* **8.1)**.

6.1.1.9 The results can also have implications for other areas of the OH&S management system, for example determining competency needs and communications related to the OH&S management system, determining monitoring and measurement needs, establishing the internal audit programme, and developing emergency preparedness and response processes. Emergency situations are unplanned or unexpected events that create the need for an immediate response in order to mitigate their actual or potential consequences. Emergency situations may create adverse effects to a local body, for example through fires, explosions, spills or releases of hazardous substances, or natural events, such as flash floods, storms, typhoons, tsunamis, etc. They may also create secondary OH&S risks and other risks to the local body, such as the off-site release of contaminated fire water during the fire-fighting process and the need to dispose of fire damaged material which may be hazardous as a result of the fire. The local body should, within the scope of its OH&S management system, determine potential emergency situations, including those that can have OH&S consequences.

6.1.2 *Hazard Identification and Assessment of Risks and Opportunities*

6.1.2.1 *Hazard identification*

The local body within the scope of its OH&S management system, should identify hazards at the conceptual stage of any new workplace, facility, or activity. Hazard identification process should be continued during full cycle of its current, changing and future activities. Hazard identification helps local body to recognize and understand the hazards in the workplace and to the workers in order to assess, prioritize and eliminate hazards or reduce OH&S risks.

6.1.2.2 The local body should consider various types of hazards associated with solid waste management activities including but not limited to,

a) Physical hazards
b) Chemical hazards
c) Biological hazards
d) High noise levels

e) Electrical hazards
f) Radiological hazards
g) Illumination
h) Psychosocial hazards
j) Extreme weather- hot, cold, rain
k) Physiological hazards and ergonomics

6.1.2.3 While identifying the hazards the local body should take in to account the following aspects of its activities

a) Work organization
b) Social factors such as workload, work hours, literacy level, language, etc
c) Leadership at various levels and functions
d) Culture in the local body
e) Routine and non-routine activities including start-up and shut-down, maintenance
f) Issues arising out of
    i. Infrastructure development
    ii. Equipments used
    iii. Material handled
    iv. Substances used
    v. Physical conditions
g) Human factors
h) Past relevant incidents both internal and external
j) Past emergencies and reasonably foreseeable emergency situations.
k) Persons having access to workplace
    i. Workers
    ii. Waste collectors
    iii. Contractors and their workers
    iv. Transporters and their workers
    v. General public
    vi. Processors and their workers
    vii. Public authorities and their workers
    viii. NGOs and their workers
    ix. Community groups
m) Changes in technology and information relevant to hazards

6.1.2.4 When identifying the hazards, the local body should also give consideration to its compliance obligations, its policies, internal and external issues and its obligations and responsibilities to interested parties. It should also consider the implications on its own OH&S performance, for example by the purchase of products containing hazardous materials, activities carried out by external providers, including contractors or subcontractors; or services supplied and used.

6.1.2.5 The process of identifying hazards benefits from the participation of those individuals who are familiar with the local body's activities. Considerations should therefore be given to hazards related to the local body's activities, including:

a) Design and development of its facilities for collection and processing of waste.
b) Acquisition of materials and equipment.
c) Operations, including waste collection, transportation, segregation, processing, storage etc.
d) Operation and maintenance of facilities, local body's assets and infrastructure;
e) OH&S performance and practices of external providers;

6.1.2.6 The local body can consider following techniques for identification of hazards,

a) Incident/accident investigation results
b) Past incident data analysis
c) Walkthrough surveys
d) Safety awareness surveys
e) Safety studies
f) Safety inspections

g) Workers health records
h) Medical examination reports
j) Workplace environment monitoring
k) Job safety analysis
m) HAZOP studies

6.1.2.7 *Assessment of OH&S risks and other risks to the OH&S management system*

a) An understanding of local body's OH&S risks related to identified hazards is necessary specially when determining criticality of those hazards that can lead to emergency situations. The local body should assess OH&S risks from the identified hazards, while taking into account the effectiveness of existing controls and using established or defined risk criteria. Many methods for OH&S risks assessment are available. The local body can choose to use cause-and-effect diagrams or flowcharts illustrating inputs, outputs; or other approaches including quantitative and qualitative risk assessment methods. The methodologies and criteria used for assessment of OH&S risks should be defined in terms of their scope, nature and timing so as to be proactive rather than reactive.
b) The local body can set levels (or values) of acceptability to be associated with each OH&S risk criterion. For example, the determination of acceptability could be based on a combination of likelihood (probability/frequency) of an occurrence and its consequences (severity/intensity). Some type of scale or ranking can be helpful in assigning acceptability, for example quantitatively in terms of a numeric value, or qualitatively in terms of levels, such as high, medium, low, or negligible.
c) The local body should also assess other risks associated with the establishment, implementation, operation and maintenance of the OH&S management system. For the assessment of other risk to the OH&S management system, the local body should consider day-to-day operations and decisions (e.g. peaks in work flow, restructuring) as well as external issues (e.g. economic change). Methodologies can include ongoing consultation of workers affected by day-to-day activities (e.g. changes in work load), monitoring and communication of new legal requirements and other requirements (e.g. regulatory reform, revisions to collective agreements regarding occupational health and safety), and ensuring that resources meet existing and changing needs (e.g. training on, or procurement of, new improved equipment or supplies).
d) The local body should maintain documented information on,
    i) Methodologies used for identification of hazards
    ii) Assessment of OH&S and other risks; and criteria
    iii) Significant OH&S and other risks

6.1.2.8 *Assessment of OH&S opportunities and other opportunities for the OH&S management system*

The local body should assess OH&S opportunities to enhance OH&S performance while taking into account;

a) Planned changes to the organization, its policies, its processes or its activities;
b) Opportunities to adapt work, work organization and work environment to workers;
c) Opportunities to eliminate hazards and reduce OH&S risks;
d) Other opportunities for improving the OH&S management system.

The process for assessment should consider the OH&S opportunities and other opportunities determined, their benefits and potential to improve OH&S performance.

6.1.3 *Determination of Legal Requirements and Other Requirements*

6.1.3.1 The local body should determine up-to-date legal requirements and other requirements that are applicable to its hazards, OH&S risks and OH&S management system.

6.1.3.2 The legal requirements can include legislation (national, regional or international), including statutes and regulations;

a) Directives;
b) Orders issued by regulators;
c) Permits, licences or other forms of authorization;
d) Judgments of courts or administrative tribunals;
e) Treaties, conventions, protocols;
f) Collective bargaining agreements.

6.1.3.4 The other requirements applicable to the local body can include the organization's requirements;

a) Contractual conditions;
b) Employment agreements;
c) Agreements with interested parties;
d) Agreements with health authorities;
e) Non-regulatory standards,
f) Consensus standards and guidelines;
g) Voluntary principles, codes of practice, technical specifications, charters;
h) Public commitments of the organization or its parent organization.

6.1.3.5 The local body should also determine how above legal requirements and other requirements apply to its activities and what needs to be communicated to the workers and other interested parties.

6.1.3.6 The local body should maintain, update, and retain documented information on its legal requirements and other requirements.

6.1.3.7 Determine how these legal requirements and other requirements apply to the organization and what needs to be communicated;

6.1.3.8 Take these legal requirements and other requirements into account when establishing, implementing, maintaining and continually improving its OH&S management system. The organization shall maintain and retain documented information on its legal requirements and other requirements and shall ensure that it is updated to reflect any changes.

6.1.4 *Planning Action*

6.1.4.1 The local body should consider and plan how to take action to address

a) Identified critical hazards, (**6.1.2.1**)
b) OH&S risks and opportunities (**6.1.2.7** and **6.1.2.8**)
c) Legal requirements and other requirements (**6.1.3**)
d) Emergency situations (*see* **8.2**)

6.1.4.2 The local body should also consider and plan how to integrate and implement the actions into its OH&S management system processes or other operational processes

6.1.4.3 The local body should plan to take action in a variety of ways using its OH&S management system processes or other processes. The local body should also determine the effectiveness of the actions taken.

The local body should use a combination of actions that include OH&S objectives and operational controls involving a combination of control hierarchies. In planning actions, the local body should consider best practices, technological options and feasibilities, financial, operational and other requirements. The local body should adopt a variety of methods and techniques to evaluate the effectiveness of the actions taken, ranging from statistical techniques to comparisons of monitoring and measuring results with expected performance levels (*see* **9.1**).

6.2 OH&S Objectives and Planning to Achieve Them

6.2.1 *OH&S Objectives*

6.2.1.1 In the planning process the local body should establish OH&S objectives to fulfil the commitments established in its OH&S policy and to achieve other organizational goals. The process of establishing and reviewing OH&S objectives and implementing processes to achieve them provide a systematic basis for the local body to improve OH&S performance.

6.2.1.2 In establishing OH&S objectives, the local body should consider inputs, including:

a) Principles and commitments in its OH&S policy;
b) Identified critical hazards (and information developed in determining them);
c) Its compliance obligations;
d) OH&S risks and opportunities that need to be addressed as determined in **6.1.1**,
e) The results of consultation with workers
f) Requirements affecting the OHS management system.

6.2.1.3 The local body should also consider:

a) Effects of achieving OH&S objectives on other activities and processes;
b) Possible effects on the public image of the organization;
c) Findings from OH&S reviews;
d) Other organizational goals.

6.2.1.4 OH&S objectives should be established at the top level of the local body and at other levels & functions; and the individual members of the organization should be made aware of their responsibilities in achieving these objectives.

6.2.1.5 OH&S objective can be expressed directly as a specific performance level, or can be expressed in a general manner and further defined by one or more targets. When targets are set, they should be measurable. Targets may need to include a specified time frame.

6.2.1.6 OH&S objectives should be measurable, monitored, communicated and updated as appropriate. (*see* IS 3786)

6.2.2 *Planning to Achieve OH&S Objectives*

6.2.2.1 When planning to achieve OH&S objectives the local body should address roles, responsibilities, processes, resources (*see* **7.1**) timeframes, priorities, and the actions necessary for achieving the OH&S objectives. The local body should also determine the methods for evaluation of the results of actions taken to achieve OH&S objectives including the indicators for monitoring.

6.2.2.2 The local body can integrate programmes to achieve OH&S objectives with other programmes within their operational process.

6.2.2.3 The local body should maintain and retain the documented information on,

a) The OH&S objectives
b) Plans to achieve OH&S objectives

7 SUPPORT

7.1 Resources

7.1.1 The local body should determine the necessary resources for establishing, implementing, maintaining and improving the OH&S management system. When determining the resources needed, the local body should consider:

a) Infrastructure;
b) Externally provided resources;
c) Information systems;
d) Competence;
e) Technology;
f) Financial, human and other resources specific to its activities, and services.

7.1.2 Examples of infrastructure include buildings, plant, equipment, utilities, information technology, and communications systems.

7.1.3 Resources should be provided in a timely and efficient manner. Resource allocations should consider the organization's current and future needs. Resources and their allocation should be reviewed periodically, including in conjunction with the management review to ensure their adequacy. In evaluating adequacy of resources, consideration should be given to planned changes and/or new projects or operations.

7.2 Competence

7.2.1 Knowledge, understanding, skills, or abilities enable an individual to gain the necessary competence with regard to OH&S performance. All workers engaged in solid waste management related activities of the local body should be competent based on training, education, experience, or a combination of these, as determined by the local body.

7.2.2 The competence of workers should include the knowledge and skills needed to appropriately identify the hazards and deal with the OH&S risks associated with their work and workplace. In determining the competence for each role, the local body should take into account things such as;

a) The education, training, qualification and experience necessary to undertake the role and the re-training necessary to maintain competence
b) The work environment;
c) The preventive and control measures resulting from the risk assessment process(es);
d) The requirements applicable to the OH&S management system;
e) Legal requirements and other requirements;
f) The OH&S policy;
g) The potential consequences of compliance and noncompliance, including the impact on the worker's health and safety;
h) The value of participation of workers in the OH&S management system based on their knowledge and skill;
j) The duties and responsibilities associated with the roles;
k) Individual capabilities, including experience, language skills, literacy and diversity;
m) The relevant updating of the competence made necessary by context or work changes.

7.2.3 Workers can assist the local body in determining the competence needed for roles. Workers should have the necessary competence to remove themselves from situations of imminent and serious danger. For this purpose, it is important that workers are provided with sufficient training on hazards and risks associated with their work.

7.2.4 When competence is acquired through training, the local body's training process (es) can include:

a) Identification of training needs;
b) Design and development of a training plan or programme to address identified training needs;
c) Delivery of the training;
d) Evaluation of the training result;
e) Documentation and monitoring of training received.

7.2 Where applicable, the local body should evaluate the effectiveness of the training and other actions taken to acquire the necessary competence to confirm the intended result is being achieved.

Documented information can be useful to ensure that identified competency needs are addressed, track progress on closing any gaps, and to enable communication of relevant information to interested parties. At a minimum, appropriate documented information should be retained as evidence of competence.

7.3 Awareness

7.3.1 Top management has a key responsibility for building awareness in the local body in relation to the OH&S management system and OH&S performance, in order to enhance knowledge and promote behaviour that supports the OH&S policy commitments. Top management should ensure workers under the control of local body are encouraged to:

a) Enhance OH&S performance;
b) Contribute toward achieving the intended outcomes of the OH&S management system;
c) Accept the importance of achieving the OH&S objectives for which they are responsible or accountable.

7.3.2 Top management should also ensure that all workers under the control of the local body are made aware of:

a) The OH&S policy and OH&S objectives
b) The importance of conforming to the requirements of the OH&S management system;
c) Their contribution to the effectiveness of the OH&S management system;
d) The benefits of improved OH&S performance;
e) Their responsibilities and accountabilities within the OH&S management system;
f) Incidents and the outcomes of investigations
g) Hazards, OH&S risks and actions determined to address them
h) Identified other risks and opportunities that need to be addressed in relation to their work activities, if applicable;
j) The consequences of the departure from applicable OH&S management system requirements,

k) The ability to remove themselves from work situations that they consider present an imminent and serious danger to their life or health, as well as the arrangements for protecting them from undue consequences.

7.3.3 Examples of methods to increase awareness can include internal communication, visual signs and banners, campaigns, training or education, and mentoring.

7.4 Communication

7.4.1 *General*

7.4.1.1 The local body should establish processes for communication relevant to the OH&S management system, taking into account the legal and other requirements, views of interested parties and diversity aspects such gender, language, literacy, culture, disability. These processes should identify:

a) What information needs to be communicated; (for example, Policy, objectives)
b) When or under what circumstances it needs to be communicated;
c) To whom it needs to be communicated;
d) How it will be communicated.

7.4.1.2 Communication of OH&S information should be based on, and consistent with, the information generated within the OH&S management system, including the internal evaluation of the organization's OH&S performance.

7.4.1.3 In determining how it intends to communicate, the local body should consider different communication methods that can encourage understanding and acceptance of the OH&S management efforts and promote dialogue with interested parties.

7.4.1.4 Methods of communication include, for example, informal discussions, organization open days, focus groups, community dialogue, involvement in community events, websites and e-mail, press releases, advertisements and periodic newsletters, annual or other periodic reports, and telephone hotlines.

7.4.1.5 The local body should consider and respond to relevant questions, concerns, or other communicated inputs to its OH&S management system. It can be beneficial to establish a process for receiving and responding to such internal and external communications.

7.4.1.6 The local body should retain documented information of its communications, as appropriate, in order to;

a) Recall the history of specific interested party communication, inquiries, or concerns;
b) Understand the nature of various interested party engagements over time;
c) Improve its effectiveness in developing future communication and in following up and addressing the concerns of specific interested parties as needed.

7.4.1.7 The local body should consider the following process steps:

a) Gather information, or make inquiries, including from relevant interested parties
b) Determine the target audience(s) and their needs for information
c) Select information relevant to the audience's interests;
d) Decide on the information to be communicated to the target audience(s);
e) Determine which methods and formats are appropriate for communication;
f) Updating the information regularly as necessary
g) Dissemination of information to workers and other interested parties
h) Evaluate and periodically determine the effectiveness of the communication process.

7.4.2 *Internal Communication*

The local body should have a process which facilitates communication with levels and functions of the organization. This can allow comments and suggestions to be made to improve the OH&S management system and the OH&S performance. Results from the OH&S management system monitoring, audit and management review should be communicated to appropriate persons within the local body. The communication process (es) should enable workers and other interested parties to contribute to continual improvement.

7.4.3 *External Communication*

The local body should take into account communication requirements associated with its legal requirements and other requirements and communicate information relevant to the OH&S management system externally, as prescribed. The local body should have in place a process for communicating with external interested parties in case of emergency situations that could affect or concern them.

Information related to the OH&S performance can, for example, be in the form of reports, promotional literature or advertising campaigns

7.5 Documented Information

7.5.1 *General*

7.5.1.1 The local body should develop and maintain adequate documented information to ensure that its OH&S management system is operating effectively, is understood by persons working under the control of the local body and other interested parties, and that processes associated with the OH&S management system are carried out as planned.

7.5.1.2 Documented information in the form of records should be retained as evidence of the results achieved or activities performed, in order to demonstrate effective implementation of the OH&S management system requirements.

7.5.1.3 It is important to keep the complexity of the documented information at the minimum level possible to ensure effectiveness, efficiency and simplicity at the same time. The documented information in particular should include,

a) OH&S policy
b) OH&S objectives
c) Process and results of hazard identification
d) Risk assessment process

7.5.1.4 The local body may choose to document its OH&S management system in the form of a manual, which can provide direction to related documented information.

7.5.2 *Creating and Updating*

7.5.2.1 When creating and updating documented information related to the OH&S management system, the local body should ensure appropriate:

a) Identification and description (for example, a title, date, author, or reference number);
b) Format (for example, Language, software version, graphics) and media (for example, Paper, electronic);
c) Internal review and approval for suitability and adequacy.

7.5.3 *Control of Documented Information*

7.5.3.1 Documented information under the OH&S management system should be controlled in order to ensure that it is available and suitable for use, and is adequately protected from loss of confidentiality, improper use or loss of integrity.

7.5.3.2 Documented information can be effectively controlled by:

a) Developing an appropriate format that includes unique titles, numbers, dates, revisions, revision history and authority;
b) Assigning the review and approval of documented information to individuals with sufficient technical capability and organizational authority;
c) Maintaining an effective distribution system.
d) Removing information that is obsolete from all points of issue and from places and situations of use.
e) Identifying and maintaining the documented information of external origin necessary for planning and operation of the OH&S management system.

8 OPERATION

8.1 Operational Planning and Control

8.1.1 *General*

8.1.1.1 The local body should establish and implement operational planning and control of processes necessary to fulfil its legal & other obligations and the commitments of its OH&S policy, by eliminating hazards or if not practicable, by reducing the OH&S risks to levels as low as reasonably practicable for operational areas and activities. The local body should implement the actions (as determined in clause 6) by,

a) Establishing risk criteria for the operations within the scope of SWM
b) Implementing control of operations in accordance with the risk criteria;
c) Maintaining and retaining documented information to the extent necessary to have confidence that the operations have been carried out as planned;
d) Adapting work to workers.
e) Coordinating the relevant parts of the OH&S management system with the other organizations at multi-employer workplaces.

8.1.1.2 Some of the operational controls may include:

a) The use of safe operating procedures and safe systems of work;
b) Ensuring the competence of workers in the area of safety
c) Establishing preventive or predictive maintenance and inspection programmes in respect of plant, equipments, machinery, vehicles, tools & tackles, appliances etc.
d) Specifications for the procurement of goods and services;
e) Application of legal requirements and other requirements, or manufacturers' instructions for equipment;
f) Engineering and administrative controls;
g) Adapting work to workers; for example, by:
    i) Defining, or redefining, how the work is organized;
    ii) The induction of new workers;
    iii) Defining, or redefining, processes and working environments;
    iv) Using ergonomic approaches when designing new, or modifying, workplaces, equipment, etc.

8.1.2 *Eliminating Hazards and Reducing OH&S Risks*

8.1.2.1 The local body should consider the following hierarchy of control for elimination of hazards and reduction of OH&S risks connected to SWM activities

a) Elimination of hazards by avoiding or barring the use of equipment, material, Operations/processes posing hazards
b) Substitution of substances by using alternate which are more safer
c) Engineering controls such as barricading, isolation, enclosing, relocation;
d) Administrative controls, such as safe operating procedures, use of visual controls, safety instructions, education, training, protective equipment.

8.1.2.2 The local body should also develop documented information to explain

a) A specific sequence of activities that should be carried out;
b) Necessary qualifications of the personnel involved in solid waste management activities, including any workmanship required;
c) Key safety parameters or variables that should be kept within certain limits, for example, Threshold limit values, illumination levels for night operations, permissible noise levels, speed limits for vehicles, maximum weight to be lifted etc.
d) Characteristics of the materials being handled, stored, processed, transported
e) Characteristics of the infrastructure to be used in solid waste management operations
f) Characteristics of the products resulting from the process.

8.1.2.3 The local body can use following methods for communicating its efforts for hazards elimination and OH&S risk reduction to interested parties:

a) Providing education through posters, leaflets, pamphlets, films etc.
b) Providing easy access to information such as documented procedures, contracts or supplier agreements, or user instructions, manuals etc.
c) Establishing user groups for sharing information, and keeping them updated.

8.1.3 *Management of Change*

The local body should establish a process (es) for the implementation and control of planned temporary and permanent changes such as

a) New or changes to its SWM operations including:
   i) changes in working conditions;
   ii) new or modified workplace locations and surroundings; new or modified equipment;
   iii) new or modified work organization;
   iv) new work force;
b) Changes to legal requirements and other requirements;
c) Changes in knowledge or information about hazards and related OH&S risks;
d) Developments in knowledge and technology related to SWM

The local body should also review the consequences of unintended changes, taking action to mitigate any adverse effects, as necessary.

8.1.4 *Outsourcing*

The local body should control its outsourced processes using types and degree of controls defined within the OH&S management system. The details of these controls should be included in the contract document with the service providers. The local body should have adequate consultations with external providers so as to address any possible impact outsourcing has on its OH&S performance.

8.1.5 *Procurement*

The local body should control its procurement activities for products and services in order to ensure their conformance with its OH&S management system. The details of these controls should be included in the contract document/procurement contract with the suppliers.

8.1.6 *Contractors*

The local body should in coordination with its contractor(s), establish and maintain process for hazard identification and assessment and control of OH&S risks, arising from the:

a) Contractors' activities & operations that impact the local body;
b) Activities and operations of local body that impact contractors' workers;
c) Contractors' activities and operations that impact other interested parties in the workplace.

The local body should ensure that the requirements of the local body's OH&S management system are met by contractors and their workers. The local body should define and apply OH&S performance criteria for the selection of contractors. Such criteria should be included for the selection of contractors in the contractual documents.

8.2 Emergency Preparedness and Response

The local body should prepare for and respond to potential emergency situations, which may arises from different hazards as identified in **6.1.2.1**, including

a) The establishment of a planned response (including provision of first aid) to emergency situations such as accidents involving multiple injuries, fires, release of toxic substances, collapse of structure, explosions etc.
b) The periodic testing and exercise of planned response capability;
c) The performance evaluation and, as necessary, revision of the planned response, including after testing and in particular after the occurrence of emergency situations;
d) The communication of relevant information to all workers on their duties and responsibilities;
e) The provision of training for the planned response;
f) The communication of relevant information to contractors, visitors, emergency response services, government authorities and, as appropriate, the local community;
g) Taking into account the needs and capabilities of all relevant interested parties and ensuring their involvement, as appropriate, in the development of the planned response.

The local body should maintain and retain documented information on the process (es) and on the plans for responding to potential emergency situations.

9 PERFORMANCE EVALUATION

9.1 Monitoring, Measurement, Analysis and Performance Evaluation

9.1.1 *General*

9.1.1.1 The local body should have a systematic approach for monitoring, measurement, analysis and evaluation of its OH&S performance on a regular basis. This can enable the local body to report and communicate accurately on its OH&S performance. The local body should determine what needs to be monitored and measured taking into account its OH&S objectives, significant OH&S risks, compliance obligations and operational controls. This should include determining the frequency and the methods used to collect the data. The local body should select indicators that are easy to understand and that provide useful information for evaluation of its OH&S performance. The selection of indicators should reflect the nature and scale of the local body's SWM operations and be appropriate to its OH&S risks.

9.1.1.2 The local body should establish, implement and maintain a process (es) for monitoring, measurement, and analysis and performance evaluation. The organization shall determine:

a) What needs to be monitored and measured, including:
   i) the extent to which legal requirements and other requirements are fulfilled
   ii) its activities and operations related to identified hazards, OH&S risks and opportunities;
   iii) progress towards achievement of the OH&S objectives;
   iv) effectiveness of operational and other controls;
b) The methods for monitoring, measurement, analysis and performance evaluation, as applicable, to ensure valid results;
c) The criteria against which the local body will evaluate its OH&S performance;
d) When the monitoring and measuring shall be performed;
e) When the results from monitoring and measurement shall be analysed, evaluated and communicated.

9.1.1.3 Monitoring and measuring can serve many purposes in OH&S management system, such as:

a) Tracking progress on achieving OH&S policy commitments, and OH&S objectives, and continual improvement;
b) Providing information to identify hazards and OH&S risks;
c) Collecting data on occupational injuries and diseases to fulfil compliance obligations;
d) Collecting data on use of substances, material and equipment to achieve OH&S objectives;
e) Providing data to support or evaluate operational controls;
f) Providing data to evaluate the local body's OH&S performance;
g) Providing data to evaluate the performance of the OH&S management system.

The local body should evaluate the OH&S performance and determine the effectiveness of the OH&S management system. It should retain appropriate documented information as evidence of the results of monitoring, measurement, analysis and performance evaluation.

9.1.2 *Evaluation of Compliance*

9.1.2.1 The local body should establish a process to evaluate the extent to which its compliance obligations are fulfilled, by monitoring, measuring, analysing and reviewing its performance against its compliance obligations, as determined in **4.2** and **6.1.3**. This process can help the local body demonstrate its commitment to fulfil compliance obligations, understand its compliance status, reduce the potential for regulatory violations and avoid adverse action from its interested parties.

9.1.2.2 The local body should:

a) Determine the frequency and method(s) for the evaluation of compliance;
b) Evaluate compliance and take action if needed (*see* **10.2**);
c) Maintain knowledge and understanding of its compliance status with legal requirements
d) And other requirements;
e) Retain documented information of the compliance evaluation result(s).

9.1.2.3 Methods used for evaluation of compliance can include gathering information and data, for example through:

a) Site tours or inspections;

b) Direct observations or interviews;
c) Project or work reviews;
d) Review of sample analysis or test results, and comparison to regulatory limits;
e) Verification sampling or testing;
f) Review of legally required documented information (e.g. Hazardous waste manifests, regulatory submittals).

9.1.2.4 Compliance obligations can be taken into account in a variety of OH&S management system processes, such as:

a) Determination of hazards (*see* **6.1.2.5**) and OH&S risks and opportunities that need to be addressed (*see* **6.1.1**);
b) Planning of actions (*see* **6.1.4**);
c) Establishing OH&S objectives (*see* **6.2.2**);
d) Development of processes for awareness (*see* **7.3**)
e) External communication (*see* **7.4.3**),
f) Operational planning and control (*see* **8.1**) and
g) Monitoring and measurement (*see* **9.1**).

9.1.2.5 The effectiveness of these processes and the results achieved can also provide evidence of fulfilment of compliance obligations.

9.1.2.6 Where a failure or potential failure to fulfil a compliance obligation is identified, the local body should take action. The nonconformity and corrective action process (*see* **10.2**) could be used to deal with needed corrections. Where appropriate and as required, the local body should communicate or report on failure to fulfil a compliance obligation to the relevant interested party/parties (*see* **7.4**).

9.1.2.7 A non-compliance is not necessarily elevated to a management system nonconformity if, for example, it is identified and corrected by the OH&S management system processes. By evaluating compliance, the local body gains knowledge and understanding of its compliance status. The frequency of compliance evaluations should be appropriate to keep this knowledge and understanding up to date. Evaluations should be conducted in a manner that provides timely input to the management review (*see* **9.3)** so that top management can review the local body's fulfilment of its compliance obligations and maintain awareness of the organization's compliance status.

9.1.2.8 The local body should retain documented information as evidence of its evaluation of compliance. This could include:

a) Reports of the results of compliance evaluations;
b) Internal and external audit reports;
c) Internal and external communications and reports.

9.2 Internal Audit

9.2.1 *General*

Internal audits of local body's OH&S management system should be conducted at planned intervals to determine and provide information to the top management on whether the system conforms to planned arrangements and has been properly implemented and maintained. The results can be used to identify opportunities for improving the OH&S management system.

9.2.2 *Internal Audit Programme*

a) The local body should establish an internal audit programme to direct the planning and conduct of internal audits and to identify the audits needed to achieve the audit programme objectives. The audit programme, and the frequency of internal audits, should be based on the nature of the SWM operations, in terms of hazards associated and potential consequences, OH&S risks and opportunities that need to be addressed, the results of previous internal and external audits, and other relevant factors. The outsourced processes that have audit provisions as controls should also be considered in the planning of the audit programme.
b) The local body should determine the frequency of the internal audits. The audit programme can, for example, cover one year or multiple years, and can consist of one or more audits. Each internal audit need not cover the entire system, so long as the audit programme ensures that all locations and functions,

system elements connected with SWM and the full scope of the OH&S management system are audited periodically.

c) The internal audits should be planned and conducted by an objective and impartial auditor or audit team, aided by technical expert(s), where appropriate, selected from within the local body or from external sources. Their collective competence should be sufficient to achieve the audit objective and to meet the scope of the particular audit and provide confidence as to the degree of reliability that can be placed on the results.

d) The results of an internal audit should be reported to relevant managers; ensure that relevant audit results are reported to workers, and, where they exist, workers' representatives, and other relevant interested parties.

e) The results can be provided in the form of a report as the basis for verification and used to correct or prevent specific nonconformities, or to achieve one or more audit programme objectives, and to provide input to the management review.

f) The local body should retain documented information as evidence of implementation of the audit programme and the audit results.

9.3 Management Review

9.3.1 The local body's top management should, at intervals that it determines, conduct a review of its OH&S management system to evaluate the system's continuing suitability, adequacy and effectiveness. This review should include consideration of:

a) The status of actions from previous management reviews;
b) Changes in external and internal issues that are relevant to the OH&S management system, including:
   i) the needs and expectations of interested parties;
   ii) legal requirements and other requirements;
   iii) risks and opportunities;
c) The extent to which the OH&S policy and the OH&S objectives have been met;
d) Information on the OH&S performance, including trends in:
   i) incidents, nonconformities, corrective actions and continual improvement;
   ii) monitoring and measurement results;
   iii) results of evaluation of compliance with legal requirements and other requirements;
   iv) audit results;
   v) consultation and participation of workers;
   vi) risks and opportunities;
e) Adequacy of resources for maintaining an effective OH&S management system;
f) Relevant communication(s) with interested parties;
g) Opportunities for continual improvement.

9.3.2 A management review can coincide with other management activities (for example, board meetings, operational meetings) or can be conducted as a separate activity. Management review can be coordinated with the local body's planning and budgeting cycle, and OH&S performance can be evaluated during top management's review of its overall business performance, so that decisions on priorities and resources for the OH&S management system are balanced with other business priorities and resource needs.

9.3.3 The outputs of the management review should include decisions related to:

a) The continuing suitability, adequacy and effectiveness of the OH&S management system in achieving its intended outcomes;
b) Continual improvement opportunities;
c) Any need for changes to the OH&S management system;
d) Resources needed;
e) Actions, if needed;
f) Opportunities to improve integration of the OH&S management system with other business processes;
g) Any implications for the strategic direction of the local body.

9.3.4 Top management should communicate the relevant outputs of management reviews to workers, and, where they exist, workers' representatives (*see* **7.4**). The organization should retain documented information as evidence of the results of management reviews. Examples of documented information retained as evidence of the results of

management review include copies of meeting agenda items, lists of attendees, presentation materials or hand-outs, and management decisions recorded in reports, minutes, or tracking systems.

9.3.5 Top management can decide who should participate in the management review. Typically, this should include OH&S staff, managers of key functions, workers representatives; and top management, representatives of other management systems (for example, quality, environment, energy, and business continuity) may also participate for integration purposes.

10 IMPROVEMENT

10.1 General

10.1.1 Improvement is integral to an effective OH&S management system. The local body should identify opportunities for improvement as a result of:

a) Monitoring, measurement, analysis and evaluation related to OH&S performance and fulfilment of compliance obligations (*see* **9.1**);
b) Audits of its OH&S management system (*see* **9.2**);
c) Management review (*see* **9.3**).

10.1.2 In order to achieve the intended outcomes of the OHS management system, the local body should take actions necessary to address identified opportunities for improvement, including controlling and correcting nonconformity, and enhance its OH&S performance through continual improvement of the suitability, adequacy and effectiveness of its OH&S management system.

10.2 Incident, Nonconformity and Corrective Action

10.2.1 For an OH&S management system to be effective on an ongoing basis, the local body should have a systematic approach for reporting and investigation of incidents, identifying nonconformity, taking action(s) to manage incidents and nonconformities, analysing the cause of the incident and nonconformity, and taking corrective action.

10.2.2 The local body should

a) React in a timely manner to the incident or nonconformity and, as applicable:
   i) Take action to control and correct it;
   ii) Deal with the consequences;
b) Evaluate, with the participation of workers (*see* **5.4**) and the involvement of other relevant interested parties, the need for corrective action to eliminate the root cause(s) of the incident or nonconformity, in order that it does not recur or occur elsewhere, by:
   i) Investigating the incident or reviewing the nonconformity;
   ii) Determining the cause(s) of the incident or nonconformity;
   iii) Determining if similar incidents have occurred, if nonconformities exist, or if they could potentially occur;
c) Review existing assessments of OH&S risks and other risks, as appropriate (*see* **6.1**);
d) Determine and implement any action needed, including corrective action, in accordance with the hierarchy of controls (*see* **8.1.2**) and the management of change (*see* **8.1.3**);
e) Assess OH&S risks that relate to new or changed hazards, prior to taking action;
f) Review the effectiveness of any action taken, including corrective action;
g) Make changes to the OH&S management system, if necessary. Corrective actions should be appropriate to the effects or potential effects of the incidents or nonconformities encountered.

10.2.3 The local body should retain documented information as evidence of:

a) The nature of the incidents or nonconformities and any subsequent actions taken;
b) The results of any action and corrective action, including their effectiveness.

10.2.4 The local body should communicate this documented information to relevant workers, and, where they exist, workers' representatives, and other relevant interested parties.

10.3 Continual Improvement

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

a) Enhancing OH&S performance;
b) Promoting a culture that supports an OH&S management system;
c) Promoting the participation of workers in implementing actions for the continual improvement of the OH&S management system;
d) Communicating the relevant results of continual improvement to workers, and, where they exist, workers' representatives;
e) Maintaining and retaining documented information as evidence of continual improvement.

10.3.2 *Opportunities for Improvement*

10.3.2.1 Continual improvement is a key attribute of an effective OH&S management system to enhance OH&S performance. It can be accomplished through the achievement of OH&S objectives and the overall enhancement of the OH&S management system or any of its components. The local body can encourage all employees to contribute ideas for improvement.

10.3.2.2 The local body should continually evaluate its OH&S performance and the performance of its OH&S management system processes to identify opportunities for improvement. Top management should be involved directly in this evaluation through the management review process.

10.3.2.3 The identification of OH&S management system deficiencies also provides significant opportunities for improvement. To realize such improvements, the local body should know what deficiencies exist and understand why they exist. This can be achieved by analysing the root causes(s) of OH&S management system deficiencies.

10.3.2.4 Some useful sources of information for continual improvement include:

a) Experience gained from nonconformities and related corrective actions;
b) External benchmarking against best practices;
c) Trade associations and peer groups;
d) New legislation or proposed changes to existing legislation;
e) OH&S management system and other audit results;
f) Evaluation and analysis of monitoring and measurement results;
g) Literature on advancements in technology;
h) Views of interested parties, including employees, customers and suppliers.

10.3.3 *Implementation of Continual Improvement*

10.3.3.1 When opportunities for improvement are identified, they should be evaluated to determine what actions should be taken. The actions for improvement should be planned and changes to the OH&S management system should be implemented accordingly.

Improvements need not take place in all areas simultaneously (*see* **4.4.1**). Continual improvement of the OH&S management system can become increasingly difficult to achieve as the system's performance is enhanced.

ANNEX A

(*Informative*)

PHASED APPROACH TO IMPLEMENTING AN OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM FOR SOLID WASTE MANAGEMENT

A-1 Local body can develop a complete Occupational Health and Safety (OH&S) management system for Solid waste management, when the scope of the OH&S management system includes all of the solid waste management activities, products and services and these are addressed using all the elements of an OH&S management system to their full extent. Developing a complete OH&S management system all at once can prove difficult for some local bodies. For these local bodies, a phased approach offers several advantages, such as the ability to readily evaluate how the time and money put into an OH&S management system provides a return. The local body can see how OH&S performance improvements can help to reduce costs, improve their community relations, enable them to live up to customer expectations and assist them in demonstrating fulfilment of compliance obligations. The local body can track the benefits of their OH&S management system while they implement the system step-by-step, adding or expanding elements that provide value to the organization. Possible approaches to the phased development of an OH&S management system include the following.

a) Undertake a single project focusing on just one or a limited number of critical Occupational Health and Safety hazards. This would provide familiarity with the basic elements of an OH&S management system, allow the local body to experience some of the benefits of managing OH&S hazards in a systematic way and help improve environmental performance, and thus secure management support for implementing an OH&S management system.
b) Use fixed steps to follow a progression of elements (*see* Fig. 1). This approach can suit local body which, after carrying out an initial OH&S project, decide to adopt this structured approach to managing their OH&S risks.
c) Use a selection of steps that may be implemented consecutively or concurrently. This selection of steps may be chosen to address specific OH&S issues, such as fulfilment of compliance obligations, including meeting the needs of interested parties, or improving OH&S performance. This approach may suit local bodies that wish to develop the OH&S management system at their own pace, within the resources available to them to ensure the effectiveness of their OH&S management system.

A-2 An implementation plan may be useful, as it can identify:

a) The approach to be adopted;
b) The timescale in which it should be achieved;
c) The resources required;
d) The roles and responsibilities of those implementing the plan;
e) The documented information required;
f) The methods by which progress can be consistently monitored and measured.

A-3 Progress can be measured in terms of achievement of the outcomes specified at the end of each phase and conformance with the implementation plan. Measuring progress towards implementing an OH&S management system is useful to ensure the efficient use of resources and achievement of the local body's OH&S objectives.

A-4 Fig. 1 shows an implementation of an OH&S management system in five phases. Phase 1 corresponds to the implementation of a specific project. Phases 2, 3, 4 and 5 correspond to a sequential implementation of the main elements of an OH&S management system. When a local body has sufficient commitment to begin implementation of an OH&S management system, it can start at phase 2.

A-5 The extent to which the supporting elements develop grows as the environmental management system is implemented is demonstrated by the shape of the triangle. The extent to which the supporting elements are needed grows as the OH&S management system is implemented.

Phase 1: Undertaking an OH&S related project to secure management support and commitment to begin the phased implementation of an OH&S management system

a) Involvement of top management
b) Identification and selection of project
c) Planning and implementation of the selected project

↓

Phase 2: Development and implementation of OH&S management system

a) Checking and reviewing the selected project
b) Undertaking context of the local body's SWM
c) Preparation of a draft OH&S policy (Identification of significant hazards, Identification of compliance obligations, Evaluation of compliance)
d) Determination of risks and opportunities that need to be addressed and planning actions to address them

↓

Phase 3: Development and implementation of an OH&S management system

a) Finalize and communicate/make available OH&S policy
b) Setting objectives and targets and establishing programme(s)
c) OH&S performance evaluations including monitoring and measurement (gather information on the key characteristics

↓

Phase 4: Development and implementation of an OH&S management system

a) Operational control
b) Planning for and responding to emergencies

↓

Phase 5: Development and implementation of an OH&S management system

a) Managing when things do not go as planned
b) Management review of progress and performance
c) Implementation of continual improvement

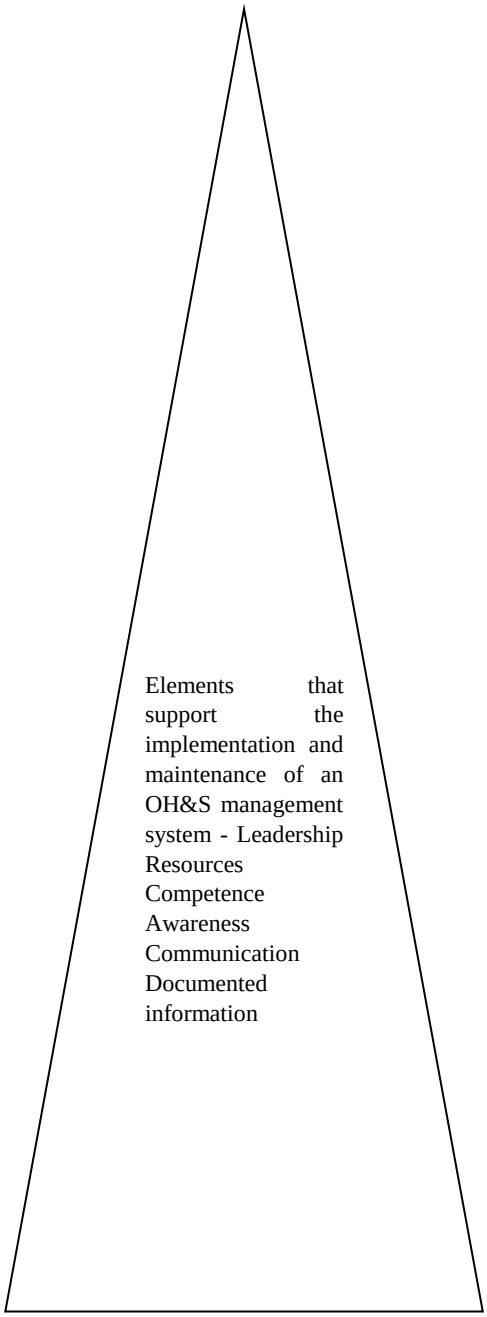

FIG. 1 – EXAMPLE OF IMPLEMENTATION IN FIVE PHASES