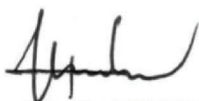

GENERAL NOTICES • ALGEMENE KENNISGEWINGS

**DEPARTMENT OF HEALTH
NOTICE 1229 OF 2015****NATIONAL HEALTH ACT, 2003 (ACT NO. 61 OF 2003)****NATIONAL ENVIRONMENTAL HEALTH NORMS AND STANDARDS FOR PREMISES AND
ACCEPTABLE MONITORING STANDARDS FOR ENVIRONMENTAL HEALTH PRACTITIONERS**

I, Malebona Precious Matsoso, Director-General of Health in terms of Chapter 3, Section 21(2) (b)(ii) of the National Health Act, 2003 (Act No. 61 of 2003) ("the Act") as amended, hereby set National Environmental Health Norms and Standards for premises and acceptable Monitoring Standards for Environmental Health Practitioners for implementation.

The National Norms and Standards for Environmental Health is the outcome of a process that is aimed to strengthen the provision of environmental health services in the country. The process included extensive input from Environmental Health Practitioners at District and Metropolitan Municipality, Provincial Departments of Health, Academic Institutions, and other Government Departments. These Norms and Standards are premised on the fact that government recognizes the importance of disease prevention across all levels of health care. The Norms and Standards are therefore essential to strengthen the delivery of Environmental Health Services as a critical programme of preventive and developmental Primary Health Care services. This is also required to make a significant contribution to attainment of the Millennium Development Goals (MDGs), particularly MDGs 4, 5, 6 and 7.

The National Norms and Standards for Environmental Health clearly outline monitoring standards for the delivery of quality Environmental Health Services, as well as acceptable standards requirements for surveillance of premises, such as business, state occupied premises, and for prevention of environmental conditions that may constitute a health hazard for protection of public health.



MS MP MATSOSO

DIRECTOR-GENERAL: HEALTH

DATE: 03/12/2015

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CHAPTER 1**INTERPRETATION, CONTEXT AND APPLICATION****1. DEFINITION OF TERMS**

For the purpose of this document, the following definitions apply:

Accommodation establishment	Means a hotel, guest house, lodge or boarding house, bed and breakfast and any other establishment where accommodation is provided to people on a temporary basis or on a semi-permanent basis;
Agricultural remedy	Means any chemical substance or biological remedy, or any mixture or combination of any substance or remedy intended or offered to be used for the destruction, control, repelling, attraction or prevention of any undesired microbe, alga, nematode, fungus, insect, plant, vertebrate, invertebrate, or any product thereof, but excluding any chemical substance, biological remedy or other remedy in so far as it is controlled under the Medicines and Related Substances Act, 1965 (Act No. 101 of 1965), or the Hazardous Substances Act, 1973 (Act No. 15 of 1973); or as plant growth regulator, defoliant, desiccant or legume inoculants;
Aircraft	Means an aircraft making an international voyage;
Applicable monitoring standards for Environmental Health Practitioners	Means activities and actions that Environmental Health Practitioners are expected to undertake in terms of the Scope of Profession of Environmental Health and relevant health legislation;
Approved building plan	Refers to a building plan approved by the local authority or approved by the review board on appeal to the review board in terms of the National Building Standards Act, 1977 (Act No. 103 of 1977);
Authorized EHP	Refers to an EHP authorized in terms of Section 8 of the Hazardous Substances Act, 1973 (Act No. 15 of 1973);
Bait	Means a product manufactured with food or other material that pests consume, which often contain an active ingredient that kills the pests;
Bait Station	Refers to containers used to house bait for pests. Stations vary in appearance depending on type and model;
Building waste	Means building and demolition waste as defined in the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008);
Bulky waste	Means business waste or domestic waste which by virtue of its mass, shape, size or quantity is inconvenient to remove in the routine door to door municipal service provided by the council;
Business premises	Means premises used for business activities including but not limited to retail, wholesale distribution, import and export;
Business waste	Means business waste as defined in the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008);
Chemical	Means a substance whether by itself or in a mixture or preparation and whether manufactured or obtained from nature but doesn't include any living organism;
Chemical quality	Refers to the nature and concentration of inorganic chemicals, organic chemicals and radioactive substances in the water
Chemical safety	Means undertaking all activities involving chemicals in such a way to ensure the safety of human health and the environment. It covers all chemicals, natural and manufactured, and full range of exposure situations from the natural presence of chemicals in the environment to their extraction or synthesis and disposal;
Chemical waste	Means waste which consists of discarded solid, liquid, and gaseous chemicals products that contain dangerous or polluting chemicals that pose a threat to humans, animals or the environment, when improperly deposited;

Child care center	Means partial care facility as categorized in terms of Section 76-90 of the Children's Act, and shall include Partial care: ECD, After-school care; Hostel and Respite care, child and youth care centers as well as Drop-in centers.
Condemned foodstuff	Means unsound foodstuffs as defined and declared in the Regulation Governing General Hygiene Requirements for Food Premises and the Transport of Food, No. R. 962 of 23 November 2012 and Regulation 328, Regulation Relating to the powers and Duties of Inspectors and Analyses on Foodstuffs at the Food premises, No. R 328 of 20 April 2007, and any amendments thereof;
Conveyance	Means an aircraft, ship, train, road vehicle or other means of transport on an international voyage;
Cosmetic	Means any article or substance (except a drug as defined in the Drugs Control Act, 1965 (Act No. 101 of 1965) intended to be rubbed, poured, sprinkled or sprayed on or otherwise applied to the human body for purposes of cleansing, beautifying, promoting attractiveness or improving or altering the appearance, and includes any part or ingredient of any such article or substance;
Dailies	Refers to putrescible waste as defined in the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), National Norms and Standards for the Assessment of waste for landfill disposal, No. R. 635 of 2013;
Dangerous goods	Means goods listed in the SANS code 10228, as goods that are capable of posing a significant risk to health and safety to property or the environment during transport;
Detergent-disinfectant	Refers to a product that cleans and disinfects simultaneously;
Determinants	Refers to Microorganism, physical or aesthetic property or chemical substance of which the risk posed is classified as chronic health -1, chronic health -2, aesthetic, chronic health or operational category;
Diseased animal	Means an animal with an animal disease as defined in the Animal Health Act, 2002 (Act No. 7 of 2002);
Disinfectant	Means any article or substance used or applied or intended to be used or applied as a germicide, preservative or antiseptic, or as a deodorant or cleansing material which is not a cosmetic or a chemical agent that kills most vegetative forms of pathogenic and other micro-organisms (but not necessarily all bacterial and fungal spores, mycobacteria, rickettsiae or viruses) on inanimate surfaces;
Disinfection	Means the procedure whereby health measures are taken to control or kill infectious agents on human diseases present in baggage, cargo, containers, conveyances, goods and postal parcels;
Domestic waste	Means domestic waste as defined in the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008);
Environmental health impact assessment	Means a combination of procedures, methods and tools by which a project, policy or programme may be judged as to its potential effects on the health and the population, and the distribution of those effects within the population;
Environmental Health Practitioner	Means, subject to the provisions of the Health Professions Act, 1974 (Act No. 56 of 1974) as amended, any person registered as such with the Health Professions Council of South Africa; and includes a) Environmental Health Practitioner b) Environmental Health Practitioner doing compulsory community service c) Health officers described under the Act;
Environmentally sound manner	Means environmentally sound management as defined in the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008);
Event waste	Refers to waste that is generated from social activities related to an event, including but not limited to putrescible waste, cans, papers, plastics, boxes;
Food handling premises	Refer to any premises where food is being processed, either raw or unprocessed state, handled, prepared, packed, displayed, or served. If meals

	are provided on the premises, a kitchen area and facilities must be provided;
Funeral undertakers, mortuaries and crematorium premises	Refers to all private and public (police stations, hospitals, police stations) premises used in connection with the handling of human remains;
General waste	Means general waste as defined in the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008);
Genotoxic or cytotoxic waste	Includes but it is not limited to certain expired drugs, vomit, urine, or faeces from patients treated with cytostatic drugs, genotoxic or cytotoxic contaminated sharps or pharmaceuticals;
Grey water	Refers to waste water that does not contain significant amounts of faecal pollution (i.e. not sewage discharges). Typically, it consists of water discharged from baths, showers and/or sinks;
Hazard	Means an intrinsic potential or ability of an agent, equipment, material, activity or process to cause harm;
Hazardous substances	Means any substance which may cause injury, ill-health to or death of human beings by reason of their toxic, corrosive, irritant, strongly sensitizing or flammable nature or the generation of pressure thereby in certain circumstances during importation, manufacture, sale, use, operation, application, modification, disposal or dumping. Includes hazardous chemical substances and substances such as solid, liquid, gas, aerosol or combination thereof, but excludes hazardous electronic products and radioactive substances;
Hazardous waste	Means hazardous waste as defined in the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008);
Health care facility	Means a health establishment as defined in the Act;
Health care general waste	Means healthcare general waste as defined in the SANS 10248, Management of Health Care Waste;
Health care professional	Means a health care professional as defined in the SANS 10248-3, Management of healthcare waste, Part 3: Management of healthcare risk waste from minor generators-Registered health care professionals and non-health care professionals;
Health care risk waste	Means to healthcare risk waste as defined in the SANS 10248, Management of Health Care Waste;
Health certificate	Means a health certificate issued to certify that the premises complies with the relevant norms and standards;
Health establishments	Refer to a "health establishment" and "military health establishment" as defined in the National Health Act;
Improved water sources	Includes water sources that, by nature of their construction or through active intervention, are protected from outside contamination, particularly faecal matter. It comprises piped water, public taps or standpipes, tube wells or boreholes, protected dug wells, protected springs and rainwater collection;
Industrial waste	Refers to waste generated as a result of industrial activities such as manufacturing, maintenance, fabricating, processing or dismantling activities, mining activities or the operation of power stations;
Integrated Pest Management	Refers to an approach to managing pests that seeks to maximise the effectiveness of biological and cultural control factors, utilising chemicals only as needed and with minimal application. IPM is designed to place stress on pest population through a series of processes that reduce breeding areas and pest entry points;
Laboratory waste	Refers to human or animal specimen cultures from health care and pathological laboratories; cultures and stocks of infectious agents from research and industrial laboratories; wastes from the production of bacteria, viruses, or the use of spores, discarded, live and attended vaccines, and culture dishes and devices used to transfer, inoculate and mix cultures; and waste containing any microbiological specimens sent to a laboratory for analysis;
Landfill site	Means a waste disposal facility as defined in the National Environmental

	Management: Waste Act, 2008 (Act No. 59 of 2008);
Major generator	Means a generator that generates more than 20kg per day of health care risk waste, including the container, calculated monthly as a daily average;
Microbiological quality	Refers to presence of micro-organisms such as protozoa, bacteria and viruses in water;
Minor generator	Means a generator that generates up to 20 kg per day of health care risk waste, including the container, calculated monthly as a daily average, but does not include domestic generator;
Monitoring	Refers to the long-term, standardized measurement and observation of the aquatic environment in order to define status and trend;
Non health care professional	Means non health care professional as defined in the SANS 10248-3, Management of healthcare waste, Part 3: Management of healthcare risk waste from minor generators-Registered health care professionals and non-health care professionals;
Norm	Means the desired status;
Norms and Standards for premises	Means standards that premises are expected to comply with;
Nuisance	Means nuisance as defined in the Act;
Nursing home	Means a place of residence for people who require constant nursing care, as well as people that might have significant deficiencies with activities of daily living. These may include rest homes and care homes and excludes homes for the aged;
Operational	Refers to a determinant that is essential for assessing the efficient operation of treatment systems and risks to infrastructure;
Pathological waste	Refers to diseased animals or animal parts infected with zoonotic diseases; human and animal tissues, organs, body parts, blood, fluid blood products and body fluids; containers or equipment containing blood that is fluid or blood from animals known or suspected to be infected with any zoonotic disease; and human fetuses;
Pest	Means any animal, which includes insects and rodents that may transmit disease;
Pest control program	Means a written program that outlines activities to be conducted for the control of pests in a premises;
Pesticide	Refers to any substance or mixture of substances of chemical or biological ingredients, intended for repelling, destroying or controlling any pest, or regulating plant growth;
Pharmaceutical waste	Refers to pharmaceutical products and medical chemicals that are no longer usable in human or animal treatment, and that have become outdated or contaminated or are no longer required; and items contaminated with cytotoxic pharmaceuticals;
Physical quality	Refers to turbidity, colour, taste, odour and other physical aspects of the water;
Point of delivery	Physical fixed interface between a water services provider or a water services authority and a customer;
Point of Entry	Means a passage for international entry or exit of travelers, baggage, cargo, containers, conveyances, goods and postal parcels, as well as agencies and areas providing services to them on entry or exit;
Point of use	Refers to taps, buckets, tanks or drums from where people utilize the water;
Potable water	Refers to water from treated sources, taps, jojo storage tanks, standpipes, and reservoirs;
Premises	Means premises as defined in the Act;
Public gathering places	Refers to public places, such as shopping malls, airports, cinemas, stadia, public events, including government owned or occupied premises;
Radioactive waste	means liquid, solid or gaseous materials that contain or contaminated, or are contaminated with, radio nuclides;
Recovery	Means Recovery as defined in the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008);
Recreational water	Refers to public and private swimming pools, spa baths;

Recycling	Means recycling as defined in the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008);
Reuse	Means reuse as defined in the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008);
Risk	Refers to the probability and severity of an adverse health or environmental effect occurring as a function of a hazard and the likelihood and extent of exposure to a pesticide;
Risk management	Refers to the process of identifying and documenting all hazards and risks within the water supply system;
Routine monitoring programme	An ongoing monitoring programme intended to validate the effectiveness of control measures at critical control points and to assess the quality of water based on location of routine sampling points, sampling frequency and determinants;
Rural and remote setting	Means rural and remote setting as defined SANS 10248-2, Management of healthcare waste, Part 2: Management of healthcare risk waste for healthcare facilities and healthcare providers in rural and remote settings;
Scrapping or recovery facility	Means scrapping or recovery facility as defined in the National Standards for the Scrapping or Recovery of Motor Vehicles, No. 925 of 29 November 2013;
Segregation	Means the separation of health care waste into different categories;
Ship	Means a seagoing or inland navigation vessel on an international voyage;
Standard	Means a qualitative statements that describe what constitutes acceptable or adequate performance or resources or services;
Surface water	Refers to untreated water sources, such as streams, rivers, springs, boreholes;
Surveillance	Refers to the continuous, specific measurement and observation for the purpose of water quality management and operational activities;
Toxicity	Means a physiological or biological property which determines the capacity of a chemical to do harm or produce injury to a living organism by other than mechanical means;
Traveler	Means a natural person undertaking an international voyage;
Unimproved water sources	Include unprotected dug well, unprotected spring, cart with small tank/drum, tanker truck, and surface water (river, dam, lake, pond, stream, canal, irrigation channels);
Unsound	Means unsound as defined and declared in the Regulation Governing General Hygiene Requirements for Food Premises and the Transport of Food, No. R. 962 of 23 November 2012
Vacant land	Refers to a private or public unoccupied or empty stands or any land without a structure on it, a pavement, or open field;
Waste	Means waste as defined in the National Environmental Management : Waste Act, 2008 (Act No. 59 of 2008);
Waste handler	Means waste holder as defined in the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008). Waste handling has a corresponding meaning;
Waste minimization	Means minimization in relation to waste as defined in the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008);
Water Safety Plan	A systematic process that aims to consistently ensure acceptable drinking water that does not exceed the numerical limits within SANS 241 by implementing an integrated water quality management plan, which utilizes a risk assessment and risk management approach from catchment to point of delivery;
Water Services Authority (WSA)	Any municipality that has the executive authority to provide water services within its area of jurisdiction in terms of the relevant national legislation or the ministerial authorizations made in terms of the relevant national legislation;
Water Services Provider	(a) Any person who has a contract with the water services authority or another water services provider to sell water to that authority or provider; or (b) Any person who has a contract with a water services authority to assume operational responsibility for providing water services to one or more consumers within a specific geographic area; or

	(c) A water service authority that provides either or both of the services in (a) and (b) itself;
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2. LIST OF ACRONYMS

DAFF	Department of Agriculture, Fisheries and Forestry
DEA	Department of Environmental Affairs
DMR	Department of Mineral Resources
DOH	Department of Health
DOL	Department of Labour
DOT	Department of Transport
DWA	Department of Water Affairs
ECDs	Early Childhood Development Centers
EH	Environmental Health
EHP	Environmental Health Practitioner
EHS	Environmental Health Services
EIA	Environmental Impact Assessment
HCRW	Health Care Risk Waste
IHR	International Health Regulations (2005)
IDP	Integrated Development Plan
ILO	International Labour Organization
IMO	International Maritime Organization
MDGs	Millennium Development Goals
MHS	Municipal Health Services
PHO	Port Health Officer
PHS	Port Health Service
PoE	Point of Entry
SANAS	The South African National Accreditation System
SANS	South African National Standards
WHO	World Health Organization
WQMP	Water Quality Monitoring Programmes

3. EXECUTIVE SUMMARY

The National Norms and Standards for EH is an outcome of a planning process prioritized by the National Department of Health to strengthen the provision of EHS in the country. The development process included extensive input from EHPs, Provincial Departments of Health, academic institutions and other government departments. These Norms and Standards are premised on the fact that government recognises the importance of prevention across all areas of health care. It is therefore essential to strengthen EHS as a critical programme of preventive and developmental primary healthcare services, required to make a significant contribution to the MDGs, particularly MDGs 4, 5, 6 and 7.

EH is a fundamental public health approach affecting the whole population and services provided by EHPs are essential elements in building healthy population. These includes amongst others, food safety; sanitation; water quality monitoring; health surveillance of premises; waste management, the protection of indoor and outdoor air quality, communicable diseases control and tobacco control. The continued neglect on basic public health practices in general and of EH, has resulted in the emerging and re-emerging environmental diseases seen around the world. EH for us remains the first line of defense against diseases as a result the provision of quality EHS is critical, which was the basis for publishing Regulations that governs the Scope of Profession for EH and for these Norms and Standards.

To fulfil the constitutional and legal obligations mandated to sectors responsible for provision of EH services, the availability of qualified and skilled EHPs is key to provide and facilitate comprehensive, proactive and needs-related services to promote a safe, healthy and clean environment and prevent diseases. In terms of the National Environmental Health Policy, in to render effective EHS in the country, it is required that one EHP be provided for every 10 000 members of the population. EHPs act as public arbiters of EH standards, maintaining close contact with the communities they serve. They act as advisers, educators, consultants, managers and enforcement officers (enforcing health policies), ensuring people are able to live, work and play in safe, healthy environments.

These Norms and Standards aim to promote compliance to EH related legislation and to provide a national approach in standardizing activities in the delivery of EHS and establish a level against which EHS delivery can be assessed and gaps identified. The monitoring standards will assist in setting a benchmark of quality against which delivery of EHS can be monitored. The over-riding goal of EH through these norms and standards is the attainment of the highest possible level of EH and EHS by all involved. The primary activity therefore is to ensure that these standards are disseminated to the general public and all EHPs particularly functional EHPs based at District and Metropolitan Municipality, Points of Entries and Provincial Departments of Health and that adherence to these standards becomes a norm. To monitor compliance with the norms and standards, municipalities will be audited on an annual basis.

These Norms and Standards are mainly based on existing South African policy and legislation, while also reflecting international best practice. The Standards provide for a national approach and standardization of functions and activities in relation to EH by EHPs.

Legislation identifies a range of government departments that have some responsibilities related to the environment and human health, therefore implementing these Norms and Standards effectively will also require collaboration with other government departments, such as the Departments of Environmental Affairs, Department of Water and Sanitation, Department of Basic Education and Department of Social Development amongst others, in order to give effect to the principles of cooperative governance.

4. POLICY AND LEGAL CONTEXT

Government recognises the importance of prevention across all areas of health care, which are clearly indicated in the White Paper on the Transformation of Health Services, as well as the Primary Health Care Alma-Ata Declaration. One of the key strategic issues for the health sector 10 Point Plan is "improving the quality of health services", which includes to strengthen the provision of EH services in the country. The shift of focus from prevention to a curative health system in the past has impacted negatively on the health status of the country as people depended on the health system for their wellbeing rather than themselves.

1) Policy context

The National Policy on EHS published in *Gazette* Number GN 37112 of 3 December of 2003 reflects the Government's intent as far as rendering EH Services is concerned. It is subject to the broader National Health Policy, as set out in the White Paper on the Transformation of Health Services in South Africa.

These National Norms and Standards reflect the South African policy context and are based to a large extent on existing legislation, policies, guidelines, and protocols with a bearing to EH, including those for which custodianship lies with other government departments. The Norms and Standards embody EH related regulatory standards prescribed in terms of the Act, to ensure protection of public health. They also embody monitoring standards for EHPs in ensuring compliance with the set standards and in rendering EH functions as per the Scope of Profession for Environmental Health, R888 of 26 June 1991, as amended, published in terms of the Health Professions Act, 1974 (Act No. 56 of 1974).

2) Legal context

In terms of Section 21 of the Act, it is the function of the Director-General of National Department of Health to issue and promote adherence to Norms and Standards on health matters, including; EH conditions that constitute a health hazard.

Section 24 of the Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996) ("the Constitution") entrenches the right of all citizens to live in an environment that is not harmful to their health or well-being. A joint (Health and Local Government) MINMEC decision was taken in 2002 that MHS be defined as a list of EHS. This decision was gazetted on 3 January and 13 June 2003 (latter gazette changed the date of implementation from July 2003 to July 2004 as agreed by the Ministers). According to the Municipal Structures Act, 1998 (Act No. 117 of 1998), Section 84(1) (i), MHS will the responsibility of Category C Municipalities, which are District and Metropolitan Municipalities.

The Constitution allocates MHS as a Local Government function under Part B of Schedule 4, Section 156(1)(a), and the Act, defines MHS as follows:

- (a) Water quality monitoring;
- (b) Food control;
- (c) Waste management;
- (d) Health surveillance of premises;
- (e) Surveillance and prevention of communicable diseases, excluding immunizations;
- (f) Vector control;
- (g) Environmental pollution control;
- (h) Disposal of the dead; and
- (i) Chemical safety,

which excludes malaria control and control of hazardous substances, which is a competency of provincial health. Section 25 (2)(f) of the Act also outlines the functions of provincial health to plan, co-ordinate, monitor and evaluate the rendering of health services, as well as to ensure the implementation of National Health Policy and Norms and Standards in the Province. The National Health Amendment Act, 2013 (Act No. 12 of 2013) which purpose was to provide for the establishment of the Office of the Health Standards Compliance also moved the responsibility to facilitate and manage the provision of PHS from the Province to national government..

In terms of the Defence Act, 2002 (Act. No. 42 of 2002), and the White paper on Defence 1996, the South African Military Health Services is the identified service provider with regard to supplying the South African National Defence Force (SANDF) with a comprehensive medical services on the Department of Defence occupied premises, which include EHS unique to the SANDF.

3) Other legislative framework within these norms and standards are developed includes the following:

- (a) Hazardous Substances Act, 1973 (Act No. 5 of 1973) and Regulations;
- (b) National Environmental Management, Waste Act 2008 (Act No. 59 of 2008);

- (c) Environmental Conservation Act, 1989 (Act No. 73 of 1989);
- (d) Water Services Act, 1997 (Act No. 108 of 1997);
- (e) Strategic Framework for Water Services, 2003;
- (f) Occupational Health and Safety Act, 1993 (Act No. 85 of 1993);
- (g) National Road Traffic Act, 1996, (Act No. 93 of 1996);
- (h) National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977);
- (i) National Environmental Management Act, 1998 (Act No. 108 of 1998) as amended and Regulations;
- (j) National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004);
- (k) The Children's Act, 2005 (Act No. 38 of 2005)("the Children's Act");
- (l) Older Persons Act, 2006 (Act No. 13 of 2006);
- (m) Tobacco Products Control Act, 1993 (Act No. 83 of 1993), as amended;
- (n) Foodstuffs, Cosmetics and Disinfectant Act, 1972 (Act No. 54 of 1972); and
- (o) International Health Regulations 2005.

5. APPLICATION

Scope of applicability

The Norms and Standards for environmental health will be applicable to provincial and municipal levels of government where environmental and municipal health services are rendered.

Norms and Standards for health surveillance of premises set out the requirements for premises and therefore are applicable to 'premises' as defined in the National health Act, including Points of entry. The norms and standards will be applicable from the date of issue by the Director-General of the National Department of Health.

2) Exclusions and limitations to the scope of application of the norms and standards:

Waste management

- (a) Domestic health care risk waste generators;
- (b) Mining waste, which is monitored and controlled by the mining inspector appointed under the Mine, Health and Safety Act, 1996 (Act No. 29 of 1996)- Department of Minerals is excluded on the scope of application;
- (c) Explosives as defined in the Explosives Act, 1956 (Act No. 26 of 1956) are excluded in the scope of application, as they are regulated by the Department of Safety and Security;
- (d) Radioactive waste-aspects on the handling of radioactive wastes in controlled areas are excluded on the scope of application, as access to controlled areas is only permitted to authorized personnel, patients and persons authorized by law; and
- (e) Aspects on disposal of radioactive waste and the handling of radioactive wastes in controlled areas are excluded from the scope as they are dealt with in Regulation Relating to Group IV Hazardous Substances R247, framed under Hazardous Substances, 1973 (Act No. 15 of 1973).

6. PRINCIPLES

The National Environmental Health Policy is key to the implementation of the National Environmental Health Norms and Standards for premises and Acceptable Monitoring Standards for Environmental Health Practitioners. The overarching principles of the National Environmental Health policy on environmental health are those principles as contained in the Bill of Rights as enshrined in Chapter 2 of the Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996) and the White Paper on the Transformation of Health Services.

The principles outlined in the policy will form the basis of the Environmental Health Norms and Standards monitoring tool. The following key principles are crucial for the achievement of policy objectives and norms and standards:

6.1 Recognition of equity in environmental health interventions

Environmental health interventions should be planned and implemented on an equitable basis, with resource allocation based on the principle of “some for all” rather than “all for some”.

6.2 Prevention central to human health

Prevention should be at the centre of all environmental health action. Prevention may need to address both adverse environmental behaviour/practices and adverse health behaviour for improved environments and healthier lifestyles.

Prevention should always be viewed as the other side of the same coin with promotion of health.

6.3 Recognition of differing needs for women, men, children and the elderly

Environmental health interventions should respond to the differing needs of women, men, children and the elderly. This must apply specifically on the role of women as main users of food, water and sanitation. Gender sensitive studies should be promoted to ensure recognition of needs for the various vulnerable members of society.

6.4 Intersectoral collaboration and coordination

Whilst the policy recognizes the advantages of having shared responsibilities, it is important that such responsibilities are clear and provided for by the environmental health related legislation established to govern the delivery of EHS. In addition, the law should recognize the Department of Health as the Ministry responsible for public health and therefore having responsibility for the overall coordination of policy implementation and the delivery of EHS. A coordinated and collaborated effort by various government departments and other stakeholders is vital in achieving this.

6.5 Decentralisation

EHS must be based on the decentralised model of the district health system for the promotion of equity, efficiency and effectiveness.

This policy takes note of the role played by Municipalities in delivering Municipal Health Services as a result of devolution of services.

6.6 Alliance to the government policies

The implementation of this policy will be in acknowledgement of the principles of Agenda 21 and Healthy Cities approach and be in line with the principles contained in the White Paper on the Environmental Management Policy of South Africa, as well as the Batho Pele Principles.

6.7 Community Participation

The principle of community participation recognizes that although the policy is established by the national government, implementation of the policy should be effected at the levels that involve the community.

6.8 Placing emphasis on voluntary compliance through awareness and education

Although it's a requirement for compliance to national policies and standards on environment and health by importers, producers, manufacturers, retailers and communities, environmental health strategies should strike an appropriate balance between promotion and education and law enforcement.

Education must be used as a vital tool of building capacity for all stakeholders/role players, to be able to attain voluntary compliance.

6.9 Risk analysis

Standards and regulations established to enforce environmental health should be underpinned by risk analysis, which will include a risk assessment through risk identification, quantifying these risks and costing them in order to implement appropriate corrective environmental health interventions.

6.10 Risk Communication

Dissemination of accurate and up to date information on environmental health risks and the prevention thereof, in order to reduce environmental related health burdens, particularly to the general public, is crucial. Different elements and principles of communicating risks, early warnings and application of methods relevant for various groups of the population are essential in the provision of EHS. Risk communication needs to be prioritised and budgeted for at municipal and provincial level.

6.11 The Precautionary principle

Successful prevention or control of environmental health related diseases requires appropriate measures underpinned by scientific means. However scientific data is not always available. An effective policy works on the principle that “we do not need to know everything to take action”, and thus a precautionary measure should be taken to protect human health, where scientific evidence may not be available.

CHAPTER 2**NORMS AND STANDARDS FOR ENVIRONMENTAL HEALTH SERVICES AND APPLICABLE MONITORING STANDARDS****7. NORMS AND STANDARDS FOR ENVIRONMENTAL HEALTH SERVICES****NORM**

- 1) **There is adequate Human Resource Capacity and placement.**

STANDARDS

- a) An Environmental Health organizational structure is developed and staffed.
- b) A suitable qualified EHP is appointed to manage environmental health.
- c) 1 (one) operational EHP is provided for every 10 000 population in line with the national norm outlined in the National Environmental Health Policy.

NORM

- 2) **Professional standards and staff identity is maintained**

STANDARDS

- d) Continued staff development needs are determined.
- e) Staff members are easily identifiable by name.
- f) Staff portrays professionalism in their attire when dealing with the public.
- g) Staff members are registered with the Health Professions Council of South Africa (HPCSA) for independent practice
- h) There is availability of and easy access to environmental health legislation for implementation at all times.

NORM

- 3) **A communication system is in place for improved quality of service delivery.**

STANDARDS

- i) There is communication about environmental health services in the organization.
- j) A standard operating procedure is in place for complaints management.
- k) Systems for internal and external electronic communication are available and functioning.
- l) Monthly staff and review meetings take place.
- m) Staff is aware of incoming environmental health related policies.
- n) District Health Information Management System is available and implemented.
- o) Quarterly reports of Municipalities are submitted to provincial office.
- p) Provincial reports are submitted to national office.
- q) Environmental health plans forms part of the Municipalities Integrated Development Plan (IDP).
- r) IDP forms part of the District Health Plan.

8. MONITORING STANDARDS FOR HEALTH SURVEILLANCE OF PREMISES

- 1) The Scope of Profession of EH, as published under Regulation 888 of 26 April 1991, as amended promulgated under the Health Professions Act, 1974 (Act No 56 of 1974), prescribes the functions of EHPs in health surveillance of premises, as follows:
- Conducting EH impact assessments of, amongst others housing projects.
 - Assessing aspects such as ventilation and indoor air quality, lighting, moisture proofing, thermal quality, structural safety and floor space.
 - Assessing overcrowded, dirty or other unsatisfactory health conditions on any residential, commercial, industrial or other occupied premises.
 - Monitoring all buildings and all other permanent or temporary physical structures used for residential, public or institutional purposes (including health care and other care, detainment, work, recreational, travel, tourism, holidaying and camping) and the facilities in connection therewith and the immediate precincts.
 - Ensuring urban and rural land use planning and practices that is conducive to sustainable development conducting sound EH impact and other assessments.
 - Ensuring the prevention and abatement of any condition on any premises, which is likely to constitute and health hazard.
 - Ensuring the health and safety of public transport facilities such as buses, trains, taxis, boats and aero planes as well as all other facilities in connection therewith.
 - Ensuring compliance with the principles of Local Agenda 21 and the Health Cities approach to integrated service rendering and the practical minimizing of any EH risk.

2) APPLICABLE ENVIRONMENTAL HEALTH MONITORING STANDARDS

- (1) Residential, business and public premises are monitored in order to identify, assess, control and manage health hazards and risks emanating from the use of such premises. This function also includes scrutinizing of building plans and providing health comment on environmental impact assessment of proposed new developments in order to ensure that all health aspects are considered.

The risk profile of the premises should inform the frequency of EH inspections of premises.

- (2) Minimum inspection frequency in a year:

Premises	Frequency of inspection
Child care centers	At least once every quarter (4)
Nursing homes	At least twice a year (2)
Maternity homes	At least twice a year (2)
Old age homes/ Homes for the aged	At least twice a year (2)
Schools	At least once a year (1)
Accommodation establishments	At least twice a year (2)
Beauty salons	At least twice a year (2)
Swimming pools and spa baths	At least twice a year (2)
Dry cleaning establishments	At least once a year (1)
Health establishments	At least twice a year (2)
Funeral undertaker's premises/mortuaries/crematorium	At least once a quarter (1)
Keeping of animals	At least once a year (1)
Food handling premises	At least once a quarter (1)
Public gathering places	At least once a year and during short term event (1)
Industrial premises	As and when necessary
Prisons/police stations holding cells	At least once a year (1)
Vacant land	As and when necessary
Office accommodation	At least once a year (1)
Offensive trades	At least twice a year (1)

- (3) Inspection checklists are developed and implemented for every inspection conducted.
- (4) An inspection report that includes the relevant health recommendations is issued by EHP to the person in charge or owner of the building after every inspection conducted.
- (5) Health education forms an integral part of all EH inspections conducted.
- (6) Environmental Health inspections of premises are unannounced.
- (7) An inventory/database of all premises (e.g. child care centers, nursing homes, beauty salons, schools etc) is kept and maintained by EH for monitoring and control purposes.
- (8) Monitoring activities are coordinated with other relevant stakeholders to ensure synergy and comprehensive provision of services to communities.
- (9) EH inspection of premises adopt a risk management approach with specific focus on the following areas:
 - (a) Ventilation, lighting, indoor air quality, structural safety History of compliance of the premises to relevant standards and legislation;
 - (b) Food safety, (to include analysis of food risks, food preparation areas);
 - (c) Water and sanitation practices;
 - (d) Management of waste;
 - (e) Pest control methods;
 - (f) Disease infection risk factors and prevention strategies, including hygiene practices and reporting protocols;
 - (g) The immediate environment (presence of chemicals, noxious fumes, gases, vapours, etc; and
 - (h) Any other conditions that is likely to pose a hazard or risk to human health.
- (10) EHPs liaise with owners or persons in charge of the premises to assist them to become compliant with relevant regulations and health requirements upon being notified or becoming aware of:
 - (a) Newly constructed premises prior to commencement of operation; and
 - (b) Proposed new premises.
- (11) EH inspections and investigations are handled as guided by Section 82-83 of the National Health Act to ensure compliance with the Act.
- (12) Inspection of rodent proofing on premises are guided by requirements as outlined in the SANS Code 080: 1972 – Code of practice for the rodent proofing of premises.
- (13) **For food handling premises;**
 - (a) Municipality is authorized under the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act 54 of 1972), as amended.
 - (b) Food safety plans are in place and budgeted for.
 - (c) Inspections are conducted strictly in accordance with the Regulations Relating to the powers and duties of Inspectors and Analysts conducting inspections and Analysis at food premises, R328 of 20 April 2007 published in terms of the Food Stuffs, Cosmetics and Disinfectants Act, 1972 (Act No 54 of 1972), as amended;
 - (d) EH inspections align to the implementation of an integrated food safety management system utilizing a hazard identification and risk-based approach;
 - (e) EH risk assessment of premises is conducted, focusing on conditions on the premises that may pose a risk to human health, which includes:
 - (i) Assessing food risks;
 - (ii) Food handling practices;
 - (iii) Food handling and preparation safety strategies;
 - (iv) History of compliance to relevant legislation;
 - (v) Water, sanitation, waste management and hygiene practices;
 - (vi) Pest control methods; and
 - (vii) Complaints from public.
 - (f) Informed by the risk profile of specific premises, inspections of premises are conducted as follows:
 - (i) Not less than once every three months for high-risk food premises;

- (ii) Not less than once every six months for moderate-risk food premises; and
 - (iii) Not less than once every twelve months for low-risk food premises.
- (g) Follow-up inspections of food handling premises are conducted as necessary to address:
- (i) Issues of non-compliance with relevant legislation;
 - (ii) Investigation of food-borne illnesses and food-borne outbreaks;
 - (iii) Investigation of consumer complaints; and
 - (iv) Action on food recalls, fires, floods, and other emergencies.
- (h) EH liaise with owners or person in charge of food premises to assist them in becoming compliant with regulations upon being notified or becoming aware of:
- (i) Newly constructed or renovated food premises prior to commencement of operation; and/or
 - (ii) Proposed food premises.
- (i) For food handlers in moderate risk and high risk premises, EH encourages the adoption of available and recommended food safety management strategies, including but not limited to:
- (i) Operational strategies to promote safe food-handling practices;
 - (ii) Hazard analysis of key food items and processes;
 - (iii) Identification of critical control points (CCPs) for these items and processes; and
 - (iv) Monitoring strategies to control CCPs to ensure the provision of safe foods.
- (j) EHP provides food safety information and/or educational material through various mediums to assist in the safe preparation and handling of food to food handling premises.

9. MONITORING STANDARDS FOR RODENT/PEST CONTROL MONITORING ON PREMISES

- 1) Pest control in premises plays a key role in the prevention and control of major vector-borne diseases. Transmission of disease from pest infestations can occur in both the internal and external environment of premises through contamination of equipments, surfaces, food or water. Implementing control measures on a regular basis is necessary to prevent or eradicate infestation and should be effected by means of a continuous vector control program. Vector control is hence well suited for an integrated approach because some vectors are responsible for multiple diseases, and some interventions are effective against several vectors. The degree of pest infestation on any premises may be indicative of the standard of hygiene and the lack of success of control measures to prevent or eradicate infestation. Apart from a nuisance in general, these infestations could pose a serious health risk.
- 2) The scope of profession for Environmental Health prescribes the role of environmental health practitioners in vector control monitoring to include the following
- a) Identifying vectors, their habitats and breeding places;
 - b) conducting vector control in the interest of public health, including control of arthropods, molluscs, rodents and other alternative hosts of diseases;
 - c) Removing or remedying conditions resulting in or favouring the prevalence of or increase in rodents, insects, disease carriers or pests;
 - d) ensuring the residual spraying of premises and precincts;
 - e) investigating zoonotic disease and vector-borne diseases in the working and living environments;
 - f) Surveying imported cargo and livestock for the prevalence of disease vectors; and
 - g) Undertaking serological testing of rodents, dogs and other pets or animals.

3) APPLICABLE ENVIRONMENTAL HEALTH MONITORING STANDARDS

- (1) A vector control monitoring plan is in place to guide the interventions and control measures within a municipality.

- (2) Pest control operators are registered in terms of the Fertilizers, Farm Feeds, Agricultural Remedies and Stock remedies Act, 1947 (Act No. 36 of 1947);
- (3) Inspection of rodent proofing on premises is guided by requirements as outlined in the SANS Code 080: 1972 – Code of practice for the rodent proofing of premises.
- (4) Regular inspections are conducted on the premises to determine:
 - (i) The presence of pests on the premises;
 - (ii) The type of pests present on the premises to be able to determine the selection of the best suited control methods in controlling or eliminating such pest;
 - (iii) The level of infestation;
 - (iv) Areas of infestation;
 - (v) Identifying potential entry points that may be used by pests to enter the premises; and
 - (vi) Identifying any conditions that are likely to favour the harbourage of or attract pest i.e. food and water sources and areas that may be used as shelter by pests.
- (5) Inspections focus on the entire premises but particular attention should be paid to areas where pests are more likely to appear, such as storage areas, food preparation areas, refuse storage areas.
- (6) Inspections are conducted by competent and skilled individuals, trained on the identification of pests within premises.
- (7) All inspection records are kept.
- (8) Where pest infestations are identified, appropriate actions are implemented in order to deal with the problem as soon as possible.
- (9) Inspection include checking of pest control documents kept on the premises to determine:
 - (i) Records detailing site inspections and chemical applications that have been conducted on the premises;
 - (ii) Site- inspection records; and
 - (iii) Records of chemical applications on premises.

10. MONITORING STANDARDS FOR ENVIRONMENTAL POLLUTION CONTROL ON PREMISES

Legislative background

- 1) The Scope of profession for EH outlines the role of EH in environmental pollution control to include the following:
 - (a) Ensuring hygienic working, living and recreational environments; Identifying polluting agents and sources of water, air and soil pollution; Conducting EH impact assessments of development projects and policies, including assessment of major hazard installations; Identifying EH hazards and conducting risk assessment and mapping thereof; Preventing accidents, e.g. owing to paraffin usage; Approving EH impact assessment reports and providing health comment on environmental impact assessment applications; Ensuring clean and safe air externally through emission inventory monitoring, modelling and toxicological reports, reviews and complaint investigations; controlling and preventing vibration and noise pollution; Preventing and controlling soil pollution that is detrimental to human, animal or plant life; Ensuring compliance to the provisions of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993); Taking the required preventative measures to ensure that the general environment is free from health risks; Ensuring registration, permitting, monitoring and auditing of all industries, activities, trade, which involves controlling the internal effects of pollution on the worker and the external effects of pollution on the worker and the external effects of pollution on the community and the environment; Monitoring management of infrastructure integrity, including management of the infrastructure integrity of pipelines and tanks; ensuring jointly with other role players, a readiness for abnormal operating conditions and disasters; and developing sustainable indicators appropriate for monitoring the effectiveness of environmental management of industries.

2) APPLICABLE ENVIRONMENTAL HEALTH MONITORING STANDARDS

- (1) An Air quality monitoring plan is in place and the implementation thereof monitored.
- (2) An Environmental management plan is in place and the implementation thereof monitored.

- (3) A Water pollution control plan is in place.
- (4) A land pollution control plan is in place.
- (5) A noise pollution control plan is in place.
- (6) Monitoring of diseases trends
 - a) Water borne, water-based and food borne disease outbreaks are investigated in particular geographic locations on occurrence;
 - b) For all potential environmental hazards, critical points, populations at risk and infection pathways are identified to inform and guide the methods to be used for monitoring and surveillance;
 - c) Data is monitored from a range of sources (routine measurements aimed at detecting changes in the environment or health); such as:
 - (i) Emissions inventories (records of the permitted or actual level of emissions from specified sources);
 - (ii) Environmental data (measurements of the concentrations of pollutants in the environment) e.g. noise levels; and
 - (iii) Health data, of exposed populations, which may include, infectious disease monitoring data; health care utilization data (hospital admissions, primary care consultations); births, congenital anomalies and related data; cancer registrations; mortality statistics.
- (7) Investigation of public complaints
 - a) All EH related public complaints are investigated.
 - b) On receipt, the public complaint is registered for record purposes; and investigated within 48 hours;
 - c) Complaint regarded as urgent/poses immediate danger to human health are investigated within 24 hours;
 - d) Feedback is provided to a complainant within 7 days of receiving the complaint;
 - e) Follow-up inspection is conducted to ensure the elimination of a condition resulting in a compliant.
 - f) A compliance notice is issued where deemed necessary by the EHP; and
 - g) A report is compiled on completion or closure of every public complaint.
- (8) Prevalent pollutants and polluting agents and sources are known and recorded.
- (9) Records of pollution related cases reported to health facilities are kept.

11. MONITORING STANDARDS FOR PORT HEALTH SERVICES

Legislative background

- 1) Port Health is an integral part within EH and plays an important role in the protection of human health by preventing the international spread of disease through South African points of entry and monitoring the importation of health related goods. Port Health Service is defined as the first line of defence to protect the citizens of South Africa and visitors against the health risks associated with cross border movement of people, conveyances, baggage, cargo, shipments and other imported consignments. PHS covers various areas of responsibility but can be categorized as responsibilities related to disease surveillance and general EH activities which include waste management and water quality monitoring. The IHR is amongst others, implemented at the points of entry and its main role and purpose is to prevent, protect against, control and provide public health response to the international spread of disease with minimum interference with international traffic and trade. The IHR requires that that designated airports, ports and ground crossings have capacities to ensure a safe environment for travellers using the facilities, including potable water supplies, eating establishments, public toilets and appropriate solid and liquid waste disposal services. The Norms and Standards for Port Health set standards for points of entry and conveyances to ensure that we meet certain requirements of the IHR.
- (2) The Scope of Profession of EH outlines the role of EHPs in port health to include the monitoring, inspecting, and sampling all imported foodstuffs, cosmetics and disinfectants at all ports of entry

(harbours and border posts); monitoring all imported foodstuffs, cosmetics and disinfectants for which a certificate of approval is required; sampling foodstuffs consumed on board all aero planes and ships; monitoring, inspecting and sampling (for chemical and bacteria testing purposes) all maize and wheat imports; monitoring continuous rodent and vector control at airports and harbours; monitoring imports of used pneumatic tyres for the prevalence of mosquitoes such as the *Aedes* species (vectors for yellow fever, dengue fever and encephalitis); providing a continuous vaccination programme for seafarers at all ports; monitoring and inspecting all hazardous cargo entering the country; monitoring and preventing communicable diseases on a 24 hour-basis; monitoring water on board ships to ensure that it is safe for human consumption; and monitoring food wastes and medical waste for disposal.

(3) APPLICABLE ENVIRONMENTAL HEALTH MONITORING STANDARDS

- (1) Monitoring of conditions at the point of entry are done in accordance with the following standards:
- (a) EH inspections of points of entry premises are conducted at least once per quarter.
 - (b) An inspection report, including the relevant health recommendations is issued to the person in charge of the building after every inspection is conducted.
 - (c) Port Health Officials advise port authorities with regard to the status of physical facilities at the points of entry.
 - (d) Regular surveys of buildings and equipment are carried out to identify defects or unsatisfactory performance.
 - (e) Inspection of points of entry includes the assessment of core capacities of airports, sea ports and ground crossings in terms of the IHR.
 - (f) Checklists for routine inspections are designed and maintained for use for every inspection.
 - (g) Inspections are coordinated with all relevant stakeholders, such as the Department of Labour, relevant local authority, conveyance operators and any border management agency.
 - (h) There is adequate collaboration and cooperation with critical role players e.g. management (port authority), infection control, health and safety committees, service providers, local authority and other departments with regard to environmental pollution matters.
 - (i) All conveyances are inspected on arrival at the point of entry.
 - (j) Inspection records are safely kept.
 - (k) Port Health Officials are familiar with, and have access to all relevant legislation, policies and guidelines standard specifications and code of practices applicable to port health services.

12. MONITORING STANDARDS FOR WASTE MANAGEMENT ON PREMISES

Legislative background

- 1) This set of Norms and Standards emanates from the constitutional right in terms of Section 24 of the Constitution of RSA, which provides that “*everyone has a right to an environment that is not their health or well-being; and to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures*”. In 1998, waste generation in South Africa amounted to 533 million ton per annum (CSIR, 2009). Waste has been identified as a major source of pollution following the development of the White Paper on Integrated Pollution and Waste Management for South Africa, GN 227 of 17 March 2000. With rapid urbanization and migration that South Africa is experiencing, more and more waste will be generated if there is no effective and efficient way of managing waste. The National Planning Commission diagnostic report of 2011 has identified high disease burden as a challenge that needs to be addressed in South Africa. Poor management of waste can result in adverse effects such as infestation of pests, spread of diseases, land, air and water pollution, and injuries to the health of the public and the environment. In response to the said policy and the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), the Department of Environmental Affairs developed a National Waste Management Strategy, GN. 344 of 4 May 2012. The strategy is centred on eight waste management goals and targets that have to be reached by 2016. In line with international trends and focus on new approaches to waste management, the strategy supports the concept of waste hierarchy. The hierarchy referred to entails steps to the lifecycle approach to waste, which is; firstly waste avoidance, waste reduction, waste re-

use, waste recycling and recovery and waste treatment and disposal that are regarded as the last option.

2) ROLES AND RESPONSIBILITIES OF VARIOUS ROLE PLAYERS IN THE WASTE MANAGEMENT SECTOR

Department of Health (DOH)

DOH has oversight of health of the people. It is the custodian of the Hazardous Substances Act, 1973 (Act No. 15 of 1973), and is responsible to ensure that waste management practices do not pose negative impacts on human health by enforcing policy and legislation on waste management; and Provides MHS through District and Metropolitan municipalities, which includes monitoring of the provision of waste management and pollution control services. In addition, the scope of profession for environmental health, promulgated under the Health Professions Act, 1974 (Act No. 56 of 1974) outlines the role of EH in waste management and environmental pollution control as follows:

Waste management and general hygiene monitoring

- a) Waste management ensuring proper refuse storage, collection, transportation, transfer and processing, materials recovery and final disposal.
- b) Ensuring proper management of liquid waste including sewage and industrial effluents.
- c) Sampling and analyzing waste or waste products such as sewage or refuse.
- d) Investigating and inspecting any activity relating to the waste stream or any product resulting there from.
- e) Advocating proper sanitation.
- f) Controlling the handling and disposal of diseased animal tissue.
- g) Ensuring safe usage of treated sewage sludge and ensuring that reclaimed waste is safe for health.
- h) Ensuring waste management including auditing waste management systems and adherence to the 'cradle to grave' approach.

Environmental pollution control

- (a) Ensuring hygienic working, living and recreational environments;
- (b) Identifying polluting agents and sources of water, air and soil pollution;
- (c) conducting environmental health impact assessments of development projects and policies, including assessments of major hazard installations;
- (d) Identifying environmental health hazards and conducting risk assessment and mapping thereof;
- (e) Preventing accidents, e.g. owing to paraffin usage;
- (f) Approving EH impact assessment reports and commenting on environmental impact assessment applications;
- (g) Ensuring clean and safe air externally (ambient and point sources) through emission inventory monitoring, modeling and toxicological reports, reviews and complaint investigations;
- (h) Ensuring compliance with the provisions of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), and its regulations;
- (i) Taking the required preventative measures to ensure that the general environment is free from health risks;
- (j) Ensuring the registration, permitting and auditing of all industries, activities, trade, etc, which involves controlling the internal effects of pollution on the worker and the external pollution on the community and the environment;
- (k) Management of infrastructure integrity, including management of the infrastructure integrity of pipelines and tanks;
- (l) Ensuring jointly with other role players, a readiness of abnormal operating conditions and disasters; and
- (m) Developing sustainable indicators appropriate for monitoring the effectiveness of environmental management systems and industries.

Department of Environmental Affairs (DEA)

DEA is the custodian of the NEMA and the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008). Therefore it is responsible for policy and legislation on waste, in order to protect, conserve and improve the environment and natural resources.

DEA is also responsible for the management of general and hazardous waste facilities, including licensing of certain waste management activities and approval of environmental authorizations for listed activities.

Department of Water and Sanitation (DWS)

DWA is the custodian of water resources and is responsible for policy formulation and implementation in the water sector to ensure that water resources are protected from the effects of poor waste management practices.

Department of Energy (DOE)

DOE is responsible for prescribing measures regarding discarding of radioactive waste and the storage of irradiated nuclear fuel.

Department of Agriculture, Forestry and Fisheries (DAFF)

DAFF is responsible for the development and sustainability of the agricultural, forestry and fisheries sector to ensure sustainable use of natural resources and safe food that can be affected by poor waste management.

Department of Transport (DOT)

DOT is responsible for regulation of transport, that is, public transport, rail transport, civil aviation, shipping, freight and motor vehicles, including safe transportation of dangerous goods and hazardous waste.

Department of Labour (DOL)

Regulate the labour market to ensure that precautionary measures are exercised by employers in order to protect employee's health and safety from hazardous working conditions.

Department of Mineral Resources

DMR is responsible to ensure the health and safety of miners against mine health hazards which can include mine waste.

Other role players in waste management include:

Waste association, organizations and NGOs in the waste recycling industry, as well as waste contractors, generators, and the community

3) WASTE MANAGEMENT PRINCIPLES AND NORMS

The following principles and norms on waste management are internationally recognized and have been agreed upon at the Basel Convention. These principles and norms must be applied and considered by any person engaged in the handling, storage, collection disposal and transportation of waste, and will also apply to the implementation of these EH norms and standards on waste management.

(i) Duty of care principle

Any generator of waste is responsible to ensure that waste is handled, stored, collected disposed and transported in an environmentally sound manner.

(ii) Polluter pays principle

Any person causing pollution is responsible for any costs incurred in the cleaning and rehabilitation of the impacts on the environment.

(iii) Precautionary principle

It is the responsibility of the waste generator to ensure that waste is less hazardous before it is disposed off.

(iv) Proximity principle

The treatment and disposal of hazardous waste should take place as near as possible to the point of production, in order to minimize transportation and environmental risks.

(v) Cradle to Grave principle

Any generator of health care risk waste is legally responsible for its final disposal from point of generation to final disposal.

4) APPLICABLE ENVIRONMENTAL HEALTH MONITORING STANDARDS

- (1) A waste management plan is in place in compliance to the Waste Management Act, 2008 (Act 59 of 2008).
- (2) Waste management activities in a municipality are monitored to ensure implementation in accordance with the plan, which should include regular cleaning of streets, sidewalks and clearing of littering and illegal dumping sites.
- (3)
- (4) Waste management practices are monitored at health facilities to ensure that acceptable methods of waste minimization, segregation, labeling, colour coding, packaging, collection, storage, transportation, treatment and disposal of waste are adopted.
- (5) EHPs monitors waste management activities (waste minimization, separation, collections, storage, transportation and disposal), at different residential, business, industrial, places of care and health care facilities and other premises at all times during routine or follow inspections as planned and as prescribed in the *norms and standards for health surveillance of the premises*.
- (6) General and hazardous landfill sites are inspected at least twice per year; and during pre operation, during closer and after closer.
- (7) All required licenses, waste management plans; waste information records and environmental impact assessment reports are analysed.
- (8) Site plans of premises generating business, industrial and hazardous, including health care risk waste, are evaluated for conformance to relevant legislation specifying requirements for waste storage areas.
- (9) The collection and management of waste during events (festivals, sports, etc) throughout the period of the particular event are monitored.
- (10) Condemned foodstuffs are collected, transported and disposed of in the presence of an EHP, who shall monitor all processes to ensure that condemned waste is effectively managed until disposal.
- (11) Records of inspections, findings and recommendations of all inspections conducted on premises generating waste, particularly hazardous, and health care risk waste are kept.
- (12) Inspection reports with recommendations are provided to the person in charge of the premises after every inspection.
- (13) Routine inspection programmes for closed landfill sites are established and implemented.
- (14) Joined multidisciplinary inspections with relevant stakeholders are established and strengthened in premises with challenges of management of waste.
- (15) Spillages are investigated and stored waste and waste to be transported are monitored to ensure that it is managed to prevent any pollution or public health hazards.
- (16) Occupational health and safety practices in health facilities are monitored to ensure that the health and safety of all personnel, including patients is protected.
- (17) Health facilities are audited once a year on waste management practices.
- (18) The following aspects of waste management shall be reported within 24 hours of identification to the relevant authorities as outlined in the table below for further action:

Waste management aspect	Relevant authority
<ul style="list-style-type: none"> ▪ Unlicensed waste management facilities. ▪ Listed waste management activities operating without the necessary basic assessment process or a scoping and environmental impact reporting process conducted ▪ Environmental pollution due to accidental spillage of hazardous waste 	Department of Environmental Affairs

▪ Unsafe handling of radioactive waste and illegal dumping thereof	Department of Health: Radiation Control Department of Energy- National Radioactive Waste Institute
▪ Unsafe transportation vehicles of general and hazardous waste that are parked on site of the premises	Department of Transport Municipal traffic police
▪ Illegal dumping of general waste, including dead domestic pets	Relevant Municipality: Environmental Health local or metropolitan municipality
▪ Illegal dumping of HCRW	Department of Environmental Affairs Relevant Municipality: Environmental Health
▪ Disposal of dead diseased animal	Department of Agriculture, Forestry and Fisheries State veterinarian
▪ Occupational health hazards from handling of general and hazardous waste	Department of Labour

13. MONITORING STANDARDS FOR WATER QUALITY MONITORING

Legislative background

1) This set of norms and standards follows what is stated in the constitution of South Africa that "everyone has a right to have access to water" (Section 27(1) (b). Hence, the aim of government is to comprehensively address all water sector issues under the Water Services Authority and Providers as stipulated under the Water Services Act, 1997 (Act No 108 of 1997) and the subsequent Strategic Framework for Water Services, approved by cabinet on 17 September 2003. The Strategic Framework for Water Services sets out a comprehensive approach with respect to the provision of water services in South Africa, ranging from small community to large regional water supply. To fulfill this mandate of water supply service addressed in the strategic framework, water should be accessible, adequate, affordable, reliable and potable to all. Water is essential to sustain life and therefore these concepts should be achieved for public health gains and social welfare. Water that is unsafe for consumption poses serious health risks, and those at greatest risk of waterborne disease are infants and young children, the elderly, immune compromised individuals and those living in settlements without basic water supply and sanitation services.

2) ROLES AND RESPONSIBILITIES OF VARIOUS SECTORS IN WATER QUALITY MANAGEMENT

Department of Water Affairs (DWA)

The Department of Water Affairs is the custodian of the water resources and the overall leader in the Water sector. DWA is therefore responsible to:

- (a) Provide leadership within the water sector;
- (b) Develop policy and regulation of water services;
- (c) Provide support to municipalities in line with the regulatory function to ensure compliance with national norms and standards; and
- (d) Managing water information.

Water Service Authorities (WSAs)

Municipalities that are designated as Water Services Authorities are responsible for:

- (a) Water services planning;
- (b) Ensuring access of community, to water ; and
- (c) Regulating the provision of water services within their area of jurisdiction.

Department of Health/ Environmental Health Services

The roles and responsibilities of the department of health in water quality management have been outlined in the Strategic framework for Water Services 2003. In addition the scope of Profession of EH, as published under R888 of 21 April 1991, as amended , promulgated under the Health Professions Act, 1974 (Act No. 56 of 1974), determines the role of EH in water quality monitoring, to include the following:

- (a) Monitoring water quality and availability, including mapping of water sources and enforcing laws and Regulations relating to water quality management.
- (b) Ensuring water safety and accessibility in respect of quality (microbiological, physical and chemical), and access to an adequate quantity for domestic use as well as in respect of the quality of water for recreational, industrial, food production and any other human and animal use.
- (c) Promoting access to water for all communities, by providing inputs towards the planning, design and management of water supply system and ensuring healthy community water supplies through surveillance.
- (d) Ensuring monitoring of and effective waste water treatment and water pollution control, including the collection treatment and safe disposal of sewage and other water borne waste and surveillance of the quality of surface water (including the sea) and ground water.
- (e) Advocacy on proper and safe water usage and waste water disposal.
- (f) Water sampling and testing in the field and examination and analysis in a laboratory.
- (g) Surveillance of waterborne related diseases to ensure healthy community water supplies.
- (h) Water pollution control.

3) APPLICABLE ENVIRONMENTAL HEALTH MONITORING STANDARDS

- (1) Water quality monitoring plan are in place, costed and implemented for monitoring of drinking water supplies.
- (2) Waterborne diseases monitoring plan is in place, with emphasis on cholera monitoring.
- (3) Adequate water quality monitoring equipment is available.
- (4) Water sampling is conducted in line with Water Sampling Guidelines.
- (5) Recommended sampling frequencies guides the sampling frequencies.
- (6) Surveillance of community drinking water supplies is conducted at least monthly.
- (7) Monitoring of community drinking water supplies includes monitoring of untreated water sources, rural water supplies and temporary water supplies.
- (8) Communities without adequate water supply are educated on the dangers of untreated water supplies, the use or application of household emergency water treatment methods, safe storage of domestic water and health and hygiene practices at the point of use regularly.
- (9) Water supplies at health facilities with additional building-specific sources of water to augment the external supply or in use of temporary water storage tanks is monitored/ sampled at least once every quarter.
- (10) Recreational waters are monitored at least once every quarter.
- (11) Waste water systems are monitored at least once every quarter.
- (12) Clinic records of diarrhoeal cases reported are inspected monthly to monitor trends and possible linkages to water supplies.

14. MONITORING STANDARDS FOR HAZARDOUS SUBSTANCES CONTROL AND CHEMICALS MANAGEMENT

Legislative background

- 1) Chemicals are a fact of life and all living things are made from chemicals and in fact we depend on chemistry for our very existence. Everything from the ground we walk on, to the air we breathe is made from chemicals and chemical compounds. Every workplace, office, factory, warehouse or plant uses chemicals to some extent or other. Chemicals range from mild cleaning agents through to highly corrosive, flammable and poisonous substances that are used for different processes and applications. The safe handling and storage of all chemicals regardless of where they are used requires a commitment by everyone to follow safe work procedures, norms and standards to protect both human health and the environment. EH has a pivotal role to play in terms of chemical safety and hazardous substances as prescribed in the Act and the Hazardous Substances Act, 1973 (Act No. 15 of 1973).

These Norms and Standards aims to assist in providing a national approach and guidelines to EHPs in the provision of chemical safety and hazardous substances control, ensure the sound management of chemicals and ensure protection of human health and the environment.

It is vitally important that chemicals and hazardous substances are regulated and controlled in such a manner to ensure the protection of human health and the environment. In addition, to minimize risks and hazards that can impact negatively on human health and the environment. Furthermore, to ensure sound management of chemicals and hazardous substances components of enforcement, compliance, monitoring and evaluation are critical and essential elements. Strengthening and improving collaboration, cooperation, coordination and communication amongst governments, entities, stakeholders and organizations is a backbone to ensure proper control and management of chemicals in an integrated manner.

2) ROLES AND RESPONSIBILITIES OF VARIOUS ROLE PLAYERS IN HAZARDOUS SUBSTANCE CONTROL AND CHEMICAL SAFETY MANAGEMENT

Department of Health

DOH is the custodian of the Hazardous Substances Act, 1973 (Act No. 15 of 1973) and regulates the use of hazardous substances and chemicals and their impact on human health and the environment.

In addition, the scope of profession for EH, promulgated under the Health Professions Act, 1974 (Act No. 56 of 1974) outlines the role of EH in chemicals management and the control of hazardous substances to include the following:

- (a) Monitoring and regulating all operators, fumigation firms and formal and informal retailers that deals with the manufacture, application, transport and storage of chemicals;
- (b) Permitting, licensing and auditing the premises of the above, e.g. by issuing Scheduled Trade Permits;
- (c) Facilitating advice, education and training on pesticides and/or chemical safety;
- (d) Ensuring the correct labelling of hazardous substances;
- (e) Ensuring all active ingredients are indicated;
- (f) Ensuring warning signs are indicated;
- (g) Ensuring precautions are taken during storage and transportation, and the appropriate protective gear is used during handling;
- (h) Ensuring all hazardous substances are registered with the Departments of Agriculture and Environmental Affairs;
- (i) Ensuring hazardous substances control to prevent injury, ill-health or death by reason of the toxic, corrosive, irritant or flammable nature of substances;
- (j) Ensuring control over the importation, manufacture, sale, operation, application, modification or dumping of such substances;
- (k) Ensuring premises are licensed and registered with the appropriate authorities;
- (l) Inspecting premises to ensure compliance with safety, storage and other precaution measures;
- (m) Ensuring sampling is done according to approved procedures;
- (n) Ensuring all labelling regulations are complied with;
- (o) Checking all stock records and ensuring the hazardous substance register is up to date; and
- (p) Ensuring that empty, containers are disposed of according to statutory requirements.

Department of Environmental Affairs (DEA)

DEA monitors and evaluate the impact of chemicals in the environment, including the implementation of multilateral agreements on chemicals and hazardous substances.

Department of Transport (DOT)

DOT is responsible for monitoring and controlling of the transportation of dangerous goods.

Department of Labour (DOL)

DOL monitors and control the implementation of hazardous chemicals in the workplace and occupational exposure of chemicals in the workplace.

Department of Mineral Resources (DMR)

DMR monitors the impact of mining chemicals used in the mines.

South African Police Services (SAPS)

SAPS assist and support with investigation with suicidal and criminal cases in terms of illegal trafficking, selling, transportation and disposal of hazardous substances and chemicals.

Department of Agriculture, Forestry and Fisheries (DAFF)

DAFF is responsible for registering of pesticides for agricultural remedies in the country and ensures proper classification and labeling of pesticides or agricultural remedies in the country.

Department of Water Affairs (DWA)

DWA ensures the enforcement and compliance of chemicals in water quality by Water Service Authorities and Water Services Providers.

South African Bureau of Standards (SABS)

SABS sets national standards on the identification and classification of dangerous goods, labeling and packaging for transport by road and rail modes, as well as testing of chemicals for compliance purposes.

National Regulator for Compulsory Specifications (NRCS)

NRCS is responsible for regulation and registration of formulated products on disinfectants or detergent-disinfectants indicated for application on inanimate surfaces.

Department of Trade and Industry (DTI)

DTI controls the import and export of chemicals in the country.

International Trade Administration Commission (ITAC)

The ITAC issue permits for the import and export of pesticides and chemicals listed in the various multilateral agreements.

South African Revenue Services (SARS)

SARS controls the entering of prohibited chemicals / pesticides into the country.

3) APPLICABLE ENVIRONMENTAL HEALTH MONITORING STANDARDS

- (1) EHPs are authorized as Inspectors in terms of the Hazardous Substances Act, 1973 (Act 15 of 1973).
- (2) Inspections of hazardous substances dealer's premises is conducted at least twice (2) a year.
- (3) Inspections include the assessment of aspects such as ventilation, indoor air quality, lighting, moisture-proofing, thermal quality, storage, labeling, conditions of sale and structural safety.
- (4) Premises are issued with a valid license.
- (5) All Group I hazardous substances consignments are inspected by authorized EHPs and released only to a Group I licensed premises.
- (6) Inspection checklists are designed and utilized for all inspections conducted to guide and ensure complete assessment.
- (7) An inspection report, indicating the conditions of the premises as well as the recommendations applicable, is issued to the owner or person in charge after every inspection.
- (8) Health and safety education forms an integral part of all EH compliance monitoring inspections.
- (9) A risk assessment of hazardous substance dealers' premises is conducted by an authorized EHP to assess conditions on the premises that may pose a threat to the health, safety and welfare of workers and the public.
- (10) An inventory of hazardous substances dealers and premises (both registered and unregistered) is kept and maintained for monitoring and control purposes.
- (11) Multidisciplinary monitoring of problematic hazardous and chemical substance dealers is coordinated with all other relevant stakeholders, such as DOL, SAPS, DAFF, to ensure comprehensive provision of services and effective law enforcement and compliance where necessary.
- (12) A monitoring system is in place to manage and ensure that all pesticide and chemical poisonings are investigated by an EHP and reported on the pesticide/chemical incident report form
- (13) Records are checked, verified and signed off during every inspection.
- (14) A chemical safety plan is in place in a municipality.
- (15) Community awareness and education campaigns on safe use of household chemicals are conducted regularly.

CHAPTER 3**GENERAL PROVISIONS****MANAGEMENT AND CONTROL NORMS AND STANDARDS****15. COMPLIANCE ENFORCEMENT STANDARDS**

- (1) Staff are appointed/designated as health officers in terms of the National Health Act, 2003 (Act 61 of 2003), as amended.
- (2) Staff is trained on law enforcement and appointed as Peace Officers, in terms of the Criminal Procedures Act, 1977 (Act 51 of 1977).
- (3) Relevant legal documents are in place (legal notice books, section 56 notice).
- (4) A dedicated official for coordinating law enforcement issues is available.
- (5) The severity of the health risk should always be considered in compliance enforcement activities. A "Zero tolerance" approach in extreme cases is exercised.
- (6) All conditions that are likely to create a health hazard or risk are investigated and appropriate action taken where necessary.
- (7) All non conformances are followed up by follow-up inspections. For continued non-compliance or in cases where a health nuisances and hazards exist, a compliance notice may be issued in terms of Section 82 and 83 of the National Health Act, 2003 (Act 61 of 2003) prescribing the nature of the offence and the corrective action that should be taken within a prescribed time period.
- (8) If non conformances still exist upon follow up inspection, a warning notice is issued with compliance period.
- (9) If deemed necessary a spot fine is instituted in terms of the relevant Local Authority By-Laws for contraventions warranting immediate action, or a notice to appear in court may be issued. If non conformances still prevail, the municipality may exercise any remedial measures to remove the nuisance and recover the costs thereof from the polluter, person in charge or owner of premises.
- (10) Cooperation and collaboration with other relevant pollution control agencies, such as the "Green Scorpions" in enforcement of environmental law is exercised.
- (11) The Municipality takes place in Joint Enforcement Operations.

16. CAPACITY BUILDING AND TRAINING

The development of adequately skilled human resources is important to ensure effective implementation of the norms and standards.

- 1) Accredited training programmes based on assessment of capacity are made available to staff to ensure competency on aspects as outlined in their scope of profession.
- 2) Training of staff include capacity building to ensure up to date information on all aspects of environmental health to improve service delivery;
- 3) Training on water quality monitoring include aspects such as sampling, analysis, interpretation of the results:
 - (a) mapping of water sources and mapping of critical water points;
 - (b) Tracking of changes in water supply and of monitoring of water sources; and
 - (c) The use of Geographic Information System (GPS) equipment to be able to appropriately geo code the risk based sampling points from all water sources, to ensure that the same sampling points are monitored over a period of time to observe trends;
- 4) Training includes various aspects in the field of waste management, focusing on various role players in the waste management sector, including in the field of waste handling. EHPs and other role players in waste management should ensure that they are kept abreast with new technologies, new concepts, new innovations and new ideas in the fields of waste by attending conferences, seminars and workshops, to enable management of waste in line with current and developing trends.
- 5) Training is based on train the trainer approach, in order to ensure distribution of capacity to other relevant health service providers such as health promoters, NGO's, Community Health Workers, environmental health assistants.

- 6) Training is conducted by accredited institutions and trainers.
- 7) In-service and refresher training is conducted periodically and records thereof are kept and updated for a period of at least 5 years.
- 8) Training includes basic aspects on environmental management.
- 9) Capacity building, education and community empowerment initiatives are conducted by EHPs to ensure community participation in environmental health.
- 10) Community education and empowerment initiatives are planned, its objectives, target group, activities, relevant stakeholders, education materials to be used, and costs implications clearly outlined and feedback reports produced detailing the assessment of its impact and recommendations.
- 11) Waste management field workers (from street cleansing to disposal of general and hazardous waste) are provided with training and information on the risks involved in the handling of waste and the importance of personal hygiene and wearing appropriate protective clothing at all times while engaged in waste handling.

17. INTER-SECTORAL COLLABORATION

EH aspects in South Africa are multi-sectoral, with some functions cutting across various government departments, and which has in some cases resulted in duplication of institutional roles and responsibilities. The need for the establishment of a health and environment strategic alliance to promote environmental cooperative governance amongst government departments has long been justified. The success of the delivery of health services related to EH by the Department of Health is therefore dependent on improved cooperation and collaboration with other government departments, the private sector and the community at large.

- 1) Strong cooperative working arrangements are established with various stakeholders, such as Department of Transport, Department of Agriculture, Forestry and Fisheries, Department of Labour, Departments of Minerals and Energy, Department of Environmental Affairs, including the private sector or contractors on issues relating to waste, air quality, water, chemical safety, hazardous substances, food etc and for the effective implementation of these Norms and Standards. Trans-boundary provincial and municipality relations should be strengthened in order to easily address trans-boundary issues relating to water, air and waste, amongst others.
- 2) Environmental Health actively participate in formalized interdepartmental/inter-municipality communication forums on e.g. waste management, water quality, air quality etc with NGOs, private sector, community to facilitate collaboration and sharing of related information and reports on environmental health related issues.

ANNEXURE: A**STANDARDS APPLICABLE TO PREMISES****1. NORMS AND STANDARDS APPLICABLE TO PREMISES**

Premises must comply with the following norms and standards:

1) Structural facilities

The building structure of the premises must comply with the requirements of the National Building Regulations and the Building Standards Act, 1977 (Act No. 103 of 1977) with regards to lighting and ventilation.

2) Water supply

- (a) Adequate supply of potable water must be available on the premises for all uses (drinking, cooking, personal hygiene, and cleaning).
- (b) The quality of water supply supplied on the premises complies with the specifications of the SANS 241 for drinking water, with regards to microbiological, chemical and physical quality;
- (c) Potable running water must continually be available on the premises.
- (d) Stored drinking water must be protected from contamination at all times and cold water is stored at temperatures below 20°C.
- (e) Outlets for distribution of non-potable water must be marked clearly with signs, indicating that the water is unsafe and must not be used for drinking, washing and cooking.
- (f) No cross-connection between a system providing potable water and a system providing non potable water is allowed.
- (g) Water service points must be provided on the premises, for various uses on the premises.
- (h) For premises without running water available, drinking water must be adequately stored and protected against contamination by flies, animals and humans. Water storage containers are covered at all times.
- (i) Water storage containers must be kept clean at all times.
- (j) Disinfection of water with chlorine is the most appropriate way of ensuring microbiological safety.
- (k) If temporary water storage tanks must be provided for drinking water, the water is from an approved source.

3) Drainage systems

- (a) Suitable and effective means of drainage and sewage disposal shall be provided on all premises, in compliance to the relevant By-Laws of a specific local authority.
- (b) Drainage systems must be kept clean and maintained so as to prevent any blockages.

4) Waste Management

- (a) Approved methods of solid waste collection, storage, and disposal shall be adopted, and in compliance with the relevant By-laws of the Local Authority concerned.
- (b) Refuse bins and/or a designated refuse storage area must be available on the premises for the storage of all refuse pending removal should either be burned or buried into the ground.

5) Health care risk waste management

Where health care risk waste is generated:

- (a) Approved methods of waste collection, storage, transportation and disposal must be adopted on the premises and the management of health care risk waste is in line with the specification of the SANS code 10248: Management of Health Care Risk Waste at health facility.
- (b) A designated waste storage area must be provided for the storage of health care risk waste pending removal by approved service provider.

- (c) Waste storage area must be located such that it is not in close proximity to any food preparation area or any area where patients are cared for.
- (d) An adequate number of purpose-manufactured, leak-proof, sealable containers must be available for the storage of health care risk waste. Such containers are designed so as to not allow the exposure of needles, cuts and other substances that may cause harm to service users or staff members.
- (e) Containers used for the storage of health care risk waste must be clearly labeled in large, legible lettering.
- (f) Employees must be adequately trained in the identification, separation, handling and storing of health care risk waste.
- (g) Accurate and up to date records must be kept of all health care risk waste generated by the facility;
- (h) A Laundry area and facilities for laundering of linen must be provided on the premises.
- (i) Laundry must be done on approved facilities or with a registered service provider.

6) Food preparation facilities

If meals are served on the premises:

- (a) A kitchen area must be provided for the hygienic preparation of foodstuffs.
- (b) All facilities used in connection with the handling, preparation, storage and serving of foodstuffs must comply with the relevant Regulations, published in terms of the **Foodstuffs, Cosmetic and Disinfectants Act 1972, (Act 54 of 1972)**, as amended.

7) Tobacco control

The premises must comply with the requirements of the Regulations Relating to Smoking in Public Places and Certain Outdoor Public Places R 264 of 30 March 2012, published in terms of Tobacco Products Control Act, 1993 (Act No. 83 of 1993) as amended.

8) Pest and rodent control

- (a) A rodent/pest control programme must be in place to minimize the risk of rodents and pests on the premises.
- (b) Rodent proofing must be maintained in good order or repair so as to be impervious to rodents.
- (c) To prevent the wide-spreading of rodents or pests, rodents must be eliminated before demolition of any building or structure likely to be infested with rodents, attached to the facility.
- (d) The premises yard must be kept clean, free from and accumulation of refuse, debris, including glass, paper, rags, tins, trash, ash and coal, dead animals, health care risk waste, overgrown weeds, trees, long grass, any accumulation which is unsightly and may pose a health nuisance.
- (e) The premises must be kept free from any other condition that may result in the breeding of flies or mosquitoes, and other vermin.

9) Air quality

- (a) Dust control measures must be put in place to control dust from the construction activities and all emissions must be in compliance with the National Environmental Management; Air Quality Act, 2004 (Act No. 39 of 2004).
- (b) The dust must be adequately controlled to prevent a nuisance or hazard from continuing.
- (c) For industry that generates emissions to the atmosphere at any stage of the project life-cycle, emissions must be in compliance with the standards as specified by the National Environmental Management, Air Quality Act, 2004 (Act No. 39 of 2004), to protect EH.

10) Noise control

- (a) The level of noise produced must conform to the requirements as specified in the Noise Control Regulations promulgated by a specific provincial government.
- (b) Excessive, disruptive and displeasing noise emanating from any activity on any premises must be controlled to ensure acceptable levels.

- (c) Noise prevention and mitigation measures should be applied where noise impacts from a project facility or operations exceed the applicable noise level guideline at the most sensitive point of reception.
- (d) Measures should be applied for controlling of noise from stationary sources at source.

2. STANDARDS FOR CHILD CARE CENTERS / ECDS

Child care centers must comply with the following standards:

1) Location and design

The premises used for or in connection with child- care services located, designed, constructed, finished, and equipped and in such a condition that child-

- (a) can be cared for hygienically; and
- (b) can be adequately protected against any possible public health hazard, risk and/or public health nuisance.

2) A partial care facility for children with disabilities or chronic illnesses, in addition to the National Norms and Standards contemplated in subsection (1) shall-

- (a) be accessible to such children;
- (b) provide facilities to meet the needs of such children; and
- (c) employ persons that are trained in and provide training to persons employed at the facility on;
 - (i) The needs, health and safety of such children;
 - (ii) Appropriate learning activities and communication strategies for such children; and
 - (iii) Basic therapeutic intervention.

3) A partial care facility may offer programmes appropriate to the developmental needs of the children in that facility as may be prescribed, in line with the Children's Act, 2005(Act No. 38 of 2005) ("the Children's Act").

4) Issue of a Health Certificate for operation of a child care center

- (a) The premises must be operated under a valid Health Certificate issued by an EHP, to the effect that the premises comply with EH norms and standards.
- (b) A health certificate shall indicate the following information:
 - (i) The details of the health certificate holder, owner/person in charge of the child care center;
 - (ii) The physical address of the premises;
 - (iii) The identity number of the certificate holder;
 - (iv) The number of children and the minimum age groups permitted on the premises;
 - (v) Hours of operation; full day or half day care;
 - (vi) Prohibitions placed on the premises;
 - (vii) A certificate number;
 - (viii) Date of issue; and
 - (ix) The validity period (one calendar year from the date of issue).
- (c) The health certificate is displayed in a conspicuous manner on the premises, so as to be clearly visible to everyone entering the premises.
- (d) A health certificate shall not be transferable from one owner to another, or from one premises to another.
- (e) Health certificates must be renewed by an EHP of the relevant local authority;

- (i) Annually;
 - (ii) In case of change of ownership;
 - (iii) In the case of renovations/additions to the existing premises; and
 - (iv) If the services moves from one premises to another.
- (f) A health certificate may be withdrawn by an EHP where conditions of the premises are such that they pose a hazard or risk to the children's health and safety.
- (5) Enclosure of the premises
- (a) An enclosed yard, enclosed with a fence, brick, wall or other approved material must be provided to ensure the safety of children on the premises.
 - (b) An entrance and exit control available on the premises.
 - (c) The yard must be kept clean at all times free from long grass, debris, litter, stagnant water and other miscellaneous waste.
- (6) Indoor play area
- (a) An indoor play area for playing, eating and for sleeping purposes is provided in line with the requirements as set out in the Children's Act.
 - (b) A building structure used as an indoor play area must be compliant with the requirements of the National Building Regulations and the Building Standards Act, 1977 (Act No. 103 of 1977):
 - (i) Exterior walls and roof is constructed in a manner as to prevent the permeation of wind and rain and to ensure the health and safety of children;
 - (ii) Windows and doors must allow natural light and cross ventilation; and
 - (iii) Floors have a smooth surface that is easily cleanable and prevents the permeation of dampness;
 - (c) An indoor play area with a minimum of 1.5m² free unobstructed floor space must be available for each child.
 - (d) If no outdoor play area must be provided on the premises, an indoor play area with a free unobstructed floor space of 3m² must be provided;
 - (e) Separate indoor and outdoor play areas must be provided for at different age groups (0-2 years), (2-4 years), (4-6years).
 - (f) An activity area of 4m² must be provided for every child of school going age catered for on the premises.
 - (g) The play area should be free from any structural hazards, such as sharp corners, stairs, slippery surfaces that may pose a danger or constitute a hazard to children on the premises.
 - (h) Adequate seating (juvenile size chairs and tables), playing and sleeping (water proof mattresses) equipment must be available for the individual use of each child.
 - (i) Cots and water proof mattresses must be spaced 750mm apart during sleep or nap time to allow free and safe movement by a child care supervisor.
 - (j) Linen used for sleeping purposes must be laundered at least weekly, especially for children under the age of 3 (three) years.
 - (k) Indoor playing equipment/toys should be provided free from sharp points or edges.
 - (l) The area must be kept clean and in good repair at all times, free from debris, litter and other miscellaneous rubbish.
 - (m) During cold weather conditions, the premises should be adequately heated throughout with suitable means of heating, to prevent children being exposed to extreme cold conditions. Heating facilities used are safe for children and staff and do not emit noxious fumes, gases or odours.
 - (n) Storage facilities for the storage of children's toys, books, and other play material must be provided in the indoor play area.
- (7) Outdoor play area
- (a) An outdoor play area of adequate size must be provided on the premises, in line with the requirements as set out in the Children's Act.
 - (b) An outdoor play area of a minimum of at least 2m² must be provided for each child.

- (c) Separate outdoor play areas should be provided for different age groups, (0-2 years) (2-4 years), (4-6 years).
- (d) The play area must be enclosed by adequate means of enclosure and provided with a lockable gate, to prevent unauthorized entry and children leaving the premises on their own accord.
- (e) The play equipment provided must be free from sharp points or corners, splinters, protruding nails or bolts or rusty parts, hazardous small parts, lead-based paints, poisonous material, or flaking or chalking paint. The play equipment should also be designed to guard against entrapment or situations that may cause strangulation.
- (f) The play equipment should be kept clean and maintained in good working order and in good repair.
- (g) Playground equipment provided on the premises must be safe and should not pose any harm to the safety of the children, with regards to the height and material construction of the equipment and playground surfacing.
- (h) The outdoor play area must be kept clean and free from litter, debris and accumulation of other waste.
- (i) The outdoor play area must be free of any excavations, steps, projections, levels or any surface which is dangerous or may constitute a safety hazard.

(8) The use of artificial/synthetic grass surfaces

Where artificial grass surfaces are used in outdoor play areas, the following measures must be put in place to ensure the safety of children:

- (a) Due to the ability of synthetic fibers to retain high surface temperatures, measures should be taken to reduce high surface temperatures on the grass (applying water on the synthetic fiber on warm days).
- (b) The surfaces should be cleaned regularly with suitable cleaning material to prevent the offensive odours and the occurrence of other health hazards.

(9) Toilets / ablution and nappy changing facilities

- (a) Adequate toilet and wash up facilities must be provided on the premises for use by the children, in line with requirements as set out in the Children's Act.
- (b) For centers catering for toddlers, junior type toilets and washbasins should be provided where appropriate.
- (c) Toilet and hand washing facilities must be accessible to the children.
- (d) For children 0-3 years:
 - (i) Developmentally appropriate toilets are provided;
 - (ii) At least 1 (one) toilet is provided for every 20 children;
 - (iii) Where there are no sewerage systems in place, potties are provided ;
 - (iv) At least 1 (one) potty is provided for every 5 (five) toddlers;
 - (v) Human excreta from potties to be disposed of hygienically in a toilet;
 - (vi) Potties are cleaned after every use and disinfected in a properly demarcated area;
 - (vii) A clearly demarcated nappy changing equipped with an easily cleanable surface and water-proof mattress in line with the Children's Act is provided, and this area is located away from the any food preparation area;
 - (viii) Proper hygiene practices are employed during diaper changing, to prevent the faecal contamination of the immediate environment in the changing area, as well as to prevent transmission of faecal oral infections, these hygiene practices include the following:
 - (aa) Covering all faeces/urine on diaper;
 - (bb) Disposal of faeces or urine in a toilet;
 - (cc) Covering of the nappy and placing it in a refuse bin with a closed lid;
 - (dd) Disinfection of changing area;
 - (ee) Wiping of babies hands; and
 - (ff) Washing of hands with soap and water (caregiver)

- (e) For children 3-6 years –

- (i) At least 1 (one) flushing toilet and at least 1 (one) hand wash basin must be provided for every 20 children on the premises;
 - (ii) A supply of cold and hot running potable water must be available at every wash-hand basin;
 - (iii) Where none waterborne toilets are available, Ventilated Improved Pit toilets are recommended;
 - (iv) The toilet facility must be available within 200m of the child care facility;
 - (v) Pit toilets used are so structured as to be able to be used by children (reduced pots size and height), and doors openable on the outside;
 - (vi) The pit toilets must be maintained in good order and cleaned regularly to prevent the occurrence of offensive smells and attraction of flies; and
 - (vii) Children are not to use pit toilets if unaccompanied by a care giver.
- (f) Toilet facilities are structurally safe and kept in a clean and hygienic condition at all times.
 - (g) Toilet facilities must be properly illuminated ventilated in line with the National Building Regulations and the Building Standards Act.
 - (h) Toilets are maintained in good order and in good repair, and are kept clean and free from offensive smells at all times.
 - (i) Where no running water is available, the use of low cost hand washing points should be made in various ways; including the following-
 - (i) a pitcher of water and a basin (one person can pour the water for another to wash their hands; the wastewater falls into the basin);
 - (ii) a small tank (e.g. an oil drum) fitted with a tap, set on a stand and filled using a bucket, with a small soak away or a basin under the tap to catch the wastewater; and
 - (iii) a “tippy-tap” made from a hollow gourd or plastic bottle that is hung on a rope and that pours a small stream of water when it is tipped.
 - (j) Children must be educated on the importance of washing hands at all times after visiting the toilet.
 - (k) Separate toilets and hand wash facilities should be provided for staff members on the premises.
 - (l) An adequate amount of toilet paper, soap and towel should be available in the toilet facilities at all times.

(10) Water supply requirements

- (a) Where no running water is available, a minimum of 10-25 liters per person per day must be made available and stored hygienically on the premises for all uses.
- (b) Children must be encouraged to drink water during the day to prevent dehydration and interruptions in concentration.

(11) Designated milk preparation areas for children under 2(two) years

- (a) Where bottle or breast fed children are accommodated on the premises, a designated area must be provided in the kitchen for the preparation, and washing of feeding bottles and teats.
- (b) An adequate supply of potable running cold and hot water is available for washing of bottles and teats.
- (c) Cooling facilities are provided for the hygienic storage of milk bottles.
- (d) Storage facilities are available for storage of milk and other foods.
- (e) To minimize infections from viruses, bacteria and parasites and the risk of disease transmission, all bottles used for feeding of children must be sterilized.
- (f) Before sterilizing, used bottles, teats and caps are must be thoroughly washed with clean soapy water to remove all traces of milk. The following methods of sterilization may be employed:
 - (i) Microwaving – Sterilizing using a microwave for approximately 90 seconds;
 - (ii) Boiling – If bottles are suitable for boiling, boil bottles in a pot with lid for approximately 10 minutes;
 - (iii) Cold water – Using of a sterilizing solutions such as bleach dissolved in cold water, the solutions must be changed every 24 hours; or
 - (iv) Electric steam sterilizing – Use of steam sterilizers, sterilizes bottles in 8-12 minutes.

- (g) Refrigeration/Cooling facilities are provided for the hygienic storage of milk bottles that are prepared and stored before use. The temperature of the refrigerator is not higher than 5⁰C and is monitored daily.
- (h) Storage facilities are available for storage of milk and other foods.

(12) Storage facilities

To minimize infections from viruses, bacteria and parasites and the risk of disease transmission, the following measures must be applied:

- (a) Separate storage facilities must be provided for proper storage on the premises; and
- (b) Adequate storage space and/or facilities should be made available for storage of;-
 - (i) Personal belongings of each child;
 - (ii) Personal belongings for staff on the premises;
 - (iii) Equipment such as children's prams, push-up chairs, cots and play and work tools, toys;
 - (iv) Cleaning material which may be unsafe, toxic, dangerous or hazardous materials.

(13) After care services

- (a) Where after care services are provided on the premises, separate facilities are provided for that purpose.
- (b) After school centre may not be permitted on the same premises as day care centre unless separate facilities are provided, or unless conducted on different times.
- (c) An indoor play area of not less than 1.5m² free floor spaces is provided for each child in after care and an outdoor play area of not less than 2m² is provided for each child.
- (d) At least 1 (one) toilet and 1 (one) hand-wash facility is provided for every 20 children of part thereof on the premises and designated by sex.
- (e) An adequate supply of toilet paper and soap is provided in the toilet and hand wash facilities at all times.
- (f) Adequate tables and chairs are provided for use by the aftercare children.

(14) Medical care for children

- (a) Adequate, timely and appropriate medical attention is provided in cases where children might require medical care, in line with the norms and standards as set out in Section 89 of the Children's Act.
- (b) For any child who becomes ill or has suffered an injury requiring medical attention, a care giver must:
 - (i) Immediately notify the parent or guardian of the child;
 - (ii) Immediately call for medical assistance, if necessary;
 - (iii) Provide the necessary care and treatment for minor ailments in the sickbay area;
 - (iv) Immediately notify an EHP/relevant health authority in an event of the illness being suspected of being a communicable disease; and
 - (v) Only administer medicine to a child with the written consent of the parent or guardian, a medical journal must be kept in which details of any medicine administered to a child, including the quantities is recorded. The journal must be signed by any parent bringing along medication to be administered during the day to any child.
- (c) Availability and/or easy access of a telephone essential for notification of a parent or guardian where applicable and to summon medical assistance in accordance when required.
- (d) It is a prerequisite that every child to attend pre-school to have completed basic immunization schedules for his/her age as determined by the National Expanded Programme on Immunization of the Department of Health.
- (e) Children suspected or diagnosed an infectious or communicable disease are closely monitored and possibly the parents advised to exclude from attending child care until it has been declared by a doctor that it is safe to do so.
- (f) Caregivers are trained in basic first aid.
- (g) Medical reports of each child must be kept on the premises, each record must contain;

- (i) Information containing the child's general state of health and physical condition, including any allergies;
 - (ii) Any illnesses, including any communicable diseases, operations etc that a child may have suffered in a specified period;
 - (iii) Immunization records; and
 - (iv) Details of allergies and any medical treatment that the child may be undergoing.
- (h) A list of emergency telephone numbers which include, fire brigade, ambulance, outbreak response, clinic, hospital, doctor and police must be available and easily accessible on the premises.
 - (i) Adequate provision is made for disposable gloves and disinfectants to protect staff and children and to disinfect contaminated areas and surfaces when dealing with blood related illnesses and injuries.
 - (j) All areas and surfaces where a treatment of a child or caregiver for an illness of injury has taken place must be disinfected immediately.
 - (k) A management plan should be in place for exposure to HIV and Hepatitis B for any child or caregiver who may have been accidentally exposed to blood or bloody substances.
 - (l) Health care risk waste accumulated on the premises as a result of provision of medical care for children is safely packaged, labeled, stored and safely disposed off.
 - (m) A child showing signs of illness or condition that is suspected to be communicable may not be admitted to the regular child care programme, until such time that a medical officer of health has certified that the condition may not pose any health risk to other children on the premises.
 - (n) Medicines, cleaning substances and any dangerous substances must be kept in locked spaces and kept out of reach of children.
 - (o) An approved, lockable and adequately equipped first aid kit is available.
 - (p) The first aid kit must include, amongst other equipment:
 - (i) Adhesive bandages;
 - (ii) Sterile gauzes;
 - (iii) Medical tape;
 - (iv) Scissors;
 - (v) A cardiopulmonary mouthpiece protector;
 - (vi) Liquid soap;
 - (vii) First aid instruction book;
- (i) Disposable gloves.

(15) Sick bay facilities

- (a) A sickbay area for the treatment and care of a child who falls ill, who is injured during day care or who may be suffering from an illness that is suspected to be infectious is provided on the premises, in line with the requirements as set out in the Children's Act.
- (b) The sick bay area :
 - (i) Must be properly ventilated and illuminated in line with the Building Regulations;
 - (ii) Must be equipped with an adequate supply of potable water and a wash up facilities (for washing of wounds, hand washing etc);
 - (iii) Must be free from any offensive odours, fumes, vapours and gases;
 - (iv) May not be utilized for any other purpose, such as storage area for other things;
 - (v) Should not be accessible by other children at all times, especially when the child in the sick bay area is suffering or suspected to be suffering of an infectious diseases.

(16) Keeping of registers and records

Registers, records and journals are kept for administrative control as per the requirements set out in the Regulations pertaining to the Children's Act.

(17) Staffing requirements

An adequate number of competent care givers must be available to supervise and care for children on the premises, in line with specifications set out in the Children's Act.

(18) General hygiene requirements

- (a) Play rooms are regularly cleaned to minimize dust and moulds.
- (b) Solid waste is removed from playrooms daily.
- (c) Waste water is disposed off quickly and safely.
- (d) The density of vectors in the premises is minimized by use of appropriate and effective methods of eliminating and preventing the breeding of vectors, in line with the specifications as set out in Chapter 3 of this document.
- (e) Basic environmental controls are in place and are the basis of a vector control strategy on the premises (disposal of waste, excreta, food hygiene, cutting of grass etc).
- (f) Each child is provided with a face cloth which must be individually marked for that child's use and is individually hanged on pegs or hooks, disposable towels may be utilized.
- (g) If cots or mattresses are used, the floor must be free from dirt, dampness or any liquid substances.
- (h) Individual sheets and covers are provided for each child and washed at least once a week, or more often, if necessary.
- (i) Mouth contact toys used for children under the age of 2 years are cleaned and sanitized daily, by scrubbing in warm and soapy water using a brush, rinsing with clean water, submerging in a sanitizing solution for at least 2 minutes and air dried.
- (j) Waste is kept out of reach of children at all times.

(19) Safety measures

- (a) Strict safety measures must be in place for protection of children's welfare in line with the requirements as set out in the Children's Act.
- (b) Reasonable measures should be taken to safeguard the health, safety and welfare of pre-school children.
- (c) All heating appliances/heat emitting surfaces must be protected by a fix guard or must be thermostatically controlled to ensure safe surface temperatures.
- (d) Hot water must be thermostatically controlled to ensure safe temperatures.
- (e) Children must be protected against fires, hot water installations, electrical fittings and appliances, heating appliances and any other objects that may be dangerous or constitute a hazard or injury to the children on the premises.
- (f) The premises must be free from any noxious, poisonous or dangerous plants or shrubs.
- (g) No animals or birds are kept on the premises where a child care center is operated, except by written permission of the EHP after the necessary EH assessment has been completed.
- (h) No paddling pool, swimming pool or other related structure are permitted in any child care center premises, except by written permission by the EHP (if a swimming pool has been allowed by the EHP, such swimming pool must be fenced off and be covered at all times); Ponds, pits and or other hazards in the garden or external play area should be fenced off to ensure safety of children.
- (i) Smoking is prohibited on the premises and "No smoking" signs must be installed strategically on the premises.
- (j) Dangerous objects, materials, sharp instruments and utensils are kept stored away and out of reach of children and dangerous substances are not used in the vicinity of children.
- (k) All open electrical plugs should be adequately covered;
- (l) Approved fire control equipment approved should be provided and maintained in good working order, in line with the relevant By-Laws of a specific Local Authority;
- (m) If children are transported to and from the child care center, care must be taken to ensure that;
 - (i) Children are supervised by at least one adult, apart from the driver during boarding and disembarkation;
 - (ii) Doors of the vehicle are child locked at all times during the transportation of children;
 - (iii) Children are not transported in the front seat or in the boot of any vehicle during transportation without proper supervision;

- (iv) Children are not overloaded in any car; and
- (v) The driver responsible for transporting the children, as well as the transportation utilized is permitted in terms of the requirements of the National Road Traffic Act, 1996 (Act No. 93 of 1996).

(20) Sand Pits

- (a) All sandpits are under shaded areas and the following measures are taken to ensure the hygienic maintenance of the sand pits: The sand pit must be:
 - (i) Covered at night to prevent contamination by animals, and other pests;
 - (ii) Properly constructed, well drained to keep it as dry as possible;
 - (iii) Raked once a week to remove dirt and rubbish and to air the sand;
 - (iv) Hosed with tap water at least once a week;
 - (v) Covered at all times when not in use;
 - (vi) Disinfected when obviously dirty and contaminated;
 - (vii) Disinfected by ranking sand through the sand;
 - (viii) Toys must be removed from the sand pit after each day; and
 - (ix) Changed at least annually.
- (b) If the sand is contaminated by animal or human faeces, blood or other body fluids, children must be removed from the sand pit and:
 - (i) Use of a watering can with mild detergent or household disinfectant diluted in water, over the sand to kill germs; or disinfect by ranking salt through the sand; or
 - (ii) The sand must be completely replaced if contaminated extensively.
- (c) Children must be supervised at all times when playing in the sand pit;
- (d) Only sand that is appropriate for use in sand pits is utilized;
- (e) Caregivers must ensure that children wash their hands every time after playing in the sand pit.

(21) After school facilities

If after- school care services are provided for children of school-going age on the same premises as the child-care services, the following are provided:

- (a) Separate facilities must be provided for school going age children and for under school going age children;
- (b) An indoor care area of at least 1.5m² must be provided for each child;
- (c) At least 1 (one) toilet facility and 1 (one) hand-wash basin must be provided for every twenty (20) children or part thereof;
- (d) Toilet and hand wash facilities are separated by sex;
- (e) Adequate seating and tables are provided for each child.

3. REQUIRMENTS FOR YOUTH CARE CENTERS

The premises used in connection with child and youth care centers must comply with the following standards:

1) Size of facilities and ratios of staff to children

- (a) The ratio of child and youth care workers to children must be no less than 1 (one) child and youth care worker on duty for every 8 (eight) children.
- (b) In a child and youth care centre that is registered to provide programmes for:
 - (i) The secure care of children in terms of Section 191(2)(g) – (i) of the Child Care Act, 1983 (Act No. 74 of 1983);
 - (ii) The care of children with disabilities and chronic illnesses in terms of Section 191(3)(a) of the Act; or

- (iii) The ratio of child and youth care workers to children must be no less than 1 (one) child and youth care worker on duty for every 5 (five) children.
- (c) The Centre may depart by up to 50% from the ratios set out in paragraphs 1 and 2 for night shift.
- (d) Every child and youth care centre must employ at least one social worker, and the specified ratio is one social worker to 60 (sixty) children;
- (e) A child and youth care centre registered to provide a secure care programme, may not accommodate more than 60 (sixty) children, provided that separate management units each accommodating 60 children may be located at the same venue;
- (f) A child and youth care centre registered to provide a programme for children with behavioral, psychological or emotional difficulties, or for children placed under the Criminal Procedure Act, 1977 (Act No. 51 of 1977), must employ at least 1 (one) psychologist, the specified ratio is one psychologist to 60 (sixty) children;
- (g) A child and youth care centre that is registered to provide a programme for the treatment of children with a psychiatric condition in terms of Section 191(3) (d) of the Child Care Act, 1993 (Act No. 74 of 1983) must utilize a multi-disciplinary team approach involving social workers.

4. REQUIREMENTS FOR CHILDREN'S HOMES

Children's homes must comply with the following standards:

1) Enclosure of the premises

- (a) The premises must comply with the requirements of the Children's Act.
- (b) An enclosed yard, enclosed with a fence, brick, wall or other approved material should be provided;
- (c) Entrance and exit control is provided.
- (d) The building structure used as an indoor play area complies with the requirements of the National Building Regulations and the Building Standards Act, 1977 (Act No. 103 of 1977).
- (e) Exterior walls and roof constructed in a way as to prevent the permeation of wind and rain and to ensure the health and safety of children.
- (f) Windows and doors must allow natural light and cross ventilation.
- (g) Floors must be constructed of a smooth surface that is easily cleanable and prevents the permeation of dampness.
- (h) A children's home should only be operated on premises which are located, designed, constructed, finished and equipped in such a condition that children:
 - (i) can be cared for hygienically;
 - (ii) can be adequately protected against any possible public health hazard and public health nuisance;
 - (iii) can be adequately fed;
 - (iv) are provided with adequate shelter;
 - (v) have access to potable clean water and sanitation facilities;
 - (vi) can be adequately safeguarded from any condition which may impact on their safety; and
 - (vii) are not allowed access to any accommodation set aside exclusively for the use of staff.
- (i) The premises from which a children's home is operated should have separate living quarters for staff and families living on the premises;
- (j) The living quarters must make provision for sleeping accommodation for:
 - (i) any guardian or child;
 - (ii) any person in whose custody the child is and the child; and
 - (iii) the different sexes for children 7 (seven) years and older;
- (k) Separate and approved toilet and hand-wash facilities must be provided for staff members;
- (l) Separate designated change and storage facilities of adequate size must be provided for the storage of personal belongings of staff members.

2) Indoor living areas

- (a) An indoor play space with sleeping accommodation of at least 2m² per child for children for children aged between 2-6 years, and 4m² for children between 7-13 years and children above 13 years is provided on the premises;
- (b) For children under the age of 2 (two) years, separate indoor activity area of 1.5m² per child should be provided;
- (c) Younger children must be kept separate from older children in the play areas.
- (d) The play area should be free from any structural hazards, such as sharp corners, stairs, slippery surfaces that may pose a danger or constitute a hazard to children on the premises.
- (e) Adequate seating, eating and playing facilities of adequate space should be provided on the premises in the indoor play space;
- (f) Cots and water proof mattresses provided for babies should be spaced 750mm apart during sleep or nap time to allow free and safe movement by a child care supervisor.
- (g) Linen used for sleeping purposes must be provided for children and laundered at least weekly if possible, especially for children under the age of 2 years.
- (h) For children on nappies, a nappy changing area, equipped with a nappy changing table, with a water-proof mattress must be provided.
- (i) Proper diaper changing procedures should be followed to prevent the transmission of faecal-oral infections.
- (j) Indoor and outdoor playing equipment/toys should be without sharp points or edges.
- (k) Children with suspected or diagnosed infectious diseases must be taken for medical care and kept in separate facilities from other children.

3) Outdoor areas

- (a) An outdoor play area with a minimum of 2m² per child should be provided for use by the children on the premises.
- (b) The outdoor area must have adequate means of enclosure and a lockable gate, to prevent unauthorized entry and children leaving the premises on their own accord and to prevent unauthorized entry to the premises.
- (c) The outdoor area must be free from excavations, steps, projections, levels or any surface which may adversely impact on the health and safety of children using that area.
- (d) Separate outdoor play areas should be provided for children under 2 (two) years of age; children between 2-6 years; and children of 7 (seven) years and older; or children must play at different intervals in the outdoor play areas; an adequate supervision must be provided to ensure the safety of each child using the outdoor play area, at all times.

4) Toilets and bathing facilities

- (a) An adequate toilet and wash up facilities should be provided on the premises for use by the children.
- (b) 1 (one) toilet facility should be provided for at least every 15 (fifteen) children on the premises **ratio 1:15**, and an adequate supply of toilet paper must be supplied in the toilet facilities at all times.
- (c) 1 (one) hand wash basin should be provided for at least every 20 (twenty) children on the premises **ration 1:20**. The hand wash basin should be located in or immediately adjacent to the toilets.
- (d) A supply of cold and hot running potable water should be made available at every wash-hand basin, or if no running water is available, a minimum of 25 liters of potable water per child per day, stored hygienically in a closed container must be available on the premises at all times for drinking, cooking, personal hygiene and laundry.
- (e) An adequate supply of soap and a clean towel should be maintained at all times;
- (f) For children under the age of 2 (two) years on potty training, 1(one) chamber pot should be provided for at least every 5 children **ratio1:5**.
- (g) The pots must be emptied properly after passing of every stool and urine, and properly cleaned at all times to prevent smells.
- (h) In cases where no sewer system is available and pit toilets are utilized, the design of the pit toilets should constructed in such a manner as not to cause harm or injury to the children. Ventilated Improved Pits are recommended.

- (i) Pit toilets used by children should be designed for use by children (reduced pots size and height), doors open-able on the outside.
- (j) The pit toilets must be maintained in good order and cleaned regularly.
- (k) Children may not use pit toilet unaccompanied by a care giver.
- (l) For children under the age of 2 (two) years, still on nappies, a separate changing area must be provided on the premises, equipped with adequate storage facilities for soiled nappies and hand wash facilities to clean the children.
- (m) Separate toilets and hand wash facilities should be provided for staff members on the premises, and an adequate amount of toilet paper, soap and towel must be available in the staff toilet and hand wash facilities at all times.
- (n) All toilet facilities on the premises should be properly illuminated, ventilated, maintained in good repair, and kept clean at all times.
- (o) At least 1 (one) bath is provided for every 8 (eight) children **ratio 1:8**, separate for the sexes and designated accordingly, showers may be substituted for baths in the following ratios:
 - (i) Males- two thirds of total number of baths; and
 - (ii) Females- one third of total number of baths.
- (p) Individual face cloths should be provided for each child and marked as such.

5) Heating facilities

During cold weather conditions, the premises must be adequately heated throughout with suitable means of heating, to prevent children being exposed to extreme cold conditions. Such heating facilities should not emit any noxious gases, fumes or odours.

6) Cleaning, sterilization of feeding equipment and preparation of infant formula

- (a) All equipment used to feed and prepare feeds for infants (cups, bottles, teats, lids, spoons) should be thoroughly cleaned and sterilized before use to remove harmful bacteria that could grow in the feed and make children ill.
- (b) Before sterilizing, used bottles, teats and caps must be thoroughly washed with clean soapy water to remove all traces of milk, and rinsed in safe water.
- (c) The following methods of sterilization may be employed:
 - (i) Using commercial sterilizers, such as microwaving – Sterilizing using a microwave by following instructions on the manufactures manual;
 - (ii) Boiling – Bottles suitable for boiling can be boiled in a pot with lid for approximately 10 minutes, the pot must be covered with a lid and bring to a rolling boil, making sure the pan does not boil dry. The pan can therefore be kept covered until feeding equipment is needed; and
 - (iii) Electric steam sterilizing – Use of steam sterilizers, sterilizes bottles for 8-12 minutes by following instructions on the manufactures manual.
- (d) Hands must be washed with soap and water, and dry well before handling sterilized equipment. The use of sterilized forceps for handling sterilized equipment is recommended.
- (e) Milk for infant's cup and bottle feeds must be prepared and stored as per the WHO Guidelines for preparation of Infant formula in care settings.

7) Storage facilities

Adequate storage space and facilities must be provided on the premises for storage of:

- (a) Personal belongings of each child;
- (b) Personal belongings for staff on the premises;
- (c) Equipment such as children's prams, push-up chairs, cots and play and work tools; and
- (d) Unsafe, toxic, dangerous or hazardous materials or substances separate from other materials and equipments.

8) Medical care for children

- (a) An approved, lockable and adequately equipped first aid kit is provided on the premises and be placed out of reach of children.
- (b) The first aid kit includes, amongst other equipment:
 - (i) Adhesive bandages;
 - (ii) Sterile gauzes;
 - (iii) Medical tape;
 - (iv) Scissors;
 - (v) A cardiopulmonary mouthpiece protector;
 - (vi) Liquid soap;
 - (vii) First aid instruction book;
 - (viii) A thermometer; and
 - (ix) Disposable gloves.
- (c) The person who operates or is in charge of a children's home must ensure:
 - (i) Children requiring emergency medical assistance, are given appropriate medical care where necessary;
 - (ii) The necessary care and treatment is provided for minor ailments in the sickbay area; and
 - (iii) That there is an easy access of a telephone essential for notification of a parent or guardian where applicable and to summon medical assistance in accordance when required.
- (d) Children suspected of suffering from an infectious or communicable disease must be taken for medical care and should be isolated from all other children.
- (e) Care givers must be trained and competent in basic first aid.

9) Safety measures

- (a) Strict safety measures are in place for protection of children's welfare;
- (b) Reasonable measures are taken to safeguard the health, safety and welfare of children;
- (c) Heating appliances/heat emitting surfaces are protected by a fix guard or must be thermostatically controlled to ensure safe surface temperatures;
- (d) Hot water provided is thermostatically controlled to ensure safe temperatures;
- (e) Children are adequately protected against fires, hot water installations, electrical fittings and appliances, heating appliances and any other objects that may be dangerous or constitute a hazard or injury to the children on the premises;
- (f) Medicines, detergents, pesticides and other harmful substances are stored in lockable places and out of reach of the children;
- (g) The premises are free from any noxious, poisonous or dangerous plants or shrubs;
- (h) The outdoor play area for younger children is free of any excavations, steps, projections, levels or any surface which is dangerous or may constitute a safety hazard;
- (i) Smoking is prohibited on the premises and "No smoking" signs are installed strategically on the premises.

10) General requirements

A person in charge must ensure that: -

- (a) Children are properly cared for and supervised at all times;
- (b) Every part of the premises, including any equipment, linen, bedding, feeding utensils and play equipment is maintained in good repair and in a clean and hygienic condition at all times;
- (c) All staff members and care givers at the premises are at all times healthy and clean;
- (d) No person smokes or uses any tobacco product in the presence of children or in any area prohibited by the Tobacco Products Control Act, 1993 (Act No. 93 of 1983) and regulations published there under;

- (e) The toys, books and other indoor play materials intended for day-to-day use are available in any indoor activity or play area and suitably stored so that they are within easy reach of the children;
- (f) children are at all times appropriately supervised by an adult when utilizing the indoor and/or outdoor areas-
 - (i) one adult supervisor for every 6 children under the age of 2 years;
 - (ii) one adult supervisor for every 15 children aged 2 to 6 years old; and
 - (iii) one adult supervisor for every 20 children 7 years and older.
- (g) In the event that transport to or from a children's home is provided, ensure that –
 - (i) the children are supervised by at least one adult apart from the driver during transportation;
 - (ii) the child locks, if any, and doors of the vehicle are locked so that they cannot be opened from inside the vehicle;
 - (iii) no children are transported in the front seat or the boot of the vehicle;
 - (iv) no children are placed under the seat of a vehicle;
 - (v) the vehicle is not overloaded in terms of South African traffic laws;
 - (vi) the driver of the vehicle holds a valid driver's licence / permit to transport the passengers;
 - (vii) the vehicle has all relevant permits and documentation to transport the children, is licensed and is in a road worthy condition; and
 - (viii) when transporting children in the back of an enclosed light commercial vehicle, ensure that no exhaust fumes enter the enclosed area and that it is adequately ventilated.
- (h) children are at all material times under adequate adult supervision when utilizing the sleeping facility;
- (i) dietary requirements for children with special dietary requirements is observed;
- (j) nutritionally balanced meals of adequate volume to satisfy the energy and nutritional needs of the children in each age group is provided;
- (k) an adequate number of bins with liners for the disposal of paper, paper towels, tissues and other waste materials, is provided inside the premises;
- (l) provide an approved refuse area, with adequate refuse bins, for the storage of refuse pending removal;
- (m) each child is provided with a towel for his or her individual use on the premises;
- (n) adequate individually marked pegs or hooks is provided for each child to hang his or her towel on;
- (o) handling and disposal of medical risk waste is done in accordance with the relevant legislation governing the particular category;
- (p) there is provision of an adequate and easily available supply of toilet paper at all toilets, soap and disposable towelling at all hand wash basins and soap at all baths and/or showers;
- (q) mattresses are cleaned and sanitised when soiled or wet;
- (r) toys are disinfected daily and immediately after it becomes contaminated by body secretions, sputum, blood or by any other means;
- (s) toys are not used simultaneously by children suffering from any infectious disease and healthy children;
- (t) blood spills or spills of other fluids containing blood are removed by using gloves to prevent contamination of the hands and that the contaminated area be disinfected with a freshly prepared solution of 1:10 household bleach and clean water applied to the area for at least 30 seconds and thereafter wiped with disposable material or alternatively by using any other approved and appropriate disinfectant;
- (u) each child is provided with his or her own toiletry which shall include amongst others, toothbrush, toothpaste, bathing soap, skin lotion and other necessary items required for use by the child; and
- (v) there is provision of an adequate supply of tissues for use by the children.

5. REQUIREMENTS FOR NURSING HOMES

Nursing home must comply with the following Norms and Standards:

- (1) Registration and Issue of Health Certificate for operation of a nursing home

- (a) The premises are operated in terms of a permit or registration by the relevant authority, authorizing that activity.
- (b) The premises are operated under a valid Health Certificate issued by an EHP, to the effect that the premises comply with the norms and standards for Nursing Homes.
- (c) A health certificate issued by an EHP to the effect that the premises comply with EH requirements shall indicate the following:
 - (i) The details of the health certificate holder, owner/person in charge of the child care center;
 - (ii) The physical address of the premises;
 - (iii) The identity number of the certificate holder;
 - (iv) A certificate number;
 - (v) Number of beds/patients that can be accommodated on the premises;
 - (vi) Services offered on the premises;
 - (vii) Prohibitions applicable;
 - (viii) Date of issue; and
 - (ix) The validity period (one calendar year from the date of issue).
- (d) The health certificate is to be displayed in a conspicuous manner on the premises, so as to be clearly visible to everyone entering the premises.
- (e) A health certificate shall not be transferable from one owner to another, or from one premises to another.
- (f) Health certificates to be renewed by an EHP of the relevant local authority, on the following conditions:
 - (i) Annually;
 - (ii) In case of change of ownership;
 - (iii) In the case of renovations/additions to the existing premises; and
 - (iv) If the services moves from one premises to another.
- (g) A health certificate may be withdrawn by an EHP where conditions of the premises are such that they pose a hazard or risk to the service users.

(2) Uses of the premises

The premises of a nursing home may also be used for the purpose of other services, such as a maternity home. Subject to the following requirements being met;

- (a) Separate areas are provided for the nursing home operations and for use exclusively as a maternity area for maternity cases.
- (b) Rooms, passages, stairways, hall, corridor, lift, external entrances or any other portion of the premises should not be used in common for any purpose whatsoever, except those that are used for the purpose of:
 - (i) Laundries;
 - (ii) Central sterilizing unit, including ancillary units and stores;
 - (iii) Pathological laboratories;
 - (iv) Kitchens, sculleries, wash-up facilities, larders and any associated storage space;
 - (v) Storage space for unused or adequately sterilized stores;
 - (vi) An administrative office other than the office used to admit and discharge patients;
 - (vii) Central pharmaceutical units;
 - (viii) Mortuaries; and
 - (ix) Workshop.
- (c) Grounds and the yard must be kept tidy and safe at all times.

(3) Structural requirements

- (a) Walls should be constructed of brick, stone, concrete or other impervious material.

- (b) Except where glazed or glass bricks, glazed tiles or other similar material with a hard and smooth surface have been used, the internal walls of operating theaters, sterilizing rooms, wards, labour wards, wash up rooms, dressing rooms, duty-rooms, kitchens, sculleries, food store rooms, bathrooms, toilets and mortuaries are:
 - (i) Plastered and brought to a smooth finish; and
 - (ii) Covered with a light coloured paint, adequate plastic finish or other approved material.
- (c) Floors are constructed of concrete, hardwood or other durable material and brought to a smooth finish.
- (d) The angles formed between each floor and wall, and between two walls, in operating units, wards, labour wards, sluice rooms, milk rooms, bathrooms, toilets and kitchens should be rounded.
- (e) Floors of operating theaters, sterilizing rooms, wards, labour wards, wash up rooms, dressing rooms, duty-rooms, kitchens, sculleries, food store rooms, bathrooms, toilets and mortuaries should be made of cement, concrete or other impervious material and brought to a smooth finish.
- (f) Ceilings must be constructed so as not to attract dust and in the case of operating theaters, labour wards, sterilizing rooms and wash up rooms, the ceiling must have a hard, smooth and washable surface;
- (g) Wards/ rooms are individually and naturally ventilated with windows.
- (h) All windows in rooms must be adequately protected or guarded to ensure the safety of service users.
- (i) Rooms must be adequately lighted and emergency lighting be provided throughout the premises.
- (j) In cold weather conditions, the premises should be adequately heated throughout with suitable means of heating. An approved, suitable and safe artificial heating system must be provided.
- (k) Heating facilities utilized should not emit any offensive and harmful gases, fumes and odours.
- (l) Proper signage must be available on the premises.

(4) Ward requirements

- (a) Safe, well maintained and comfortable indoor facilities are provided for patients.
- (b) Adequate sluicing (wash up) facilities must be available in each floor, taking onto account the beds on the floor.
- (c) A dressing room fitted with adequate sterilizing equipment, containing impervious shelves for the storage of sterile drums and other equipments should be available, and used exclusively for:
 - (i) The sterilization or preparation of equipments, dressings and other equipment; and
 - (ii) The treatment of patients.
- (d) A ward kitchen equipped with a sink with constant supply of potable hot and cold running water, a refrigerator, a stove, storage facilities for cutlery and crockery, is provided, unless all needs of that floor are adequately catered for by the premises main kitchen.
- (e) The ceilings in each ward must have a minimum height of 3m, except in the case of existing nursing homes where the height may be a minimum of 2.6m, provided that the floor area of the ward is sufficient to provide at least 22m³ of air space for every bed.
- (f) The size of the floor area must provide a minimum of not less than 8.5m² of floor space for every bed;
- (g) No bed must be placed within 750mm of any wall on the side of a bed or wall fixture, other than a wash-hand basin or central radiator or within 1m of any other bed.
- (h) Spaces left between the beds must not be obstructed in any manner;
- (i) The number of the ward as well as the number of patients that may be accommodated in the ward is displayed on the outside door of each ward.
- (j) An adequate number of easily accessible wash-hand basins supplied with a constant supply of hot and cold running water must be provided in each ward for scrubbing-up.
- (k) The floors of wards should be constructed of concrete, hardwood or other durable material and brought to a smooth finish.

(5) Ablution and wash up facilities

- (a) Adequate and accessible toilet, bathing and washing facilities must be provided to meet the needs of patients.
- (b) At least one toilet and at least 1 (one) bath must be provided for at least every 12 (twelve) patients, **ratio 1:12** on the premises.
- (c) In calculating the number of toilets and bathrooms, no account must be taken of any toilet contained in a bathroom.
- (d) Every toilet facility should be equipped with an adequate flushing system and must be maintained in proper working condition.
- (e) Adequate and sufficient sluice-rooms are available in each ward. Each ward must be equipped with a sluice room which must be a minimum of 7.5 m² in area and a minimum width of 2.2 m².
- (f) Every sluice room opens into a well-ventilated passage and must be accessible to every ward which it serves.
- (g) Sluice-rooms must be equipped with a sluice-pan of approved design and equipped with an adequate flushing system maintained in proper working order.
- (h) Approved storage shelves should be provided in the sluice-room for the storage of bed-pans or other sanitary utensils.
- (i) An impervious receptacle of adequate size with a tight fitting lid must be provided for the reception of soiled dressings; and for the:
 - i) Storage and cleansing of bed-pans and other sanitary utensils;
 - ii) Temporary deposit of soiled dressings; and
 - iii) Testing of urine.
- (j) At least 1 (One) toilet, bath/shower should be available for every 12 members of staff, **ratio 1:12** and designated by sex;
- (k) In calculating the number of toilets for staff members, no account should be taken of any toilet contain in a bathroom.

(6) Storage facilities

- (a) Storage facilities must be provided for the storage for medicines and drugs and such facilities should be kept locked at all times except when medicines or drugs are being removed or returned to it.
- (b) Additional storage facilities must be provided for the storage of poisons, habit-forming drugs and potentially dangerous drugs.
- (c) Storage facilities must be provided for the storage of clean linen and the storage of soiled linen prior to collection and cleaning.
- (d) A room reserved exclusively for sorting and handling linen must be provided on the premises.
- (e) A room for the storage of any spare equipment, including heavy equipment and gas cylinders should be provided.
- (f) Separate storage facilities must be provided for storage of hazardous chemicals, such storage facilities must be marked as such, and locked at all times.
- (g) Storage rooms should be equipped with adequate moveable shelving made of impervious material.
- (h) Every shelf in a store room must be a minimum height of 225 mm above the floor.
- (i) All storerooms and store facilities must be kept clean at all times and cleaned routinely at least once every week.
- (j) Adequate storage facilities for the storage of another equipments or materials reasonable necessary to store on the premises for the day to day running of the nursing home must be provided.

(7) General requirements

- (a) Separate residential accommodation should be provided for staff required who reside on the premises.

- (b) Separate bathrooms and toilets must be provided for domestic and residential staff. The bathrooms should be fitted with porcelain enamel or cast-iron enamel baths with a supply of hot and cold running water.
- (c) Kitchen facilities must be provided on the staff accommodation for the safe preparation of foodstuffs.
- (d) Adequate accommodation for the administrative purposes of the nursing home must be provided.
- (e) A laundry room should be provided on the premises for the hygienic washing and handling of laundry.
- (f) A fire escape, the stairs of which are a minimum of 1m wide with landings at each turning point, measuring a minimum of 2.2m by 1.7m should be affixed on the premises.
- (g) Fire control equipment, approved by the relevant authority of a specific local authority should be provided. An emergency stand-by electrical plant must be provided which is adequate to provide an immediate alternative supply of electricity to any part of the nursing home to ensure the continued operation, throughout the period of the of the failure of all electrically operated appliances and equipment which, in the opinion of an EHP of any relevant professional, are or may be lifesaving.
- (h) A rodent/pest control programme must be place on the premises to prevent any infestations of rodents/pests, and is in line with the requirements as set out in Chapter 3 of this document.

6. REQUIREMENTS FOR MATERNITY HOMES

Maternity homes must comply with the following Norms and Standards:

(1) Registration and issue of Health Certificate for maternity home

- (a) The premises must promote the health and safety of patients;
- (b) The premises must be operated in terms of a permit or registration by the relevant local authority, authorizing that activity;
- (c) The premises must be operated under a valid Health Certificate issued by an EHP, to the effect that the premises comply with the Norms and Standards for Nursing Homes;
- (d) A health certificate issued by an EHP to the effect that the premises comply with EH requirements shall be issued and must indicate the following:
 - (i) The details of the health certificate holder, owner/person in charge of the child care center;
 - (ii) The physical address of the premises;
 - (iii) The identity number of the certificate holder;
 - (iv) A certificate number;
 - (v) Number of beds/patients that can be accommodated on the premises;
 - (vi) Services offered on the premises;
 - (vii) Applicable prohibitions;
 - (viii) Date of issue; and
 - (ix) The validity period (one calendar year from the date of issue).
- (e) The health certificate must be displayed in a conspicuous manner on the premises, so as to be clearly visible to everyone entering the premises;
- (f) A health certificate shall not be transferable from one owner to another, or from one premises to another;
- (g) Health certificates must be renewed by an EHP:
 - (i) Annually;
 - (ii) In case of change of ownership;
 - (iii) In the case of renovations/additions to the existing premises; and
 - (iv) If the services moves from one premises to another.
- (h) A health certificate may be withdrawn by an EHP where conditions of the premises are such that they pose a hazard or risk to the service users.

(2) Structural requirements

- (a) Walls should be constructed of brick, stone, concrete or other impervious material.
- (b) Except where glazed or glass bricks, glazed tiles or other similar material with a hard and smooth surface have been used, the internal walls of operating theaters, sterilizing rooms, wards, labour wards, wash up rooms, dressing rooms, duty-rooms, kitchens, sculleries, food store rooms, bathrooms, toilets and mortuaries must be :
 - (i) Plastered and brought to a smooth finish; and
 - (ii) Covered with a light coloured paint, adequate plastic finish or other approved material.
- (c) Floors must be constructed of concrete, hardwood or other durable material and brought to a smooth finish.
- (d) The angles formed between each floor and wall, and between two walls, in operating units, wards, labour wards, sluice rooms, milk rooms, bathrooms, toilets and kitchens should be rounded angles.
- (e) Floors of operating theaters, sterilizing rooms, wards, labour wards, wash up rooms, dressing rooms, duty-rooms, kitchens, sculleries, food store rooms, bathrooms, toilets and mortuaries should be made of cement, concrete or other impervious material and brought to a smooth finish.
- (f) Ceilings should be constructed so as not to attract dust and in the case of operating theaters, labour wards, sterilizing rooms and wash up rooms, the ceiling must have a hard, smooth and washable surface.
- (g) Wards/ rooms should be individually and naturally ventilated with windows.
- (h) All windows in the rooms must be adequately protected or guarded to ensure the safety of service users.
- (i) Rooms should be adequately lighted and emergency lighting must be provided throughout the premises.
- (j) Heating facilities that are likely to emit offensive and harmful gases, fumes and odours are not allowed.

(3) Ward requirements

- (a) Adequate and suitable ward facilities must be provided on the premises.
- (b) Separate areas must be provided for:
 - (i) A nursery;
 - (ii) A labour ward;
 - (iii) A delivery ward; and
 - (iv) A milk room.
- (c) Every delivery room must be equipped with a scrubbing-up basin, provided with a constant supply of cold and hot running potable water, the taps of which should be designed to be operated by elbow or foot.
- (d) Newborn babies must be kept in the nursery room except when brought to their mothers for feeding or other purposes, except that the infants may be kept with their mother at all times if there are no more than two maternity cases in a ward.
- (e) The floor area of the maternity ward in which a maximum of two maternity cases are accommodated, must be of a minimum of at least 10m² for each bed and crib.
- (f) A minimum of not less than 2m² floor space must be provided in every nursery for the accommodation of baby's cribs. One (1) separate crib must be provided for each baby.
- (g) The cribs should be placed a minimum of 750mm from each other and a minimum of 300mm from any wall on the side of the crib or wall fixture, excluding a wash-hand basin or a central heating radiator.
- (h) A baby's bathing and changing room, fitted with adequate baby bathing equipment, must adjoin every nursery room.
- (i) Every milk room must be equipped with:
 - (i) A sink made of porcelain, enamel or stainless steel and a hand wash basin with a supply of cold and hot running potable water for washing of milk bottles;

- (ii) A refrigerator for the storage of milk and milk bottles;
- (iii) Tables with impervious and easily cleanable surfaces;
- (iv) Adequate equipment for sterilizing utensils used in the handling of milk; and
- (v) In case of maternity home, the sluice-rooms must have adequate apparatus for sterilizing bed-pans by steam or boiling water and in the case of a nursing home carrying on a general practice, adequate apparatus for cleaning of bed-pans.

(4) Operating theatres

- (a) Adequate operating theatre exclusively for surgical operations for patients in need of surgical treatment must be provided on the premises.
- (b) Every maternity home that receives patients in need of surgical treatment must provide an operating theatre used exclusively for surgical operations.
- (c) The operating theatre must be provided with:
 - (i) A scrubbing up room or bay, which must immediately adjoin the operating room;
 - (ii) A sterilizing room;
 - (iii) A theatre sluice room; and
 - (iv) A recovery room.
- (d) The sterilizing door, which adjoins an operating room, must be separated by a swing door or other approved type door;
- (e) The sluice-room, sterilizing room and the recovery room must be reasonably accessible from the operating theatre;
- (f) One sluice room, sterilizing room and recovery room may be used to serve more than one operating theatre.

(5) Toilet and ablution facilities

- (a) Adequate toilet and shower/bath facilities that meet the needs of patients and staff members must be provided.
- (b) All bathrooms must be fitted with porcelain, enamel or cast iron enamel baths with a constant supply of cold and hot running potable water.
- (c) At least 1 (one) bath should be provided for at least every 12 (twelve) patients on the premises **ratio 1:12**.
- (d) At least 1 (one) toilet should be provided for at least every 12 (twelve) patients on the premises **ratio 1:12**;
- (e) At least 1 (one) toilet and bath/shower must be provided for at least every 12 (twelve) nursing staff, domestic staff and other employees on the premises **ratio 1:12**.
- (f) In calculating the number of toilets for patients or for the staff, no account must be taken of any toilet contained in a bathroom.
- (g) Every toilet facility must be equipped with an adequate flushing system and all toilets, bathrooms or showers are maintained in good working order and have running water provided.
- (h) All toilets and ablution facilities must be kept clean at all times, floors scrubbed and bowls cleaned and disinfected daily.
- (i) Separate bathrooms and toilets must be provided for domestic and residential staff. The bathrooms should be fitted with porcelain enamel or cast-iron enamel baths with a supply of hot and cold running water.
- (j) At least 1 (one) toilet must be provided for every 12 members of staff, **ratio 1:12**.
- (k) At least 1 (one) bathroom or shower must be provided for every 12 members of staff, **ratio 1:12**.
- (l) In calculating the number of toilets for staff members, no account must be taken of any toilet contained in a bathroom.
- (m) Every toilet facility must be equipped with an adequate flushing system maintained in proper working condition.
- (n) The bathrooms and toilets must be designated for each sex.

(6) Water Supply

- (a) Water storage facilities, the reservoirs, borehole and tanks must be adequately protected from contamination.
- (b) Water in reservoirs and storage tanks must be regularly tested for suitability for consumption. Water source e.g. borehole must be effectively protected against contamination.
- (c) To prevent organisms that grow in temperatures between 25⁰C and 50⁰C e.g. Legionella spp, hot water temperatures must be kept above 50⁰C and cold water below 20⁰C.
- (d) The water supply system that includes the sources (if applicable), pumps, purification plant, storage facilities and the distribution network linked to health facilities must be maintained in good working order.

(7) Sluice-rooms

- (a) Sluice-rooms must be provided in every ward.
- (b) Each sluice-room should be a minimum of at least 7m² in area and have a minimum width of 2.2 meters and be accessible to every ward which it serves, and must be equipped with smooth and impervious shelves or other adequate apparatus for the storage of bed-pans or other sanitary utensils.
- (c) Adequate apparatus must be provided for the cleaning and sterilizing of bed-pans.
- (d) Receptacles equipped with a tight fitting lid should be available for the storage of soiled dressings.
- (e) All sluice rooms must be kept clean at all times.

(8) Storage facilities

- (a) Adequate storage facilities must be available for storage on the premises.
- (b) Storage facilities must be provided for storage of medicines and drugs and such facilities should be kept locked at all times except when medicines or drugs are being removed or returned to it.
- (c) Additional storage facilities should be provided for the storage of poisons, habit-forming drugs and potentially dangerous drugs.
- (d) Adequate storage facilities must be provided for the storage of any spare equipment, including particularly heavy equipment and gas cylinders. The equipment must be stored in manner so as not to obstruct any passages, entrances or exits to the premises.
- (e) A storage room and/or facility should be used exclusively for the storage and distribution of those articles intended to be stored in such a room/facility.
- (f) Storage rooms should contain adequate moveable shelving made of impervious material.
- (g) Every shelf in a store room should have a minimum height of 225 mm above the floor.
- (h) All storerooms and store facilities must be kept clean at all times and cleaned routinely at least once every week.
- (i) Adequate storage facilities for any other articles that are reasonable necessary to store on the premises for the day to day running of the nursing home must be provided.

(9) General Requirements

- (a) Adequate sleeping accommodation and kitchen facilities must be provided for the resident nursing staff.
- (b) Adequate facilities must be provided for the sterilization of instruments where required.
- (c) Adequate accommodation for the administrative purposes must be provided on the premises.
- (d) Laundry facilities must be provided on the premises, for laundering of soiled linen and other items requiring laundering.
- (e) A separate linen room, containing adequate cupboards or shelves for the storage of linen must be provided.
- (f) A fire escape, the stairs of which must be a minimum of 1m wide with landings at each turning point, measuring a minimum of 2.2m by 1.7m should be affixed on the premises.
- (g) Fire control equipment, approved by the relevant authority of a specific Local Authority must be provided and maintained.
- (h) An emergency stand-by electrical plant should be provided which must be adequate to provide an immediate alternative supply to electricity to any part of the maternity home to ensure the continued

operation, throughout the period of the of power failure to operate appliances and equipment which, in the opinion of an EHP of any relevant professional, are or may be lifesaving.

- (i) A pest/vector control program must be in place on the premises in line with specifications set out in Chapter 3.

7. STANDARDS FOR OLD AGE HOMES / HOMES FOR THE AGED

Old aged homes must comply with the following Norms and Standards;

(1) Registration and Issue of Health Certificate for maternity home

- (a) The premises should be operated in terms of a permit or registration by the relevant authority, authorizing that activity.
- (b) The premises are complies with the requirements of the Older Persons Act, 2006 (Act No. 13 of 2006), as well as the Norms and Standards for acceptable levels of services to older persons and service standards for residential facilities, published by the Department of Social Development.
- (c) The premises must be operated under a valid Health Certificate issued by an EHP, to the effect that the premises comply with the Norms and Standards for Old Age Homes.
- (d) The premises must promote the health and safety of residents or older persons;
- (e) A health certificate issued by an EHP to the effect that the premises comply with EH requirements shall be issued and indicate the following:
 - (i) The details of the health certificate holder, owner/person in charge of the child care center;
 - (ii) The physical address of the premises;
 - (iii) The identity number of the certificate holder;
 - (iv) A certificate number;
 - (v) Number of beds/patients that can be accommodated on the premises;
 - (vi) Services offered on the premises;
 - (vii) Prohibitions applicable;
 - (viii) Date of issue; and
 - (ix) The validity period (one calendar year from the date of issue).
- (f) The health certificate must be displayed in a conspicuous manner on the premises, so as to be clearly visible to everyone entering the premises.
- (g) A health certificate shall not be transferable from one owner to another, or from one premises to another.
- (h) Health certificates must be renewed by an EHP:
 - (i) Annually;
 - (ii) In case of change of ownership;
 - (iii) In the case of renovations/additions to the existing premises; and
 - (iv) If the services moves from one premises to another.

(2) Structural and physical facilities

- (a) Walls the of premises should be constructed of brick, stone, concrete or other impervious material, plastered and brought to a smooth finish; and covered with a light coloured paint, adequate plastic finish or other approved material.
- (b) Floors should be constructed of concrete, hardwood or other durable material and brought to a smooth finish.
- (c) Ceilings must be constructed so as not to attract dust and in the case of operating theaters, labour wards, sterilizing rooms and wash up rooms, the ceiling must have a hard, smooth and washable surface.
- (d) Rooms should be adequately and individually ventilated and illuminated.
- (e) All windows in the rooms should be adequately protected or guarded to ensure the safety of service users.
- (f) Heating facilities that are likely to emit offensive and harmful gases, fumes and odours are not allowed.

(g) Proper signage must be available on the premises.

(3) Accommodation requirements

- (a) Suitable accommodation must be provided for each service user on the premises in line with the requirements of the Older Persons Act, 2006 (Act No.13 of 2006) which meets minimum space as follows:
- (i) Single rooms must have a floor space of at least 9m² and double rooms with a floor space of 16m² for people sharing (double room).
 - (ii) For ward type accommodation, a floor space of at least 7.5m² must be provided for every service user accommodated in the ward.
 - (iii) For ward-type accommodation, an unobstructed space of at least 1.2m² should be maintained between beds, to enable movement of carers and equipment.
 - (iv) Single rooms accommodating wheel chair users must have at least 12m² usable floor space.
 - (v) The rooms and/wards must be cleaned daily and kept hygienic and free from offensive odours.
 - (vi) For frail care patients, a maximum of 4 (four) beds should be placed per room, with a floor space of 7.5m² per bed.

(4) Dining areas, lounges/sun porches and corridors/passages/ staircases

- (a) The dining area must have a minimum floor space of at least 1.2m² for every service user.
- (b) The lounge area or sun porches area have a minimum floor space of at least 1.5m² for every service user.
- (c) All floor surfaces must be equipped with a non-slip surface, and all carpets, mats and other loose coverings should be suitably and securely secured to the floors and adequately illuminated.
- (d) Corridor area of least 1.8m wide must be provided with a hand railing along the length of at least one wall.
- (e) All corridors, staircases, steps and ramps must be adequately eliminated and fitted with effective ramps.

(5) Toilet and ablution facilities

- (a) Adequate and accessible toilet, bathing and washing facilities must be provided to meet the needs of service users in line with the Older Persons Act, 2006 (Act No. 13 of 2006).
- (b) At least 1 (one) toilet and one bath should be provided for at least every 8 (eight) service users on the premises **ratio 1:8**. Where suitably adapted en-suite toilet and bathing/shower are provided in the user's rooms, these rooms can be excluded from the calculation. The toilet facilities should be designed for use by one person at a time.
- (c) Each service user must have access to toilet facility within close proximity of his/her private accommodation or where they are cared for.
- (d) Additional toilet facilities must be provided, accessible and clearly marked next to the lounge and dining areas for use by service users.
- (e) In calculating the number of toilets, no account must be taken of any toilet contained in a bathroom.
- (f) Every toilet should be equipped with an adequate flushing system and all toilets, bathrooms or showers should be maintained in good working order.
- (g) All toilets must be kept clean at all times; floors scrubbed and bowl cleaned and disinfected daily.
- (h) Adequate and accessible toilet, wash-up and bath facilities should be provided for staff members employed on the premises.
- (i) All bathrooms must be fitted with porcelain, enamel or cast iron enamel baths with a constant supply of cold and hot running potable water.
- (j) Walls of the toilet facilities should be constructed of a smooth surface and be light coloured.
- (k) Toilet facilities must be adequately illuminated and ventilated.
- (l) Separate toilet facilities and hand wash basin should be provided on the premises, for visitors.
- (m) Every toilet facility must be equipped with an adequate flushing system and should be maintained in proper working condition.
- (n) Bathrooms and toilets must all be designated for each sex.
- (o) The toilet areas should be adequately illuminated and ventilated.

- (p) The bathroom complex must be painted with a light coloured durable, washable paint.
- (q) Floors should be covered with a non-slip, non-shining surface.

(6) Staff facilities

- (a) Work station for staff members must be equipped with hand wash basins, with a supply of cold and hot running water to prevent cross infection.
- (b) Separate toilet facilities must be provided for staff members on the premises.
- (c) Separate residential accommodation should be provided for staff required to reside on the premises.
- (d) Adequate sleeping accommodation, toilet and hand wash facilities must be provided for the residential or domestic staff.
- (e) Separate bathrooms and toilets must be provided for domestic and residential staff. The bathrooms must be fitted with porcelain enamel or cast-iron enamel baths with a supply of hot and cold running water.
- (f) At least 1 (one) toilet should be provided for every 12 (twelve) members of staff, **ratio 1:12**.
- (g) At least 1 (one) bathroom or shower is provided for every 12 members of staff, **ratio 1:12**.
- (h) In calculating the number of toilets for staff members, no account must be taken of any toilet contain in a bathroom.
- (i) Every toilet facility must be equipped with an adequate flushing system and maintained in proper working condition.
- (j) The bathrooms and toilets must be designated for each sex.

(7) Examination rooms

- (a) A hand wash basin with a supply of cold and hot running water should be available in all examination rooms.
- (b) Floors should be constructed of a non-slippery floor to prevent accidental slipping.
- (c) Walls must be painted with a light coloured washable paint.
- (d) The room must be adequately equipped for first aid for emergency situations.

(8) Sluice rooms

- (a) Sluice rooms must have a minimum floor area of 7.5m² and a minimum width of 2.5m.
- (b) The sluice room must be well ventilated and illuminated.
- (c) The rooms must be equipped with impervious shelves.
- (d) The rooms must be equipped with hand wash basin for washing of hands by staff and hot and cold running water as well as a combination of a hopper sink with a wash facility for bedpans/urinals.
- (e) The wall area behind the slop hopper sinks and hand wash basins should be equipped with a back splash plate or should be tiled, to facilitate easy cleaning.
- (f) Floors must be constructed of an easy cleanable surface.
- (g) Separate storage space should be provided for urinalysis testing.

(9) Storage facilities

- (a) Adequate storage facilities must be provided for:
 - (i) Storage of medicines and drugs and such facilities and should be kept locked at all times except when medicines or drugs are being removed or returned to it,
 - (ii) Storage of poisons, habit-forming drugs and potentially dangerous drugs.
 - (iii) Storage room must contain adequate moveable shelving made of impervious material.
- (b) Every shelf in a store room should be a minimum height of 225 mm above the floor.
- (c) All storerooms and store facilities must be kept clean at all times and cleaned routinely at least once every week.
- (d) Individual lockable cupboards should be available for storage of each resident's personal items.
- (e) Adequate storage facilities must be provided for the storage of any spare equipment, including particularly heavy equipment and gas cylinders. The equipment must be stored in manner so as not to obstruct any passages, entrances of exits to the premises.

(10) General Requirements

- (a) Measures should be taken for infection control and to prevent spread of infection and communicable diseases.
- (b) All areas of the premises should be maintained in good condition, including the kitchen equipment, laundry machinery; outdoor steps, pathways; gardening equipment to ensure a safe environment for the service users.
- (c) Separate residential accommodation should be provided for staff required to reside on the premises.
- (d) Adequate accommodation for the administrative purposes must be provided on the premises.
- (e) Adequate storage facilities for articles that are reasonable necessary to store on the premises for the day to day running of the nursing home should be provided.
- (f) A fire escape, the stairs of which are a minimum of 1m wide with landings at each turning point, measuring a minimum of 2.2m by 1.7m should be affixed on the premises.
- (g) Fire-fighting and control equipment, approved by the relevant authority of the relevant local authority must be provided and maintained on the premises.
- (h) An emergency stand-by electrical plant is provided which is adequate to provide an immediate alternative supply of electricity to any part of the old age home to ensure the continued operation, throughout the period of the of the failure of all electrically operated appliances and equipment which, in the opinion of an EHP of any relevant professional, are or may be lifesaving;
- (i) Appropriate first aid emergency equipment should be available on the premises.
- (j) A vector control program must be in place on the premises (in line with requirements as set out in Section 18 of this norms and standards.
- (k) Landry area should be available for laundering of linen or other soiled articles on the premises and facilities used in connection with laundering of linen on the premises are compliant with the requirements as set out in section 18 of this document.
- (l) A separate linen room, containing adequate cupboards or shelves for the storage of linen must be provided on the premises.
- (m) If an outside contractor is utilized for laundry purposes, it must be done in an approved laundry by a qualified or registered service provider.

8. STANDARDS FOR SCHOOL PREMISES

School premises must comply with the following Norms and Standards:

(1) Issue of a Health Certificate

- (a) The premises must comply with the requirements of the Children's Act with regards to care for children.
- (b) The premises must be operated under a valid Health Certificate issued by an EHP, to the effect that the premises and general facilities comply with EH Norms and Standards for school premises.
- (c) The premises should promote the health and safety of students/children.
- (d) A valid health certificate must be issued by an EHP certifying that the premises comply with EH requirements. The certificate must indicate the following information:
 - (i) The name of the school;
 - (ii) The physical address of the premises;
 - (iii) Name and identity number of the owner or person in charge;
 - (iv) Number of children to be accommodated at the school;
 - (v) Date of issue; and
 - (vi) The validity period (one calendar year from the date of issue).
- (e) The health certificate must be displayed in a conspicuous manner on the premises, so as to be clearly visible to everyone entering the school premise.
- (f) A health certificate is not transferable from one owner to another, or from one school premises to another;
- (g) Health certificates must be renewed by an EHP:
 - (i) Every 2 (two) years;

- (ii) In case of change of ownership;
- (iii) In the case of renovations/additions to the existing premises; and
- (iv) If the school moves from one premises to another.

(2) Structural facilities

- (a) Walls should be constructed of brick, stone, concrete or other impervious material and must:
 - (i) Be plastered and brought to a smooth finish; and
 - (ii) Be covered with a light coloured paint.
- (b) Floors should be constructed of concrete, hardwood or other durable material and brought to a smooth finish.
- (c) Ceilings should be constructed so as not to attract dust and in the case of operating theaters, labour wards, sterilizing rooms and wash up rooms, the ceiling must have a hard, smooth and washable surface.
- (d) Classrooms must be adequately ventilated and illuminated in compliance to the National Building Regulations and the Building Standards Act, 1977 (Act No. 103 of 1977).
- (e) The school premises should be equipped with outdoor shaded areas to prevent children from being exposed to excessive heat/sun exposure during play time. The planting of trees around the premises is encouraged.
- (f) Adequate floor space of at least 1.5-2 m² per child should be available per classroom.
- (g) The school premises should be enclosed with an approved means of enclosure, such as a fence, bricks or other approved material.
- (h) Entrance and exit should be controlled so as to prevent unauthorized entry to the school premises.
- (a) An outdoor play area/yard should be available for outdoor activities on the school premises.

(3) Toilet and ablution facilities

- (a) Adequate toilet and wash up facilities that meet the needs of pupils and staff members on should be available on the school the premises.
- (b) At least 1 (one) toilet facility should be available for every 25 children **ratio 1:25**, and in addition at least 1 (one) urinal is available for every 50 boys **ratio 1:50**.
- (c) The school toilet facilities should be equipped with an adequate flushing system and running water.
- (d) At least 1 (one) hand wash basin should be available for every 25 (twenty) children **ratio1:25** on the school premises, equipped with a constant supply of running water.
- (e) Hand wash basins should be located in or immediately adjacent to the toilets.
- (f) If non-waterborne toilets are utilized, Ventilated Improved Toilets are recommended.
- (g) If pit toilets are used, the design of the pit toilets should be constructed in such a manner as not to cause harm or injury to the children.
- (h) Pit toilets should be so structured as to be able to be used by small children (reduced pots size and height), and doors should be open-able on the outside.
- (i) The pit toilets should be maintained in good order and cleaned regularly to prevent smells and flies going in and out of the toilet facilities.
- (j) Young children should not use pit toilet unaccompanied.
- (k) Children must be educated on hand washing after visiting the toilet.
- (l) Separate toilets and hand wash facilities must be provided for staff members on the premises. Toilet and washing facilities for staff may also open for use by visitors. At least 1 (one) toilet facility and at least 1 (one) hand wash basin should be provided for every twelve staff members on the premises **ratio1:12**.
- (m) Staff toilets should be separated by gender.
- (n) Toilet facilities must be properly illuminated and ventilated in compliance with the National Building Regulations and the Building Standards Act, 1977 (Act No. 103 of 1977).
- (o) Toilets should be easily accessible to all, including staff and children with disabilities - **no** more than 30 m from all users. Male and female toilets should be completely separated.
- (p) Toilets must provide privacy and security.
- (q) Toilet facilities should be kept unlocked at all times during school hours.

- (r) Toilets must be cleaned daily and wherever dirty, with a disinfectant being used on all exposed surfaces. A cleaning and maintenance plan should be in place for cleaning and maintenance of all toilets.
- (s) All toilets facilities should be designated/ separated by gender.
- (t) An adequate supply of soap and toilet paper should be maintained in the toilet facilities at all times.

(4) Washroom facilities boarders/residential pupils and staff

- (a) Facilities for bathing and showering should be provided on the premises for residential students and staff on the premises.
- (b) Water closets and/or hand wash basins, baths and/showers should be provided and easily accessible to the sleeping accommodation.
- (c) All wash up facilities should be separately provided for male and female boarders.
- (d) At least 1 (one) bath/shower and should be provided for every twenty pupils or staff members on the premises **ratio1:20** and or at least 1 (one) shower is available for every 20 pupils or staff members.
- (e) Wash-up facilities should be separated for pupils and staff, and separate wash-up facilities should be available for boys and for girls. At least one shower should be accessible for females with disabilities and one for males with disabilities.
- (f) A supply of cold and hot running water should be available in the wash rooms.
- (g) If no running water is available on the premises, a minimum of 25 (twenty) liters per person per day for all residential school children and staff should be available and kept and stored hygienically on the premises for all drinking, personal hygiene, food preparation, cleaning and laundry.
- (h) Drinking water must be adequately stored and protected against contamination by flies, dust or animals.

(5) Water supply

- (a) A reliable water point, with soap or a suitable alternative, must be available at all the critical points within the school, particularly in toilets and kitchens.
- (b) A reliable drinking-water access points should be accessible by staff and school children, including those with disabilities, at all times.
- (c) If no running water is available on the premises, a minimum of 5 liters per person per day for non-residential children and staff must be kept and stored hygienically on the premises for all purposes (drinking, personal hygiene/hand washing and cleaning. For boarding schools, a minimum of 20 liters per person per day for all residential school children and staff must be available on the premises for drinking, washing up, cleaning and food preparation purposes.;
- (d) Hand washing is encouraged in children. Simple and low-cost hand washing points can be made in various ways, are utilised for areas with no running water:
 - (i) a pitcher of water and a basin (one person can pour the water for another to wash their hands; the wastewater falls into the basin);
 - (ii) a small tank (e.g. an oil drum) fitted with a tap, set on a stand and filled using a bucket, with a small soak away or a basin under the tap to catch the wastewater; and
 - (iii) a "tippy-tap" made from a hollow gourd or plastic bottle that is hung on a rope and that pours a small stream of water when it is tipped.

(6) Accommodation for pupils and staff members at boarding schools

- (a) Adequate sleeping, living and accommodation facilities must be provided for boarders and should comply with the requirements of the National Building Regulations and the Building Standards Act, 1977 (Act No. 103 of 1977), with regards to ventilation and lighting.
- (b) Separate sleeping accommodation must be provided for residential male and female pupils.
- (c) Separate sleeping and living accommodation should be provided for staff on the premises.
- (d) For dormitories, a floor space of not less than 4.2 m² must be provided for each pupil with a distance of at least 0.9 m maintained between each beds.
- (e) For cubicles, a cubicle for a single pupil with its own window and a minimum floor area of 5.0 m²; must be provided.
- (f) Single bed bedroom for a single pupil must have a minimum floor area of 6.0 m².

- (g) Sleeping accommodation must be kept clean and in good repair.
- (h) A floor space of not less than 2.3 m² should be available in all living accommodation for each pupil and staff on the premises.
- (i) Adequate storage facilities must be provided for the storage of personal belongings of residential pupils and staff, which may include a lockable locker.
- (j) Storage facilities should be provided for the storage of linen.

(7) Sick Bay facilities

- (a) An adequate and equipped sick room must be provided for isolation of sick pupils on the premises in line with the requirements of the Children's Act.
- (b) One more rooms should be available to be utilized as sick bays for the isolation of any pupil that may fall ill. The office may be utilized for this purpose.
- (c) The area must be provided/ equipped with a hand wash basin with a supply of running water.
- (d) An approved, lockable and adequately equipped first aid kit should be made available in the sick bay area for treatment of minor injuries or illnesses.
- (e) The first aid kit must include, amongst other equipment:
 - (i) Adhesive bandages;
 - (ii) Sterile gauzes;
 - (iii) Medical tape;
 - (iv) Scissors;
 - (v) A cardiopulmonary mouthpiece protector;
 - (vi) Liquid soap;
 - (vii) First aid instruction book;
 - (viii) A thermometer; and
 - (ix) Disposable gloves.
- (f) The sickbay must be equipped with a bed or water proof mattress.
- (g) Proper supervision should be provided at all times for a pupil placed in the sick bay.

(8) Medical care for pupils and students

- (a) Adequate, timely and appropriate medical attention must be provided for pupils requiring medical care on the school premises (in line with the requirements of the Children's Act.
- (b) For any pupil who becomes ill or has suffered an injury requiring medical attention, the school:
 - (i) Immediately assess the injury/illness and if minor, and provide the necessary care and treatment for minor ailments in the sickbay area;
 - (ii) Call for medical assistance, if necessary; and notify the parent/guardian of the pupil;
 - (iii) Immediately notify an EHP/ relevant health authority in an event of the illness being suspected of being a communicable disease.
- (c) A telephone should be available on the school premises for notification of a parent or guardian where applicable and to summon medical assistance in accordance with paragraph b(ii).
- (d) Pupils suspected of suffering from a communicable disease must be excluded from attending preschool if in the opinion of an EHP or relevant health professional, the person poses a health risk to other pupils and is capable of communicating the disease.
- (e) A list of emergency telephone numbers which must include, fire brigade, ambulance, outbreak response, clinic, hospital, doctor and police should be made available and easily accessible on the premises.
- (f) Adequate provision should be made for disposable gloves and disinfectants to protect staff and children and to disinfect contaminated areas and surfaces when dealing with blood related illnesses and injuries; all health care risk waste must be handled and disposed off safely.
- (g) All areas and surfaces where treatment of a child or caregiver for an illness of injury has taken place must be disinfected immediately;
- (h) The adequate training of care givers on basic first aid is recommended.

(9) Vector control

- (a) The density of vectors in the school must be minimized.
- (b) School children and staff must be protected from potentially disease-transmitting vectors.
- (c) Vectors should be prevented from contact with school children and staff or substances infected with related vector-borne diseases.
- (d) Basic environmental control methods- such as proper disposal of excreta, food hygiene, drainage, solid-waste disposal and routine cutting back of vegetation - should be the basis of any strategy.
- (e) Mosquitoes and flies should effectively be excluded from buildings by covering opening windows with fly-screen and fitting self-closing doors to the outside. The use of chemical controls, such as residual insecticide spraying, in and around the school must be conducted in accordance with the specification as set out in Chapter 3 of this Norms and Standards.
- (f) Students and staff with vector-borne diseases such as malaria and typhus should be identified and treated rapidly. They should not attend school during the infectious period so that the related vectors do not transmit the disease from them to other people in the school.
- (g) Regular inspections are carried out to detect and treat body lice and fleas.
- (h) The school premises and, to the extent possible, the immediate surroundings of the school, must be kept free of faecal material to prevent flies and other mechanical vectors from carrying pathogens.

(10) General requirements

- (a) Reasonable measures must be taken to safeguard the health, safety and welfare of pupils on the school premises.
- (b) Pupils and staff must be adequately protected against fires, hot water installations, electrical fittings and appliances, heating appliances and any other objects that may be dangerous or constitute a hazard or injury on the premises.
- (c) Medicines, detergents, pesticides and other harmful substances should be stored in lockable places and access be given to employees responsible for utilizing such materials only.
- (d) The school premises must be kept clean at all times. The outside and inside areas should be free from sharp objects.
- (e) Waste water must be disposed off quickly and safely. Waste water disposal systems should be in place on the premises, in compliance to the relevant By-Laws of the Local Authority concerned.

9. STANDARDS FOR INITIATION / CIRCUMCISION SCHOOLS

Traditional male circumcision/ Initiation schools must comply with the following Norms and Standards:

(1) Structural facilities

- (a) Circumcision for children in initiation school must be conducted in line with the requirements of the Children's Act.
- (b) Structures and facilities should protect the health and safety of initiates.
- (c) A suitable structure must be so constructed as to protect initiates from environmental conditions (heat, cold, and rain) must be provided for living and sleeping purposes.
- (d) Food must be hygienically prepared in a clean area with clean utensils at all times, therefore a separate suitably constructed structure must be provided for preparation of meals.
- (e) There initiation school shall be located in such a manner as to allow easy access in cases of emergencies.

(2) Admission and entry for initiation

- (a) The age group of boys to be circumcised must be in line with the specifications as set out in the Children's Act. Chapter 2, Section 12 (8) prohibits circumcision of male children under the age of 16 except when performed for religious purposes or for medical reasons. The Children's Act also stipulates that male children older than 16 may be circumcised only with their consent and after proper counselling.
- (b) Persons 21 years and older may be admitted to initiation school voluntarily.

- (c) In a case where an initiate has entered the initiation school premises without the necessary consent of parents/guardian, he/she must be separated from the other initiates and should not be allowed to participate in any of the school's rituals/activities, until such time that the parents have been notified and permission has been granted.

(3) Water supply and sanitation

- (a) Potable water fit for human consumption must be provided for all uses (drinking, cooking, bathing, and washing) at every initiation school.
- (b) A minimum of 25 liters per person per day must be kept and stored hygienically on the initiation school premises for all purposes (drinking, personal hygiene and cleaning).
- (c) Drinking water must be adequately stored and protected against contamination by flies, animals and humans. Water storage containers should be covered with lids at all times.
- (d) Water storage containers must be kept clean at all times and emptied regularly for cleaning purposes.
- (e) Suitable sanitary facilities should be provided for use by initiates; either portable chemical closet or a safely and well-constructed pit toilet.
- (f) Containers used to store night soil should be emptied only in a toilet and cleaned after each use.

(4) Medical care for initiates

- (a) Prospective initiates must undergo a pre-circumcision medical examination by a medical doctor.
- (b) The Medical Officer of Health designated in particular area of a specific Province must provide a written permission for a school in that particular area.
- (c) The medical officer of health has a right of access to any occasion or instance where circumcision is performed or an initiate is treated.
- (d) The traditional practitioner/nurse must not expose any initiate to any danger or harmful situation and exercises reasonable care in the holding of the circumcision school.
- (e) All circumcisions must be conducted in a medically acceptable and humane manner.
- (f) The local district medical officer must be consulted by the traditional surgeon with the date on which circumcisions are expected to be conducted he/she will therefore prescribe and or advice on medical procedures to be followed to ensure the use of appropriate surgical instruments, as well as surgical procedures to be followed to ensure the health and safety of initiates. The traditional surgeon must at all times have the district medical officer on standby for referrals and in case of emergencies.
- (g) Circumcisions must only be conducted by a medical practitioner, or a traditional practitioner or any person authorized as a traditional surgeon.
- (h) All instruments, especially sharps used in connection with the circumcision procedures must be sterilized accordingly before each use.
- (i) Razor blades should only be used once, per individual.
- (j) An approved and adequately equipped first aid kit should be available for treatment of minor injuries or illnesses experienced by any initiate on the premises. The first aid kit include, amongst other equipment:
- (i) Adhesive bandages;
 - (ii) Sterile gauzes;
 - (iii) Medical tape;
 - (iv) Scissors;
 - (v) A cardiopulmonary mouthpiece protector;
 - (vi) Liquid soap;
 - (vii) First aid instruction book;
 - (viii) A thermometer; and
 - (ix) Disposable gloves.
- (k) The traditional surgeon and other assistants on the premises must undergo first aid training by an authorized service providers.
- (l) Wounds of initiates must be checked at least twice a day, and where there are signs of a septic wound, the initiate must be taken to the nearest health facility for further observation.

- (m) The traditional nurse should be equipped and trained on the use of body temperature detectors, to be able to monitor any initiate showing signs of fever, to ensure close monitoring for prevention of infections.
- (n) The traditional nurse must have access to a telephone at all times to be able to summon medical assistance as and when necessary, and to notify a parent/guardian/next of kin where applicable.

(5) Management of waste

- (a) General Waste must be stored properly on the premises and should be disposed off by trench or excavated holes. Burning of waste should be discouraged at all times.
- (b) Health care risk waste generated during circumcision (foreskins) must be disposed off properly, where possible arrangements should be made with the local health facility to ensure proper disposal.

(6) Food storage and preparation

- (a) If food are prepared and served on the premises, a designated food preparation area must be provided;
- (b) Food must be handled and prepared with utmost cleanliness (hands are washed before food preparation).
- (c) Contact between raw and cooked food must be avoided at all times.
- (d) Food must be cooked thoroughly.
- (e) Safe water and safe ingredients must be used in preparing food.
- (f) Food served should be safe for human consumption and protected from contamination.
- (g) The food preparation and storage must be kept clean.

(7) General requirements

- (a) The traditional surgeon, nurse or traditional leader must keep a register/journal of all admissions and discharges of all initiates on the premises. The journal/register contain the following information, in line with the Children's Act:
 - (i) The initiate's name and date of birth;
 - (ii) Name, address and contact numbers of the parent/guardian/ next of kin;
 - (iii) The name, address and contact numbers of a responsible person other than the parent or guardian who may be consulted in case of emergencies; and
 - (iv) The name, address and contact numbers of the initiate's family doctor, if available.
- (b) Consideration must be taken for environmental hygiene, other medical and nursing aspects of the initiation school and the general health conditions of the initiates during an inspection.

10. STANDARDS FOR ACCOMMODATION ESTABLISHMENTS

Accommodation establishments must comply with the following Norms and Standards:

(1) Issue of a Health Certificate

- (a) The premises must be operated under a permit or registration, authorizing that activity issued by the relevant Local Authority in terms of the relevant By-Laws.
- (b) The premises operated under a valid Health Certificate issued by an EHP, to the effect that the premises comply with the Norms and Standards for accommodation establishments.
- (c) The certificate must indicate the following:
 - (i) The business name of the accommodation establishment;
 - (ii) The physical address of the premises;
 - (iii) Name and identity number of the owner or person in charge;
 - (iv) No of beds that the premises can accommodate;
 - (v) Date of issue; and

- (vi) The validity period (one calendar year from the date of issue).
- (d) The health certificate must be displayed in a conspicuous manner on the premises, so as to be clearly visible to everyone entering the premises.
- (e) A health certificate is not transferable from one owner to another, or from one premises to another.
- (f) Health certificates must be renewed by an EHP:
 - (i) Annually;
 - (ii) In case of change of ownership;
 - (iii) In the case of renovations/additions to the existing premises; and
 - (iv) If the services moves from one premises to another.

(2) Structural facilities and accommodation requirements

- (a) Ceilings and walls of rooms must be constructed of a dust-free material.
- (b) Walls must be brought to a smooth finish.
- (c) Floors surfaces of kitchens, scullery, laundry, bathrooms, showers, ablution rooms, and toilets, should be constructed of concrete or other durable, impervious material brought to a smooth finish.
- (d) All rooms, passages, staircases, bathrooms, kitchen and other areas should be adequately ventilated and illuminated as per the provisions of the National Building regulations and the Building Standards Act.
- (e) Each room must have at least one exterior window, openable from the inside without any obstructions.
- (f) Disabled facilities must be provided on the premises, such as ramps to enable people with disabilities to move in and around the premises with ease.
- (g) Accommodation rooms must be kept clean at all times.
- (h) All employees that reside on the premises must be provided with sleeping facilities equipped with a bed.
- (i) Residential employees must be provided with separate sleeping facilities on the premises.

(3) Toilet and ablution facilities

- (a) Toilet facilities and hand wash basins – should be provided to meet the needs of guests, and should be equipped with a flushing system and an adequate supply of running potable water.
- (b) Bath and or showers should be provided and suitably placed in each room; otherwise it must be easily accessible to every occupier and designated for different sexes, in compliance to SANS 10400-P2010.
- (c) Suitable and effective means of drainage and sewage disposal connected to the municipal sewer must be in place and approved by the Local Authority concerned.
- (d) A waterborne sewage system connected to the municipal sewer, a septic tank or other approved disposal system must be utilized for sewage disposal, in compliant with the local authority's relevant By-Laws.
- (e) Drainages and sewage disposal systems or private sewage disposal systems should be maintained in proper operating condition and free from defects and be in compliance with relevant By-Laws of a specific Local Authority.
- (f) Toilet paper, soap and towel must be supplied adequately in the ablution facilities at all times.
- (g) All sanitary, ablution and water supply fittings must be kept clean and maintained in good working order at all times.
- (h) A container made of a durable and impervious material, equipped with a close-fitting lid should be provided in every toilet used by females for disposal of sanitary towels.
- (i) Staff on the premises should be provided with separate and adequate toilet and wash-up facilities. At least 1 (one) toilet and hand wash basin, bath/shower is provided for every 12 (twelve) employees on the premises **ratio 1:12**.

(4) Swimming pools and hot tubs

- (a) If hot tubs/swimming pool facilities are provided on the premises for use by the guests:

- (i) Management must frequently monitor the swimming pool on the premises for turbidity, residual disinfectant and pH values as well as microbiological parameters to ensure safety of guests.
- (ii) The pH of swimming pool water must be controlled to ensure efficient disinfection and coagulation, to avoid damage to the pool fabric and ensure user comfort. The pH should be maintained between 7.2 and 7.8 for chlorine disinfectants and between 7.2 and 8.0 for bromine-based and other non-chlorine processes.
- (iii) Management must ensure the sampling of bath tub/pool is conducted regularly for heterotrophic plate count, E Coli, Pseudomonas aeruginosa and legionella spp.
- (iv) Ensuring that children under the age of 10 years are accompanied by an adult at all times when utilizing the facilities.
- (v) The facilities must be kept clean and maintained in good working order.

(5) General hygiene requirements

- (a) Beds provided for guests must be maintained in a clean and sanitary condition and equipped with a mattress cover.
- (b) An adequate supply of mattress covers, pillows and other bedding must be provided and maintained in a clean and sanitary condition at all times.
- (c) Sheets, towels and pillow cases provided for guests should be laundered prior to each new guest or at least once per week for long term guests.
- (d) A laundry facility must be provided on the premises, equipped with facilities for washing, drying and ironing of linen and other material. Separate storage facilities must be provided for the storage of clean and soiled articles.
- (e) Adequate changing facilities must be provided for non-resident employees, and individual lockers should be provided for storage of personal belongings of each staff member.
- (f) The premises and all equipment used in connection with the operation of the facility must be maintained in a clean and sanitary good condition at all times.
- (g) A rodent/pest control program must be in place on the premises (in line with requirements as set out in Chapter 3 of this Norms and Standards, to prevent conditions that promote the entry, presence and harbourage of rodents, flies other pests.
- (h) Fire protection equipments, approved by the relevant authority of a local authority concerned is should be in place and complies with the relevant By-Laws.

11. STANDARDS FOR BEAUTY SALONS

Beauty salons must comply with the following requirements:

(1) Issue of a Health Certificate

- (a) The premises must be operated under registration or permit authorizing that activity issued by the local authority concerned, in line with relevant By-Laws of that local authority.
- (b) The premises must be operated under a health certificate issued by an EHP, to the effect that the premises comply with norms and standards for beauty salons.
- (c) A valid health certificate must be issued by an EHP certifying that the premises comply with EH requirements. The certificate must indicate the following:
 - (i) The business name of the beauty salons;
 - (ii) The physical address of the premises;
 - (iii) Name and identity number of the owner or person in charge;
 - (iv) Service provided on the premises and services prohibited;
 - (v) Date of issue; and
 - (vi) The validity period.
- (d) The health certificate must be displayed in a conspicuous manner on the premises, so as to be clearly visible to everyone entering the premises.
- (e) A health certificate is not transferable from one owner to another, or from one premises to another;
- (f) Health certificates must be renewed by an EHP:

- (i) Bi-annually;
- (ii) In case of change of ownership;
- (iii) In the case of renovations/additions to the existing premises; and
- (iv) If the services moves from one premises to another.

(2) Structural facilities

- (a) Internal walls must be constructed of an easily cleanable material and painted with a light coloured paint.
- (b) Floors should be constructed of an easily cleanable material brought to a smooth finish.
- (c) The ceiling must be constructed of a dust proof material.
- (d) The premises should be adequately ventilated and illuminated.
- (e) The clients and employees should be provided with toilet and ablution facilities on the premises. At least 1 (one) toilet and hand wash basin should be provided for every 12 employees **ratio 1:12** and at least one toilet and hand wash basin should be provided for every twenty clients on the premises **ratio 1:20**, and should be equipped with a constant supply of running water. The toilet facilities must be equipped with a flushing system.
- (f) All toilet facilities should be designated by sex.
- (g) Adequate wash up facilities with a constant supply of hot and cold running potable water should be in place for washing of hair.
- (h) An approved system for the disposal of waste water should be in place on the premises.
- (i) All working surfaces, including shelves, fixtures and table tops should be constructed of a durable, non-absorbent and easily cleanable material.
- (j) Adequate storage facilities must be provided for the storage of articles in connection with the services provided.
- (k) Where five or more persons of the same sex are employed on the premises, adequate separate change facilities should be provided for the storage of personal belongings.
- (l) The change rooms provided should contain an individual locker for every employee and a hand wash basin provided with a supply of hot and cold running potable water and an adequate supply of soap and disposable towel.
- (m) All refuse must be disposed off in an environmentally acceptable manner and in line with relevant By-laws of the local authority concerned.
- (n) A central refuse storage area must be provided on the premises for the storage of waste pending removal for disposal.
- (o) Adequate number of refuse bags and/ or bins should be provided for the collection of waste on the premises. The refuse bags must therefore be transferred to the central storage area.
- (p) The salon premises may not be used for the purpose of food preparation or for sleeping, unless separate food preparation area is provided for such different purpose.
- (q) The premises and all equipment used in connection should be maintained in good conditions and clean and sanitary at all times.
- (r) Employees on the premises should be equipped with adequate protective clothing. A water-proof apron, gloves and dust mask where necessary.
- (s) Animals are not permitted on the premises, unless in the case of a guide dog.
- (t) Instruments used in the salon should be kept clean and disinfected after each use.
- (u) All instruments that come into contact with blood must be sterilized after each use.
- (v) Plastic, cloth towels, aprons and caps must be washed daily after each use.
- (w) Disposable gloves and wipes must be disposed off after each use.
- (x) Adequate numbers of towels should be provided for various uses associated with the running of the business and must be kept clean.
- (y) Laundry facilities for the washing of all linen and towels should be provided on the premises.
- (z) If beverages are provided on the premises, a separate area should be provided equipped with a facility for cleaning crockery and utensils for that purpose.

(3) Waste management

- (a) All sharp instruments, bloodied instruments are regarded as infectious waste and must be disposed off accordingly, including razors, blades, needles and other sharp instruments. Approved methods of waste collection, storage, transportation and disposal should be adopted for the management of

health care risk waste and must be in line with the National Environmental Management: Waste Act, 2004 (Act No.39 of 2004) and SANS 10248.

- (b) An approved first aid kit should be available on the premises at all times for the treatment of minor injuries, which should be equipped with the following:

- (i) Adhesive bandages;
- (ii) Sterile gauzes;
- (iii) Medical tape;
- (iv) Scissors;
- (v) Liquid soap;
- (vi) First aid instruction book; and
- (vii) Disposable gloves.

- (c) Containers used for the storage of health care risk waste should be clearly labeled in large, legible lettering.
- (d) Employees should be adequately trained in the identification, separation, handling and storing of health care risk waste.
- (e) Health care risk waste may only be removed/ collected, transported, treated and dispose by a registered service provider from the premises.
- (f) Accurate and up to date records of all health care risk waste generated by the facility must be kept.

(4) The use of ultra-violet radiation for tanning

- (a) Persons under the age of 18 are allowed to make use of or operate, or to be in contact with any operations of the sun bed business on the premises.
- (b) Users of sun beds should be provided with all relevant health information in relation to the use of sunbeds, which should be placed in a conspicuous place on the premises, for easy access by the users.
- (c) Adequate protective eye wear should be available for use by the users at all times during tanning, and if not disposable, the eye wear must be cleaned and disinfected after each use.
- (d) Records must be kept of the following:
- (i) All clients that used their services; including their contact details and residential addresses;
 - (ii) Incidences, including the effects thereof, experienced by clients, during sunbed usage;
 - (iii) Maintenance, service and inspection monitoring; which should all be kept for a period of at least 3 years before discarding.

(5) The use of dyes, pigments and stencils and tattoo procedures

- (a) All dyes and pigments manufactured for the purpose of tattooing must be used according to the manufacturer's specifications.
- (b) In preparing dyes or pigments, non-toxic materials should be used.
- (c) Single-use, sterile, individual containers for dyes or pigments must be used for each patron.
- (d) The stencil, unless composed of acetate, should be used for a single tattoo procedure only. Acetate stencils may be disinfected and re-used.
- (e) Tattooing must be conducted in such a manner so as to prevent the transmission of communicable diseases from client to client and from artist to client. The following minimum standards are maintained:
- (i) The area of the body to be tattooed, and all parts of the body which are visible, must be examined for signs of intravenous drug use, open sores, lesions, oozing wounds and skin diseases. If such are found or suspected, the person should not be tattooed.
 - (ii) A tattoo artist must wear water proof and clean aprons at all times during tattooing. If the apron is contaminated with blood, it must be changed between clients and washed.
 - (iii) Tattoo artists must wash hands with soap and running water at all times before working on each client.
- Storage facilities must be provided for storage of all instruments, dyes, pigments, stencils and other equipment used in connection with tattooing, when not in use, must be stored in an orderly

manner within the facilities provided.

- (iv) Equipments used for tattooing, body piercing, clippers etc must be sterilised accordingly utilising approved sterilizers; and
- (v) Good sanitary and hygiene practices must be adopted at all times.

12. STANDARDS FOR PUBLIC SWIMMING POOLS AND SPA BATHS

Swimming pools and Spa baths premises must comply with the following EH norms and standards:

(1) Structural and physical facilities

- (a) Swimming pools and spa baths must be operated under a valid Health Certificate issued by an EHP of a relevant health authority/municipality to the effect that the premises and general facilities comply with EH Norms and Standards.
- (b) The quality of the swimming pool water must be in compliance with the specifications as set out in SANS 241.
- (c) The premises must be surrounded by a wall or fence as prescribed by the National Building Regulations and the Building Standards Act.
- (d) Potable water supply serving the swimming pool, showers, drinking points and other water using devices must be in compliance with the SANS 241 for drinking water.
- (e) The surface of the floor area surrounding the spa bath or swimming pool must be constructed of an approved impervious, non slip material.
- (f) Toilet facilities (flush water closets and urinals) and showers should be provided, separate toilet and showers should be provided for males and for females. Toilet facilities must be accessible to disabled persons.
- (g) At least 1 (one) water closet should be provided for every 50 (fifty) people and one (1) urinal for every 50 (fifty) males swimmers expected at the time full capacity.
- (h) At least 1 (one) shower should be provided for every 20 (twenty) swimmers on the premises.
- (i) Floors, walls and ceiling in the toilet and shower facilities must be constructed of an approved material, not adversely affected by steam, water.
- (j) Toilet and shower facilities must be properly ventilated in accordance with the Building Regulations, to prevent the existence of odour nuisances.
- (k) Toilet and shower facilities must be kept clean and sanitary at all times.
- (l) Floors of toilets and shower rooms should be constructed of a non-slippery finish, impervious to moisture that is easily cleanable.
- (m) Readily accessible change rooms should be provided for the convenience of users and are separated for each sex.
- (n) Water used to fill swimming pools or to keep the level of the pool or spa baths must be from an approved water source.

(2) Monitoring of water quality

- (a) The spa bath/swimming pool must be frequently monitored for turbidity, residual disinfectant and pH values. The pH of swimming pool water should be controlled to ensure efficient disinfection and coagulation, to avoid damage to the pool fabric and ensure user comfort. The pH should be maintained between 7.2 and 7.8 for chlorine disinfectants and between 7.2 and 8.0 for bromine-based and other non-chlorine processes. Where chlorine based disinfectant are used, a minimum free available chlorine residual of 0.5 mg/l, with a maximum free available chlorine residual of 3 mg/l must be maintained.
- (b) The total viable bacteriological count of any sample submitted for analysis should not exceed 100 organisms per ml of water.
- (c) Escherichia coli type 1 bacteria should not be present in any 100 ml of spa bath or swimming pool water.
- (d) Bacteriological and chemical quality of the water should be monitored regularly by management for heterotrophic plate count, E Coli, Pseudomonas aeruginosa and legionella spp;

Recommended frequency of sampling for swimming pools in terms of WHO guidelines

Pool type	Heterotrophic plate count	Thermo tolerant coliform/ <i>E. coli</i>	<i>Pseudomonas aeruginosa</i>	<i>Legionella</i> spp.
Disinfected pools, public and heavily used	Weekly (<200/ml)	Weekly (<1/100 ml)	When situation demands (<1/100 ml)	Quarterly (<1/100 ml)
Disinfected pools, semi-public	Monthly (<200/ml)	Monthly (<1/100 ml)	When situation demands (<1/100 ml)	Quarterly (<1/100 ml)

WHO guidelines for recreational water environments

- (e) Pool water must be monitored during these critical times;
- (i) Before a pool is used for the first time;
 - (ii) Before it is put back into use, after it has been shut down for repairs or cleaning;
 - (iii) If there are difficulties with the treatment system; and
 - (iv) As part of any investigation into possible adverse effects on bathers' health.
- (f) Equipments for the random testing of the water should be available on the premises for routine testing of the quality of spa bath/swimming pool water.
- (g) A daily record must be kept on the premises of the quality of spa bath water. An EHP must have full access of those records.
- (h) The premises should be kept in a safe, clean and sanitary condition and in good repair at all times.
- (i) No direct physical connection between the sewer system and any drain from the swimming pool or recirculation system must exist. Any swimming pool, gutter drain, overflow from the recirculation system when discharged to the sewer system shall connect through a suitable air gap so as to preclude the possibility of backflow sewage or waste into the swimming pool piping system.

(3) General hygiene requirements

- (a) The spa bath/ swimming pool and its surroundings should be kept in a clean and sanitary condition at all times.
- (b) Continuous swimming hygiene education should be provided to users (may be through the display of information, education and communication material) the sewer system must be adequate to serve the facility, including bathhouse, locker room and related accommodations. The sewer line serving the backwash for the filter shall be 1-1/2 times the size of the backwash line or provide a containment vessel capable of holding a minimum of 5 minutes volume of backwash water at the backwash design rate.
- (c) In the case of an accidental faecal release or vomit:
 - (i) The facility must be closed for use and all bather removed;
 - (ii) The contaminants should be removed and inactivated;
 - (iii) The water chemistry must be checked;
 - (iv) If disinfection levels are within required parameters, the pool remains closed for at least 60 minutes and then re-opened;
 - (v) If disinfection levels are not within the required parameters, the pool must be closed and disinfection levels restored. The facility may re-open 60 minutes after acceptable disinfectant levels have been attained; and
 - (vi) If faeces are in the form of diarrhoea, the pool must be closed for 24 hours, remedial action taken to remove the contaminants, disinfect the facility and attain acceptable quality standards before re-opening the facility.
- (d) Animals are not allowed in the spa bath/ swimming pool or surrounding area, unless in the case of a guide dog.

- (e) A properly maintained, approved and fully resourced first aid box should be kept on the premises for the treatment of minor injuries.
- (f) A qualified and proficient life saver/s must be available on the premises and should be competent in life saving, first aid, and the operation of the swimming pool.
- (g) The sanitary sewer serving the swimming pool and auxiliary facilities discharges to the public sewer system wherever possible. Where no such sewer is available, a method of disposal must be in place.
- (h) Children under the age of 10 years must be accompanied by an adult at all times when utilizing the facilities.

13. STANDARDS FOR DRY CLEANING AND LAUNDRY ESTABLISHMENTS

Dry cleaning and laundry establishments must comply with the following EH norms and standards:

(1) Structural facilities

- (a) The layout of the laundry and plant in health facilities must meet process requirements for ensuring health and safety of employees; for controlling of infection; and avoiding contamination.
- (b) Ventilation must comply with specific air flow requirements e.g. from clean to soiled linen areas and from roof to floor in contaminated linen areas.
- (c) Drainage for laundry from health facilities should be designed without open drains; with lockable inspection or rodding eyes; with a flow from clean to dirty areas; and not connected to storm water drainage.
- (d) Internal walls should be constructed of an impervious material, brought to a smooth finish and painted with a light coloured paint that is easily cleanable.
- (e) Ceilings should be constructed of a dust proof material, smoothly finished and painted with a light coloured washable paint.
- (f) Floor surfaces should be constructed of cement or some other adequate impervious material, brought to a smooth finish and properly drained.
- (g) The minimum height from floor to ceiling of any room or area should not less than 2.4 meters.

(2) Water supply and sanitation facilities

- (a) Toilet facilities and hand wash basins should be provided on the premises for staff and must be separated by gender. At least 1 (one) toilet and 1 (one) hand wash basin should be provided for every 20 (twenty) employees on the premises.
- (b) Toilet facilities should be equipped with a flushing system and a constant supply of toilet running water, and provided with toilet paper, soap and disposable paper towel.
- (c) Where five or more persons of the same sex are employed on the premises, adequate separate change rooms should be provided for male and female employees and designated for each sex; a locker must be provided for each staff member in the change rooms, as well as a hand wash basin provided with a supply of running hot and cold potable water.
- (d) A supply of soap and disposable towels at every hand wash basin.
- (e) An approved, suitable and effective means of drainage and sewage disposal should be in place on the premises, and must be approved by the local authority concerned.

(3) Storage, work areas and facilities

- (a) A workroom or area used for housing dry- cleaning machines, washing-machines, and all other fixed or movable equipment used for the operation of a dry cleaning or laundry facility should be provided on the premises.
- (b) In the case of receiving depots, a separate area with a minimum width of not less than 2m must be provided, fifty percent of that area must be unobstructed.
- (c) A floor area of not less than 2.5 m² per person should be provided in the work area for persons employed on the premises.
- (d) A separate area with separate designated counters, with an impervious surface must be provided for receiving and dispatching of articles.

- (e) A separate area should be provided for receiving and marking of soiled and dirty articles and the area is equipped with:
 - (i) Working tables constructed of a durable material with an impervious surface;
 - (ii) Adequate containers constructed of a washable material for storage of dirty articles; and
 - (iii) Hanging rails and shelves constructed of an impervious material in the area for marking clean articles.
- (f) A store room of facilities for the storage of packaging material and other articles should be provided and equipped with adequate packing shelves.
- (g) Suitable and separate hazard-free lockable storage for chemicals must be provided.
- (h) All packaging shelves should be a height of at least 250mm above floor level.
- (i) A separate room or area with separate designated counters, with an impervious surface should be provided for the receipt and dispatch of articles.
- (j) All machinery and equipment should be equipped with adequate suction fans to remove any noxious gas, steam and hot air from any room and to release it in the open air in an adequate manner.
- (k) If nappies are laundered on the premises, a separate pre-rinsing area should be provided for rinsing of nappies prior to washing.
- (l) The premises, as well as all fittings, equipment and appliances and machinery must be kept clean, hygienic and in good repair at all times.

(4) General requirements

- (a) Emission levels must be in compliance with the prescribed Ambient Air Quality Standards in terms of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004).
- (b) A tea kitchen provided with a single-basin stainless steel sink, with a constant supply of hot and cold running potable water should be provided separately, to meet the needs of employees on the premises.
- (c) Fire fighting and control equipment should be available and must be in compliance to the local authority concerned fire department requirements.

14. STANDARDS FOR HEALTH ESTABLISHMENTS

Health establishments must comply with the following EH norms and standards:

(1) Physical and structural facilities;-

- (a) Internal walls must be constructed of an impervious material brought to a smooth finish and easily cleanable and painted with a light coloured paint.
- (b) Ceilings must be constructed of a dust proof material, smoothly finished and painted with a light coloured washable paint.
- (c) Floor surfaces must be constructed of impervious material, brought to a smooth finish and properly drained.
- (d) The locality of all facilities, including lifts, fire escapes, and entrances exits should be clearly marked for convenience of patients, staff and visitors.
- (e) Facilities for patients and other visitors must be adapted to accommodate physically disabled persons.
- (f) Consultation rooms should be provided separately from waiting rooms to facilitate privacy for consultation purposes.
- (g) The use of equipment, material or substances by workers must be in line with the requirements of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).
- (h) The premises must comply with the requirements of the National Environmental Management: Waste Act, 2004 (Act No. 39 of 2004), as well as relevant By-Laws of the local authority concerned with regards to the management of general waste on the premises.
- (i) The use of boilers on the premises must comply with the requirements of the National Environmental Management: Air Quality Act with regards to emissions into the atmosphere.

(2) Drinking water quality

- (a) In case a health facility/hospital has additional building-specific sources of water used to augment the external supply, or have specific purposes that increase potential risk, hospitals a risk management plan is in place.
- (b) Water must be continuously tested for fitness of consumption. Where on-site water storage facilities are utilized, the storage capacity should be sufficient for 24 hours.
- (c) Water storage facilities e.g. reservoirs and tanks should be adequately protected from contamination.
- (d) Designated health facility staff monitors continuously the water in reservoirs and tanks for compliance and possible pollution activities. The water in the storage facilities must be tested for compliance and fitness for consumption.
- (e) Water source e.g. borehole, should be effectively protected from contamination.
- (f) If non-compliance is identified when testing of the water, the possible source of contamination must be traced. The possible source of contamination must then be monitored as part of a risk management approach to ensure effectiveness of interventions.
- (g) To prevent organisms that grow in temperatures between 25⁰C and 50⁰C e.g. *Listeria* spp hot water temperatures especially must be kept above 50⁰C and cold water below 20⁰C.
- (h) The water supply system that includes the sources (if applicable), pumps, purification plant, taps, pipes, storage facilities and the distribution network linked to health facilities should be maintained in good working order.
- (i) Taps and pipes containing water not fit for human consumption are clearly marked as such.
- (j) The necessary chemicals must be available continuously for water purification, where purification is undertaken by the health facility.
- (k) Designated staff must be available for regular monitoring of the water system in the health facility. Water quality monitoring records must be kept and made available to an EHP on request.
- (l) If water is stored in a temporary water storage tank on the premises, the following standards are applicable with regards to water storage tanks:
 - (i) Potable water tanks should be constructed of a rust-free and durable material that is suitable and safe for potable water storage to prevent the contamination of water;
 - (ii) Tanks should be designed so as to prevent contamination of the water by insects, flies, animals and human contact;
 - (iii) Cold water storage tanks must be located in an appropriate area such that the water is not exposed to the excessive sun to prevent the water from reaching temperatures above 25⁰C;
 - (iv) Water in tanks should constantly be sampled to ensure proper levels of residual chlorine and other bacteriological and chemical parameters to ensure fitness for consumption;
 - (v) Residual chlorine should be maintained in water kept in storage tanks;
 - (vi) The design of the tanks must be such that it allows sampling to be conducted and tests to be taken to verify water quality. They must also be made of material that allows disinfection and contact with flames for sterilizing, in the case where a tap must be flamed before a sample is taken;
 - (vii) Potable water storage tanks and any part of the potable water distribution system should be cleaned, flushed with potable water and disinfected to prevent contamination of the water.

(3) Toilet and ablution facilities

- (a) Adequate toilet and wash up facilities should be provided for patients and staff on the premises. At least 1(one) toilet is provided for every 12-15 (twelve to fifteen) in-patients, and 1 (one) hand wash basin, and 1 (one) bath or shower is provided for every 12-15 (twelve to fifteen) in-patients.
- (b) Separate toilet and hand washing facilities must be provided for staff on the premises.
- (c) At least 1 (one) toilet facility and 1 (one) hand wash basin should be provided for every 50 out-patients.
- (d) Staff required to sleep on the premises must be provided adequate wash up facilities. At least 1 (one) bath or shower must be provided for every 15 (fifteen) members of staff on the premises.
- (e) Floors of walls of the toilet facilities must be constructed of a smooth and easily cleanable material.
- (f) All toilet facilities on the premises must be kept clean and in good repair at all times.
- (g) All hand wash facilities should be supplied with a constant supply of potable running water.
- (h) An adequate and constant supply of soap, toilet paper and towel must be maintained in all toilet and hand wash facilities at all times.

(4) Storage facilities

- (a) Storage facilities should be provided for the storage for medicines and drugs and such facilities are kept locked at all times except when medicines or drugs are being removed or returned to it.
- (b) Additional storage facilities should be provided for the storage of cleaning equipment, pesticides and other potentially dangerous hazardous substances.
- (c) Storage rooms must contain adequate moveable shelving made of impervious material.
- (d) Every shelf in any store room should be of a minimum height of 225 mm above the floor.
- (e) All storerooms and store facilities must be kept clean at all times and cleaned routinely at least once every week.
- (f) Hazardous substances must be stored and disposed off in a safe manner, separate from other non-hazardous materials.
- (g) Expired medicines should be stored separately and must be disposed off in a safe manner.
- (h) Adequate storage facilities should be provided for the storage of any spare equipment, including particularly heavy equipment and gas cylinders. The equipment must be stored in manner so as not to obstruct any passages, entrances of exits to the premises.
- (i) Adequate storage facilities for articles that are reasonable necessary to store on the premises for the day to day running of the nursing home must be provided.
- (j) A separate linen room, containing adequate cupboards or shelves for the storage of linen must be provided.
- (k) If five or more persons are employed, separate change-rooms must be provided for male and female staff members, equipped with storage facilities or lockers for personal belongings of each worker.
- (l) Food and non-food items should be stored separately from any other items; refrigerators used for storage of medicines are not at any time used for storage of any foodstuffs.
- (m) Separate storage facilities for dirty and clean linen and equipment, including sluice facilities for cleaning of soiled linen and equipment should be provided.
- (n) The storage and dispensing of medicines must comply with the requirements of the relevant legislation.
- (o) Refrigeration facilities used for storage of hazardous waste or infectious material must be marked as such, and should be used to store any other item except for the designed purpose.

(5) Reception of dead bodies on the premises

- (a) All facilities used in connection with the handling, preparation, storage and transportation of dead bodies on the premises and the requirements with regards to the operation of premises for the management of Human Remains must comply with the requirements of the Regulations relating to the Management of Human Remains, R363 of 22 May 2013 published in terms of the National Health Act, 2003 (Act 61 of 2003), as amended.
- (b) Suitable trained staff should be available and responsible for duties in the mortuary and ensure that the Hygiene Standards are adhered to.
- (c) A cleaning program for the mortuary should be in place. A register and records must be kept and maintained of the information regarding the handling of corpses; including the record of refrigeration facilities and temperatures must be taken daily.
- (d) The infection control staff member should regularly monitor whether the policy regarding the handling of corpses is followed and whether the mortuary is operated in an acceptable manner and in consideration of the Norms and Standards document.
- (e) Adequate protective clothing (comprising of waterproof aprons, light coloured overalls and protective gloves) should be provided and utilized for employees working in the mortuary.
- (f) Approved methods of waste collection, storage, transportation and disposal should be adopted for the handling of infectious waste in the mortuary, in compliance to the SANS 10248.

(6) Laundry facilities

- (a) The health establishment facility must have access to a well manage laundry facilities for the effective laundering of linen, for controlling of infection; and avoiding contamination on the premises.
- (b) Internal walls should be constructed of an easily cleanable material, brought to a smooth finish and painted with a light coloured paint.

- (c) Floors should be brought to a smooth finish and are easily cleanable.
- (d) Ceilings should be constructed of a dust proof material.
- (e) The laundry facility must be properly ventilated by cross ventilation and adequately illuminated.
- (f) Drainage systems should be available and designed without open drains; with lockable inspection or rodding eyes; with a flow from clean to dirty areas; and not connected to storm water drainage.
- (g) Areas receiving soiled linen must be separated from areas handling clean linen.
- (h) Adequate ablution and toilet facilities must be provided, including an emergency shower or eye-wash facility in the wash-room where chemicals are handled.
- (i) Suitable and hazard-free storage facilities for storage of chemicals should be provided.
- (j) The capacity and the condition of the equipment used for laundering must meet the hospitals laundering requirements.
- (k) Vehicles, containers, trolleys or other manually operated equipment for the transporting of linen must conform to requirements to ensure contamination free conditions.
- (l) All dirty linen and hospital clothes regarded as infectious waste and must be stored only in the designated storage area and removed from wards, passages or any other place where patients are treated.

(7) Operational requirements

- (a) A policy for the management of linen in a facility must be in place.
- (b) Adequate resources must be provided to ensure effective laundering of linen, including for proper maintenance of buildings and equipment.
- (c) A quality management system must be established incorporating:
 - (i) work instructions and procedures;
 - (ii) process control procedures;
 - (iii) quality control procedures; and
 - (iv) control of linen (clean/soiled) procedures.
- (d) A procedure specifically for infection/contamination control must be made available to staff handling linen. The procedure should include control measures through differentiation between categories of soiled linen, i.e. of high-risk to normal soiled linen: containers must be colour coded in accordance with SANS 1024-1 (as amended):
 - (i) Category **A** (red bag) = high risk infection for immediate incineration;
 - (ii) Category **B** (yellow bag) = sealed alginate bags of high-risk (blood/body fluids contaminated or sluiced) for direct loading into washing machines;
 - (iii) Category **C** (yellow bag/hazard label) = sealed hazardous material (chemical, anti-neoplastic drugs or radio-isotopes) for direct loading into washing machines; and
 - (iv) Category **D** (white bag) = normal linen of no risk during handling.
- (e) A clear policy on health and environmental protection must be documented and communicated to all laundry staff.
- (f) A person designated as the laundry controller must ensure that the requirements regarding pollution, occupational and environmental hygiene are complied with, including appropriate action in respect of any risks associated with infection or other hazards.
- (g) Procedures for the use of protective clothing and personal hygiene where staff is in contact with high-risk areas or linen should be documented to include precautionary measures.
- (h) The laundry management/controller and other designated staff must be trained and must be competent on:
 - (i) carrying out their functions effectively;
 - (ii) handling hazardous goods in the laundry service;
 - (iii) following procedures (including first aid) with regard to prevention and control of infection;
 - (iv) using protective clothing and follow procedures for decontamination; and
 - (v) operating laundry machines in order to ensure optimum results including general safety procedures.

- (i) Laundry staff must pass the appropriate medical examination at appointment followed by routine health monitoring as prescribed by occupational health and safety legislation.

(8) Record keeping

- (a) Appropriate records of all activities that affect linen and quality must be kept on the premises.
- (b) The laundry data control system must include a master list of documents to facilitate the location and revision of records or documents.
- (c) The results of inspections/checks and quality control tests should be documented and may indicate the need for remedial action where necessary.
- (d) Accurate records of stocks of chemicals, cleaning agents and detergents must be maintained.
- (e) A full set of up-to-date materials safety data sheets for all washing or cleaning chemicals used in the laundry should be available in one location for staff who are likely to become involved in the control of an emergency situation.
- (f) Operation and maintenance records of plant and equipment, including records of special precautions to ensure minimum risk of cross-infection of laundered items must be kept.
- (g) Records of medical examinations, health monitoring and training of staff must be kept.

(9) Use of boilers and incinerators

- (a) The premises must comply with the requirements of the National Environmental Air Quality Act, 2004 (Act No. 39 of 2004) with regards to the use of boilers and incinerators.
- (b) The operation of boilers, incinerators and private sewage works on any premises must comply with the following requirements:
 - (i) Coal and fuel burning equipment such as boilers and incinerators must be operated effectively to minimize smoke, gas, odours, fly-ash or any other form of air pollution;
 - (ii) Only incinerators and boilers which conform to prescribed requirements must be used; and
 - (iii) Incinerators and boilers must be maintained in good working order to ensure pollution free performance.
- (c) Incinerators and boilers should be monitored regularly to ensure effective operation in terms of permit conditions and the applicable local authority's by-laws.
- (d) All necessary technical investigations should be conducted by the operators of incinerators and boilers to ensure that the coal and fuel burning equipment and other relevant disposal facilities are operated in accordance with the relevant permit requirements.

(10) General hygiene requirements

- (a) The premises must be maintained clean, free from offensive odours, unsightly accumulation of debris, litter and miscellaneous waste at all times.
- (b) Cleaning staff should be trained and competent on cleaning techniques and processes to be utilized for various areas in the health facility.
- (c) Cleaning material and detergent required to ensure a hygienic environment in the health facility must be available and properly stored at all times.
- (d) A cleaning schedule should be kept and maintained for cleaning of all areas in the facility.
- (e) Appropriate cleaning material and equipment should be available on the premises.

15. STANDARDS FOR CONSTRUCTION SITES AND INDUSTRIAL PREMISES

Construction sites must comply with the following norms and standards:

(1) Water supply and sanitation facilities

- (a) For industry that have either direct or indirect discharge of process wastewater, wastewater from utility operations or storm water to the environment, and industrial discharges to sanitary sewers, and the treatment thereof must conform to the requirements as specified by the Water Services Act, 1997 (Act No. 108 of 1997), and its Regulations to ensure prevention of pollution.

- (b) Discharges of process wastewater, sanitary wastewater, wastewater from utility operations or storm water to surface water should not result in contaminant concentrations in excess of local water quality criteria.
- (c) Discharges of industrial wastewater, sanitary wastewater, wastewater from utility operations or storm water into public or private wastewater treatment systems should meet the pre-treatment and monitoring requirements of the sewer treatment system into which it discharges and not interfere, directly or indirectly, with the operation and maintenance of the collection and treatment systems, or pose a risk to worker health and safety.
- (d) Adequate toilet facilities should be provided for use by construction workers. At least 1 (one) toilet and one hand wash basin is provided for every 20 employees on the premises **ratio 1:20**. In addition at least one urinal should be provided for every 40 males on site **ratio 1:40**. If more than 200 employees are employed on the site, at least 1 (one) toilet and 1 (one) urinal must be provided for at least every 50 workers **ratio 1:50**;
- (e) The toilet facilities should be equipped with a flushing system and a supply of running water.
- (f) Separate toilet facilities should be provided for male and female workers and must be equipped with a sign indicating the sex.
- (g) If non-waterborne toilets are utilized, Ventilated Improved Pits (VIP) or chemical closets must be provided. Toilet facilities must be adequately ventilated and illuminated.
- (h) Toilet facilities intended for female workers should be provided with a disposal receptacle for sanitary napkins. The receptacle should be designed so as to prevent the exposure of the contents.
- (i) Supply of toilet paper should be maintained at all times in the toilet facilities.
- (j) All toilet facilities should be designed to provide the user with privacy and security.
- (k) Wash-up facilities equipped with a supply of hot and cold running should be provided for employees, especially employees engaged in the application of paints, coating, pesticides etc.
- (l) Toilet and washing facilities should be maintained in a sanitary condition at all times.
- (m) Hand soap and disposable paper towels/hand blowers/individual sections of continuous cloth toweling, must be in a close proximity to toilet and washing facilities.
- (n) The toilet and shower facilities must be adequately ventilated and illuminated.
- (o) Walls and floors of toilet facilities and showers must be constructed of a smooth and easily cleanable material and the walls must be painted with a light coloured paint.
- (p) Suitable, effective and approved drainage and sewage disposal system must be in place on the premises in compliance with relevant municipal by-laws of a specific local authority.

(2) Physical facilities

- (a) The site must be properly fenced off and no unauthorized entry permitted.
- (b) Construction areas, ramps, runways, corridors, offices, shops, and storage areas should be adequately lighted while any work is in progress.
- (c) Construction areas should be adequately ventilated and equipped with adequate extraction systems for the removal of fumes, gases, vapours, dust and mist from the work areas into the atmosphere.
- (d) Whenever food is prepared and served on the premises, the facilities used in connection with the preparation, handling, storage and serving of foodstuffs must comply with the requirements of the Regulations Governing General Hygiene Requirements and the Transport of Food, R962 of 21 November 2012. Where necessary in the interests of the health and safety of any person on a construction site, a sufficient number of suitable emergency routes and exits should be indicated to enable any person to reach a place of safety quickly in the event of danger.
- (e) Whenever employees are required to wear protective clothing when engaged in work, esp. because of the possibility of contamination with toxic materials, change rooms and showers should be provided on site. Change rooms should be available for both males and females on the premises.
- (f) The change rooms should not be located near any room where there is possible exposure to a hazardous chemical substance or a hazardous biological agent; in which untanned hides or skins or unwashed wool or mohair are treated, processed or stored.
- (g) Change rooms should be equipped with separate lockers for storage of each employee's personal belongings.
- (h) Change rooms must be adequately ventilated by natural or artificial ventilation.
- (i) Fire control equipment must be available on the premises, in compliance to the municipality's fire control requirements.

(3) Waste management and waste water

- (a) Private sewage disposal works or refuse (landfill) disposal sites managed must be operated effectively in accordance with prescribed legislation and permit conditions for operation of landfills and sewage works.
- (b) Evaluations/monitoring must be included in the waste/pollution management plans and must be implemented per plans.
- (c) Final effluent or sludge emanating from the sewage disposal works should be utilized in accordance with prescribed national guidelines to prevent soil and water pollution.
- (d) The sewage drainage system must be maintained effectively to prevent blockages and spills that could give rise to environmental pollution.
- (e) Final effluent must comply with the specifications of Regulation 991 promulgated in terms of the Water Act, 1998 (Act No. 36 of 1998) and any subsequent amendments; and monitor the disposal of effluent to ensure compliance with the permit specifications of the DWA.
- (f) Staff responsible for the operation of boilers and waste disposal works or facilities should be well trained to operate the facilities effectively and pollution free.
- (g) All necessary information concerning boiler and incinerator operations, as required by permit conditions and legislation should be recorded, including results of final sewage effluent of a sewage disposal site.
- (h) Waste material and debris should be removed to a disposal area and reusable material should be sorted and moved to a storage area at least once daily to prevent a hazardous condition arising.
- (i) Waste generated should be disposed off at an approved landfill site and in accordance with the relevant by-laws of a Local Authority concerned.
- (j) Rubbish, debris and other waste material from the demolition or construction of projects should be temporarily disposed off in a designated area on site and access to the area should be strictly controlled.

16. STANDARDS FOR FUNERAL UNDERTAKERS', MORTUARIES, CREMATORIUM PREMISES

Mortuaries, funeral undertaker's premises and crematorium premises must comply with requirements of the Regulations relating to the Management of Human Remains, R363 of 22 May 2013 published in terms of the National Health Act.

17. STANDARDS FOR FOOD HANDLING PREMISES

Food handling premises must comply with the following norms and standards:

- (1) The premises must be operated under a business license, issued by the relevant local Authority in terms of the Business Act, 1991 (Act No. 71 of 1991).
- (2) The premises must be operated under a valid Certificate of Acceptability issued by an EHP, to the effect that the premises comply with the requirements of food safety related legislation.

18. STANDARDS FOR PUBLIC GATHERING PLACES

Public gathering places must comply with the following EH Norms and Standards:

(1) Waste management

- (a) The management of waste on the premises should comply with the relevant by-laws of a specific Local Authority.
- (b) Refuse bins should be provided at strategic points throughout the premises for collection of litter.
- (c) On-site management of waste should be available on the premises during events, for management of spillages and littering, to prevent a nuisance from occurring.
- (d) Arrangements should be in place between the event manager and the Local Authority, with regards to waste management during and after an event.

(2) Drinking water supply

- (a) In the case of events, water points should be available at strategic points throughout the premises.
- (b) If water tankers are used during events, the storage tanks must adhere to the following requirements:
- (i) care should be taken to ascertain that the tanks constructed of a rust-free material, are durable and suitable for delivering potable safe water;
 - (ii) The tanks should be disinfected before used for potable water distribution;
 - (iii) The tanks are adequately designed so as to prevent contamination of the water by insects, flies, animals and human contact;
 - (iv) Tanks design should allow sampling to be conducted and tests to be taken to verify water quality. They must also be made of material that allows disinfection and contact with flames for sterilizing, in the case where a tap must be flamed before a sample is taken;
 - (v) Cold water should be stored at temperatures below 20°C; and
 - (vi) Tankers should only supplied by water from an approved and treated source.

(3) Sanitation facilities

- (a) Adequate toilet and hand washing facilities should be provided for staff and for the general public at the ratios depicted in Table 1 below:

Table of sanitary facilities to be provided					
For a population of up to	Males		Females		
	WC Pans	Urinals	Washbasins	W C pans	Washbasins
50	1	1	1	2	1
100	1	2	1	3	2
150	1	3	1	5	3
250	2	4	2	7	4
500	3	7	3	12	6
1000	3	12	4	16	7
1500	4	15	5	20	8
	For a population in excess of 1500 add 2 WC pans for every 500 persons or portion thereof	For a population in excess of 1500 add 1 Urinal for every 500 persons or portion thereof	For a population in excess of 1500 add 1 washbasins for every 500 persons or portion thereof	For a population in excess of 1500 add 1 WC pans for every 150 persons or portion thereof	For a population in excess of 1500 add 1 washbasin for every 500 persons or portion thereof

National Building Regulations and the Building Standards Act, 1977 (Act No. 103 of 1977)

- (b) Suitable, effective drainage and sewage disposal system should be in place on the premises to the satisfaction of and in compliance to the relevant by-laws of the Local Authority concerned.
- (c) The use of non-waterborne sanitary services on the premises must comply with the specification of the SANS 10400.

- (d) At least 5% of the total number of toilets to be provided should be accessible by disabled persons.
- (e) For short term events:
 - (i) If chemical closet toilets are used, an on-site maintenance team should be available on the premises for the duration of the event to ensure the prevention of blockages and leakages from creating a nuisance and health hazard from occurring; and
 - (ii) A site plan detailing the location and type of sanitary facilities to be used during events should be submitted to EH of the relevant Local Authority.

19. STANDARDS FOR KEEPING OF ANIMALS ON PREMISES

Premises used in connection with the keeping of animals must comply with the following Norms and Standards:

- (a) Structures/facilities erected to house animals must comply with the requirements of the National Building Regulations and the Building Standards Act, 1977 (Act No. 103 of 1977).
- (b) The premises should be operated under a permit issued in compliance with the relevant by-laws of a specific Local Authority.
- (c) The keeping of animals other than household pets should only be kept on premises designed for that purposes and in accordance to the relevant Local Authority town planning schemes.

(1) Keeping of cattle, horses, mules and donkeys

Structural and physical facilities:

- (a) Cattle, horses, mules and donkeys should only kept in stables designed for keeping of such animals.
- (b) Every wall and partition of the stable for keeping of cattle, horses, mules or donkeys, must be constructed of brick, stone, concrete or other durable material.
- (c) The internal wall surfaces of the stable must be constructed of smooth brick or other durable surface brought to a smooth finish.
- (d) The height of the walls to the wall plates of the stable must:
 - (i) if the roof is a pitched roof, be at least 2,4 metres;
 - (ii) if the roof is a flat roof, be at least 2,7 metres;
 - (iii) if the roof is a lean to roof, be a mean height of at least 3 metres with a minimum of at least 2,4 metres on the lowest side; and
 - (iv) in the case of a stable which has an opening along the entire length of one of its long sides be not less than 2 metres.
- (e) The stable must have a floor area of at least 9m² for each head of cattle, horse, mule or donkey accommodated in it.
- (f) Lighting and ventilation should be provided by openings or glazed opening windows or louvers totalling at least 0,3 m² for each animal to be accommodated in it except in the case of a stable open along the entire length of one of its long sides.
- (g) The lowest point of every opening, window or louvers should at least be 1, 8 metres, above floor level.
- (h) The floor of the stable must be constructed of concrete or other durable and impervious material brought to a smooth finish graded to a channel and drained.
- (i) An enclosure must have an area of at least 10m² for each head of cattle, horse, mule or donkey accommodated in it and the fencing must be strong enough to prevent the animals from breaking out.
- (j) No enclosure or stable should be situated within:
 - (i) 15 metres of the boundary of any land, property, dwelling or other structure used for human habitation; or
 - (ii) 50 metres of any water resource or water supply intended or used for human consumption.

- (k) There must be a water supply adequate for drinking and cleaning purposes next to every stable or enclosure.

General hygiene standards for keeping of cattle, horses, mules and or donkeys

- (a) The premises and any equipment, apparatus, container or receptacle used in connection with keeping the animal must be kept in a clean and sanitary condition and in good repair.
- (b) A portable manure storage receptacle of an impervious material with close fitting lids should be provided.
- (c) Every manure storage receptacle must be kept on a platform constructed of concrete or other durable and impervious material near the stable or enclosure.
- (d) If there is so much manure and bedding those storage receptacles is impractical, a manure container or area should be provided on the premises.
- (e) The manure container or area should be roofed and enclosed by three walls constructed of brick, concrete or other durable material plastered to a smooth finish.
- (f) The floor of the manure area should be smoothly finished concrete that is inclined so that it drains to a water channel along the full length of the open side, which should at least be 150 mm in a diameter and must always be filled with water.
- (g) Manure should be removed from the stable and enclosure at least once every 24 hours and placed in the manure storage receptacles or manure container or area until it is removed from the premises (if so many KGs of manure are produced per day or in 24hrs and provided so many animals are kept in a stable).
- (h) The contents of the manure storage receptacles or manure container or area should be removed from the premises at least once every second day and disposed off in a way which will not create a public health nuisance.
- (i) All bedding should be removed from the stable at least once a week and should be stored in the manure receptacles or manure container or area until it is removed from the premises.
- (j) All saddles, bridles, harnesses and other equipment or articles use in connection with the keeping of the animals should be stored in a storeroom or other adequate storage facility.
- (k) All feed should be stored in a rodent-proof storeroom and all loose feed in rodent-proof receptacles with close fitting lids.
- (l) Measures should be taken to keep the premises free of pests and to prevent offensive odours arising from the keeping of cattle, horses, mules and donkeys.

(2) Keeping of goats and sheep on premises

Structural and physical facilities:

- (a) Goats and sheep must be kept in an enclosure with the minimum overall floor area of 30m² and at least 1, 5 m² of floor space must be provided for every goat or sheep accommodated in it.
- (b) An enclosure used for keeping of goats and sheep comply with the following requirements:
- (i) Every wall should be constructed of brick, stone, concrete or other durable material;
 - (ii) Every wall should at least be 2 metres in height and have a smooth internal finish;
 - (iii) The floor should be constructed of concrete or other durable and impervious material brought to a smooth finish and graded to a channel;
 - (iv) At least 1,5 m² of floor space must be provided for every goat or sheep accommodated in it with an overall minimum floor area of 6 m²; and
 - (v) Lighting and ventilation opening totalling at least 0.15 m² per goat or sheep should be provided.
- (c) An enclosure used for keeping of goats and sheep should not be situated within 15 metres of any boundary of any land, dwelling, building or other structure used for human habitation; Or 50 metres of any water resources or water supply intended or used for human consumption.
- (d) Potable drinking water supply complying with the specifications of the SANS 241 with regards to its microbiological, chemical and physical quality should be provided and situated next to or in every enclosure or stable used to accommodate goats or sheep.

(3) General hygiene standards for keeping of goats and sheep

- (a) The premises and any equipment, apparatus, container or receptacle used in connection with keeping the animal should be maintained in a clean and sanitary condition and in good repair.
- (b) Portable manure storage receptacles of an impervious material and with close fitting lids should be provided;
- (c) Manure storage receptacles should be kept on a platform that enables the surface underneath the receptacle to be cleaned.
- (d) Manure should be removed from the enclosure or stable at least once every seven days and place it in the manure storage receptacles.
- (e) The contents of the manure storage receptacles should be removed from the premises at least once every seven days and dispose of the manure in a way that will not create a public health nuisance.
- (f) All feed should be stored in a rodent-proof storeroom and all loose feed in rodent-proof receptacles with close fitting lids in the storeroom.
- (g) Adequate measures should be taken to keep the premises free of pests and to prevent offensive odours arising from the keeping of goats and sheep.

(4) Keeping of poultry on premises

Structural and physical facilities:

- (a) Structures/facilities erected to house poultry must comply with the requirements of the National Building Regulations and the Building Standards Act, 1977 (Act No. 103 of 1977).
- (b) Noise producing poultry should not be kept on residential premises (e.g. cockerels).
- (c) Poultry should only be kept in a poultry house which complies with the following requirements:
 - (i) Every wall should be constructed of brick, stone, concrete or other impervious material and has a smooth internal surface.
 - (ii) The floor should be constructed of concrete or other impervious material and brought to a smooth finish.
 - (iii) The upper floor of a two or more story structure must be constructed of an impervious and easily cleanable material.
 - (iv) The minimum floor area should at least be 0, 20 m² for each grown fowl, duck, muscovite duck or guinea fowl; at least 0,5 m² for each grown goose, turkey or peacock; and at least 0,14 m² for each grown pigeon; and the minimum aggregate floor area should at least be 4m².
- (d) A poultry run, if provided, should be enclosed with wire mesh or other durable material.
- (e) Every wall of a building or structure housing a battery system should at least be 2,4m high and must be constructed of concrete, stone, brick or other impervious material and must have a smooth internal surface.
- (f) If walls are provided, the building should be ventilated and lighted by means of mechanical ventilation and artificial lighting or by obtaining natural ventilation and light through openings or opening windows of an area not less than 15% of the floor area of the building or structure.
- (g) The floor of the building or structure housing a battery system should be constructed of concrete or other impervious material brought to a smooth finish and if required by an EHP, the floor surface is graded and drained by means of a channel drained.
- (h) If no walls are provided, or the walls are made of metal, the floor should be provided with a curb at least 150 mm high around its edges.
- (i) The cages of the battery system should be constructed of an impervious material, and if required by an EHP, a tray of an impervious material must be fitted under every cage for the collection of manure.
- (j) A water supply adequate for drinking and cleaning must be provided in or next to every poultry house and poultry run and in or next to a building or structure housing a battery system.
- (k) A poultry run or building or structure housing a battery system must not be constructed within 3 (three) metres of any dwelling or other building or structure used for human habitation, any place where foodstuffs are stored or prepared for human consumption, or the nearest boundary of any land.
- (l) Feed should be stored in an adequate rodent-proof storeroom.

- (m) Adequate washing facilities should be provided for the cleaning of the cages.
- (n) If required by an EHP, due to the amount of manure stored on the premises awaiting removal, a manure storage area complying with the following requirements may be provided:
 - (i) a roofed platform constructed of concrete or other impervious material;
 - (ii) the platform's outside edges have a minimum curb of 100 mm high;
 - (iii) the platform is graded and drained; and
 - (iv) the roof of the platform is extend a minimum of 1 metre beyond the edges of the base of the platform.

(5) General hygiene standards for keeping of poultry on premises

- (a) All poultry must be kept within a poultry run or building or structure housing a battery system.
- (b) The premises and any equipment, apparatus, container or receptacle used in connection with keeping of poultry should be maintained in a clean, sanitary condition and in good repair.
- (c) The premises and every poultry house, poultry run or building or structure housing a battery system must be maintained in a clean condition and all cages are free from pests.
- (d) Measures should be taken to ensure that the poultry do not disturb or hinder the comfort, convenience, peace or quiet of the public.
- (e) Portable manure storage receptacles of an impervious material and with close fitting lids should be provided and the manure storage receptacles must be kept on a platform.
- (f) All manure and other waste from a poultry house and poultry run should be removed at least once every 48 hours and once every four days from a building or structure housing a battery system.
- (g) Manure and other waste matter must be kept in manure storage receptacles.
- (h) The contents of the manure storage receptacles should be removed from the premises at least once every seven days and disposed of in a way which will not create a public health nuisance.
- (i) Adequate measures should be taken to keep the premises free of flies, cockroaches and rodents and to prevent offensive odours arising from the keeping of poultry on the premises.

(6) Keeping of rabbits

(1) Structural and physical facilities:

- (a) Rabbits must be kept in a rabbit hutch.
- (b) The walls of the rabbit hutch should be constructed of brick, stone, concrete or other impervious material and must have a smooth internal surface.
- (c) The floor surfaces should be constructed of concrete or other impervious material brought to a smooth finish. The hutch is adequately ventilated.
- (d) The rabbit hutch should be adequate in size to allow free unobstructed movement of animals kept therein.
- (e) Any rabbit run should be enclosed with wire mesh or other durable material and constructed in a way that prevents the escape of rabbits from the hutch.
- (f) The walls of a building or structure housing rabbits should at least be 2, 4 meters high and must be constructed of concrete, stone, brick or other durable material and has a smooth internal surface.
- (g) If walls are provided, the building or structure should be ventilated and lighted by means of natural openings or windows of an area not less than 15% of the floor area of the building or structure.
- (h) The floor must be constructed of concrete or other impervious material brought to a smooth finish, and if required by an EHP, the floor surface is graded to a channel drained.
- (i) If no walls are provided, or walls are made of metal, the floor should be provided with curb at least 150 mm high around its outside edges, every cage must be constructed of an impervious material and fitted with trays of an impervious material for the reception of manure.
- (j) A potable water supply adequate for drinking and cleaning purposes should be provided in or next to every rabbit hutch or building or structure housing rabbits.
- (k) Rabbit hutch, rabbit run or building or structure housing rabbits should not be located within at least 5m any house, building or other structure used for human habitation, any place where foodstuffs are stored or prepared for human consumption, or the nearest boundary of any land.
- (l) An adequate rodent proof store room should be provided for the storage of feed.
- (m) Adequate washing facilities should be provided for the cleaning of hutches.

(7) General hygiene standards for keeping of rabbits

- (a) All rabbits should be kept within the rabbit hutch, rabbit run or building or structure housing a battery system.
- (b) The premises and any equipment, apparatus, containers or receptacles used in connection with keeping rabbits must be kept in a clean, sanitary condition and in good repair.
- (c) The premises should be maintained free from offensive odours and every rabbit hutch, rabbit run or building or structure housing a battery system and all cages clean and free from pests.
- (d) Portable manure storage receptacles of an impervious material with closefitting lids should be provided which receptacles must be kept on a platform.
- (e) All manure and any other waste matter should be removed from the rabbit hutch, rabbit run or building or structure housing a battery system, at least once every 48 hours.
- (f) Manure and waste must be kept in manure storage receptacles until it is removed from the premise.
- (g) The contents of the manure storage receptacles should be removed from the premises at least once every seven days and dispose of the contents in a way which will not create public health nuisance.
- (h) Adequate measures should be taken to keep the premises free of pests.

(8) Keeping of birds other than poultry

(1) Structural and physical facilities:

- (a) Birds, other than poultry must be kept in a aviary which must be constructed of durable rodent-proof material.
- (b) Adequate access should be provided for cleaning purpose.
- (c) If the aviary must be constructed above ground level, its base should be constructed of an impervious and durable material and it should be situated a minimum of 300 mm above ground level.
- (d) No aviary may be situated within 3m of any building or structure boundary fence or boundary wall.
- (e) A potable water supply adequate for drinking and cleaning purposes should be provided and situated in or next to every aviary.

(9) General hygiene standards for keeping of birds other than poultry

- (a) The aviary and the premises must be kept in a clean condition and free from pests.
- (b) Rodent-proof facilities should be provided and used for the storage of bird food.
- (c) Measures should be taken to ensure that the birds do not disturb the comfort, convenience, peace or quiet of the public.

(10) Kennels and catteries

Structural and physical facilities:

- (a) For the use of residential premises as kennels or cattery, the premises should be issued with a permit authorizing that activity, by the relevant local authority.
- (b) Every dog or cat must be kept in an enclosure which complies with the following requirements:
 - (i) The enclosure should be constructed of impervious materials and must provide adequate access for cleaning purposes;
 - (ii) The floors should be constructed of concrete or other impervious material brought to a smooth finish and graded to a channel at least 100 mm wide, extending the full width of the floor, which channel must be graded and drained into a gully connected to the Council's sewer by means of a pipe at least 100 mm in diameter;
 - (iii) A curb at least 150 mm high should be provided along the edge of the channel, referred to in subparagraph (ii), to prevent any storm water runoff entering the channel; and
 - (iv) The enclosure should be adequate in size to allow free unobstructed movement of animals kept therein.
- (c) Subject to the provisions of paragraph (a) every enclosure referred to in paragraph (b), should be provided with an adequate roofed shelter that complies with the following requirements:

- (i) Every wall should be constructed of brick, stone, concrete or other impervious material;
 - (ii) Every wall should be of a smooth internal surface;
 - (iii) The floor must be of concrete or other impervious material brought to a smooth finish; and
 - (iv) Every shelter must have an adequate access for cleaning and eliminating pests.
- (d) A dog kennel which complies with the following requirements may be provided instead of the shelter contemplated in paragraph (c):
- (i) the kennel should be constructed of an approved weatherproof and insulating material or other similar material and must be movable;
 - (ii) the kennel is placed on a base constructed of concrete or other impervious material with an easily cleanable finish; and
 - (iii) a sleeping board, which will enable the dog to keep dry, is provided in any kennel that does not have a waterproof base.
- (e) A concrete apron extending at least one metre wide around the edges of the enclosure must be provided.
- (f) The apron should be graded and drained in a way that drains storm water away for the enclosure.
- (g) A water supply, adequate for drinking and cleaning purposes, must be provided in or adjacent to the enclosure.
- (h) Any cage in which cats are kept should be constructed of durable impervious material and in a manner that it may be easily cleaned.
- (i) A shelter, enclosure or kennel may not be situated within 5m of any dwelling or other building or structure used for human habitation, place where food is stored and prepared for human consumption or the boundary of the premises.
- (j) If deemed necessary by the EHP, a separate room or roofed area may be provided for the preparation of food for the animals.
- (k) The floor of the food preparation area should be constructed of concrete or other impervious material brought to a smooth finish.
- (l) The internal walls surfaces of the room or roofed area should be smooth and easily cleanable.
- (m) Adequate washing facilities for food bowls and utensils should be provided.
- (n) A rodent-proof storeroom must be provided for the storage of animal food.
- (11) General hygiene standards for kennels and catteries
- (a) The premises, equipment and every vessel, receptacle or container and sleeping board used in connection with the kennels or cattery should be maintained in a clean, sanitary condition and in good repair.
 - (b) Portable storage receptacles, of an impervious material with close fitting lids should be provided for the storage of dog and cat faeces.
 - (c) All animal faeces and other waste matter should be removed from the enclosure and shelter at least once every 24 hours and place it in the receptacles referred to in paragraph (b);
 - (d) The contents of the storage receptacles must be removed from the premises at least twice every seven days and dispose of it in a manner that will not create a public health nuisance.
 - (e) All loose animal food should be stored in receptacles, with close fitting lids, in the food store.
 - (f) Adequate refrigeration facilities must be provided to store perishable foods on the premises.
 - (g) Adequate separate refuse receptacles, with close fitting lids must be provided on the premises for refuse other than faeces.
 - (h) A sick dog or cat must be isolated from all other animals. The premises should be maintained free from offensive odours and every enclosure, shelter, kennel, cage or food store clean and free from pests.
 - (i) Measures should be taken to ensure that no dog or cat disturbs the comfort, convenience, peace and quiet of the public.

(12) Keeping of wild animals premises

Structural and physical facilities:

- (a) Wild animals may not be kept on any premises without prior approval of the relevant nature conservation authorities and/or without a permit by the relevant local authority authorizing the keeping of such animals on the premises.
- (b) Wild animals should be kept in an enclosure and/or housing constructed and equipped as follows:
 - (i) The enclosure and/or housing must satisfy the needs of the specific animal as specified by the relevant nature conservation authorities; and
 - (ii) The enclosure and/or housing may not be situated within 50 metres of any boundary of the premises; any dwelling, building or structure used for human habitation; Any dwelling, building or structure where food is stored, handled or prepared for human consumption; or any water resource intended for domestic consumption.
- (c) An adequate supply of potable water for drinking and cleaning purposes must be provided on the premises for both the animals and for persons on the premises.
- (d) The enclosure and/or housing should be graded and drained in a way that does not pollute any water resource or create a public health nuisance.
- (e) A separate room, equipped with a preparation table and wash up sink, supplied with running potable water and drained must be provided for the preparation of food for the animals.
- (f) Adequate facilities should be provided for washing any cages, trays, crate, refuse receptacles and food containers in the following form:
 - (i) A curbed platform constructed of concrete or other impervious material brought to a smooth finish; or
 - (ii) A stainless steel sink or trough adequate in size to accommodate the equipment to be washed.
- (g) Both facilities referred to in paragraph (f) should be provided with a supply of running water adequate for drinking and cleaning and be drained.
- (h) Any area and room in which fodder and food are stored should be rodent-proof; and the enclosure and/or housing should be adequate in size to allow free unobstructed movement of animals kept therein.

(13) General hygiene standards for keepers of wild animals

- (a) The premises should be maintained in a clean and sanitary condition at all times.
- (b) All manure and food scraps from any enclosure and/or housing should be cleaned at adequate intervals.
- (c) Measures should be taken to prevent the soil beneath or around any enclosure and/or housing from becoming saturated with urine or polluted by any other matter or liquid.
- (d) All bedding must be removed from any housing at least once every seven days and store it in a manure receptacle or manure container or area, until it is removed from the premises.

(14) Keeping of pigs

Structural and physical facilities:

- (a) No pigs may be kept on any residential premises. For keeping of a pot belly pig as a pet, special authorisation must be issued by the relevant municipality.
- (b) Wall of the premises used for keeping of pigs should be constructed of brick, stone, concrete or other durable material; have a minimum height of at least 1,5 metres, and have a smooth, impervious internal surface.
- (c) The floor area should at least be 3m² for each pig accommodated in the pigsty, with an overall minimum floor area of at least 6m².
- (d) The roof over any portion of a pigsty should be a minimum height of at least 1,5 metres.
- (e) Except in the case of a roofed structure having one of its long sides completely open, the lighting and ventilation openings should be situated opposite one another in the external walls, and provide a minimum of at least 0,15 m² for each pig.

- (f) The floors should at least be 150 mm above the surrounding ground level, constructed of concrete or other durable and impervious material brought to a smooth finish, and graded for the runoff liquids into an open channel outside the pigsty.
- (g) The open channel referred to in paragraph (e) should be constructed of concrete or other durable and impervious material and must be a minimum of at least 100 mm in diameter, and be drained.
- (h) The pigsty should be strong enough to prevent the pigs breaking out.
- (i) The pigsty may not be situated within at least 100m of the boundary of the premises of any dwelling, building or structure used for human habitation, any place where foodstuffs are stored or prepared for human consumption; or any water resource intended for domestic consumption.
- (j) A roofed over concrete platform should be provided for the storage of all swill in containers and the preparation of pig feed.
- (k) The platform referred to in paragraph (i) must comply with the provisions of paragraph (e) and in addition, must have a curbing of a minimum height of 100 mm on each edge.
- (l) A water supply, adequate for drinking and cleaning purpose must be provided in or adjacent to the pigsty.

(15) General hygiene standards for keepers of pigs

- (a) All pigs must be kept within a pigsty.
- (b) The premises and any equipment, apparatus, containers and receptacles concerned must be maintained in a clean and sanitary condition and in good repair.
- (c) Portable storage receptacles, of impervious material and with close fitting lids should be provided for the storage manure.
- (d) All manure storage receptacles must be kept on a roofed concrete platform; All manure must be removed from the pigsty at least once every 24 hours and place it in the manure storage receptacles.
- (e) The contents of the manure storage receptacles should be removed from the premises at least once every second day and dispose of the manure in a manner that will not create a public health nuisance.
- (f) A rodent-proof storeroom of adequate size must be provided in which all feed, other than swill, must be stored.
- (g) Rodent-proof receptacles with close fitting lids must be provided to store all loose feed.

(16) Keeping of pets on residential premises

- (a) Premises in which pets are kept should be maintained in a clean and sanitary condition at all times.
- (b) All manure and food scraps must be cleaned daily and removed from the premises at daily.
- (c) Measures should be taken to prevent the soil beneath or around any premises from becoming saturated with urine or polluted by any other matter or liquid from the pets.
- (d) Measures should be taken to ensure that no pet disturbs the comfort, convenience, peace and quiet of the public.
- (e) Pets must be vaccinated against zoonotic diseases, such as rabies at necessary intervals.
- (f) Measures should be taken to prevent the breeding of pests and flies as a result on keeping of the pet.
- (g) Pets should always be kept on the premises and measures must be taken to ensure that the pet does not leave the owner's premises, unless accompanied by the owner.
- (h) The pet cage must be situated at least 3m from the boundary of the neighbour's wall.

(17) Keeping of bees on premises

- (a) Bees may be kept on any premises only upon issue of a permit by the relevant authority, authorizing that activity.
- (b) A bee hive should not be situated within 5 meters from any boundary of any premises, an a minimum of at least 20 meters from any public place or building used for human habitation or from any place used for keeping of animals, poultry or birds.
- (c) The bees must be kept in an approved bee hive at all times.
- (d) The bee hive should be kept in an area inaccessible to children and animals.
- (e) The bee hive must be kept in a shaded area at all times, and supplied with a source of drinking water within five metres of the hive.

(f) No Refuse or waste material may be deposited within t 5m of any bee hive.

(18) Keeping of and slaughtering of animals for religious, ceremonial and own consumption purposes

(a) In terms of Section 7(1) and (2) of the Meat Safety Act, 2000 (Act No. 40 of 2000), no person may:

(b) Slaughter any animal at any place other than at an abattoir;

(c) Permit the slaughter of any animal at any place under his or her control unless the place is an abattoir: or

(d) Sell-or provide meat for human and animal consumption unless it has been slaughtered at an abattoir.

(e) Paragraph (a) does not apply to a slaughter for own consumption or for cultural or religious purposes.

(f) No meat or animal product obtained from an animal slaughtered as contemplated in paragraph (a) may be sold to any person.

(g) In the case of religious or traditional slaughtering, the local authority must be notified in writing, fourteen (14) days prior to the event.

(h) The slaughtering of the animal must be conducted in a position as to not to allow observation by any person on neighbouring premises or any member of the public.

(i) The meat from the slaughtered animal may only used purpose of the religious or ceremonial feast and may not be sold to any person.

(j) The meat must be handled in a hygienic manner at all times.

(k) Blood and other waste products from the carcass must be disposed off in a manner which will not become a public health hazard or public health nuisance.

(l) The animal to be slaughtered should not be kept on the premises for a period in excess of 12 hours, prior to slaughtering.

(m) Measures should be taken to ensure that no health nuisance is created or exist on the premises as a result of the slaughtering.

(n) The services of an EHP or any person deemed as a meat inspector, in terms of the Meat Safety Act may be requested for conducting a post-mortem examination of the slaughtered animal at a cost determined by Local Authority concerned.

(19) Pet shops and pet parlours

The following are the structural and physical facilities requirements of pet shops and pet parlours:

(a) The walls of the premises of a pet shop or pet parlour must be constructed of brick, concrete or other impervious material, have a smooth and easily cleanable internal surface, and be painted with a washable paint or other adequate finish.

(b) All floor surfaces should be constructed of concrete or other impervious material brought to a smooth finish.

(c) All ceilings must be constructed of a dust proof material that is easily cleanable.

(d) At least one wash hand basin, with a supply of running hot and cold potable water must be provided for employees; and the ratio of wash hand basins to persons employed on the premises should be **1:15**. The hand wash basins must be drained.

(e) Adequate storage facilities should be provided on the premises.

(f) Facilities for the washing of cages, trays and other equipment should be provided in the form of either a curbed and roofed over platform with a minimum surface area 1, 5m², raised at least 100 mm above the floor and constructed of concrete or other impervious material brought to a smooth finish, which platform is provided with a supply of running potable water; or a stainless steel sink or trough of adequate size with drainage board and provided with a supply of running potable water.

(g) The platform, sink or trough referred to in paragraph (f) should be adequately drained.

(h) Any wall surface within 0,5 metres of the platform, sink or trough referred to in paragraph (f), must be permanently covered with waterproof material to minimum height of 1,4 metres above the floor.

(i) If more than 6 persons are employed on the premises, a clearly designated change room should be provided and the change room must have a floor area providing at least 0,5m² for each employee,

have a minimum overall floor area of 6m² and width of two metres, and must be equipped with an adequate metal locker for each employee.

- (j) If no change room is required in terms of paragraph (i) each employee must be provided with an adequate metal locker.
- (k) For the purposes of washing, clipping or grooming of pets, a bathroom fitted with a bath, or similar fitting, and a wash hand basin supplied with running potable water must be provided on the premises.
- (l) A clipping and grooming room fitted with impervious topped tables and an adequate number of portable storage receptacles of an impervious durable material with close fitting lids, for the storage of cut hair pending removal must be provided.
- (m) All buildings, including storage areas should be rodent-proof.
- (n) The premises may not have a direct internal access with any room or place used for human habitation, where clothing is stored or sold, or where food is prepared, stored or sold for human consumption.
- (o) The exterior cavity of any tubular or hollow material used to construct a cage must be sealed.
- (p) The cages should be movable.
- (q) The distance from any cage to the nearest wall should be a minimum of 150 mm.
- (r) The cages must be kept at a minimum of 450 mm above floor level, and the space below every cage must be unobstructed.
- (s) Rodent-proof receptacles, of an impervious material and with close fitting lids, for the storage of all loose pet food in the storage facilities should be provided.
- (t) Adequate refrigeration facilities to store all perishable pet food should be provided on the premises.
- (u) In any room in which the pets are kept 50% of the floor space should be unobstructed, and the cages should be placed at a minimum distance of 800 mm from one another.
- (v) Suitable means should be provided for the removal of animal faeces from the premises.
- (w) An approved trapped waste pipe system discharging via a hair trap to an outside gully must be provided to receive waste water from animal washing facilities.
- (x) Adequate measures and precautions should be taken to prevent the discharge of animal hair into the atmosphere
- (y) The premises must comply with the provisions of the relevant Noise Regulations.

(20) General hygiene standards for pet shops or pet parlours

- (a) The cages must be cleaned on a regular basis to prevent accumulation of manure.
- (b) The premises and every cage, tray, container, receptacle, basket and all apparatus, equipment or appliances used in connection with the pet shop or pet parlour should be maintained in a clean and sanitary condition, free from pests and in good repair.
- (c) Overalls or other protective clothing must be provided and must be worn by staff at all times when on duty.
- (d) Isolation facilities should be provided in which every pet which is or appears to be sick is kept while on the premises.
- (e) An adequate supply of potable water should be maintained for drinking and cleaning purposes.
- (f) Adequate ventilation should be available in the cages to ensure the comfort and survival of the pets.
- (g) Measures should be taken to ensure that the number of pets contained in each cage does not impede their free movement.

(21) Removal of dead animals on all premises where animals are being kept

- (a) All dead animals must be removed from the premises within 24 hours of its death, to prevent a health nuisance or hazard from occurring.
- (b) Where the premises are provided with an animal mortuary, carcasses must be kept in the cold storage facilities until they are removed from the premises.
- (c) Disposal of dead animals should be conducted in an acceptable manner and in compliance to the relevant by-laws of the Local Authority concerned.

20. STANDARDS FOR PRISONS, INCLUDING POLICE STATION HOLDING CELLS

Prisons, including police station holding cells must comply with the following standards:

(1) Structural facilities

- (a) Walls must be constructed of an approved material, brought to a smooth finish and painted with a light coloured paint.
- (b) Floors must be constructed of concrete, brought to a smooth finish and are easily cleanable.
- (c) Adequate floor space should be provided for each prisoner/inmate on the premises, with regards to cell accommodation to enable prisoners to move freely, and for sleeping purposes.
- (d) Holding cells should be kept clean at all times, free from debris, litter and other miscellaneous rubbish and be maintained in good repair.
- (e) Adequate storage facilities should be provided for the storage of personal belongings of each inmate.

(2) Toilet and ablution facilities

- (a) Adequate toilet, hand washing and shower facilities should be provided on the premises for use by service users/inmates.
- (b) Toilet and wash-up facilities should be adequately illuminated and ventilated.
- (c) At least 1 (one) toilet facility and 1 (one) hand wash basin must be provided for every 20 (twenty) inmates on the premises; and at least 1(one) urinal must be provided for every 50 inmates on the premises.
- (d) At least 1 (one) shower should be provided for every 20 (twenty) inmates on the premises.
- (e) Toilet facilities should provide privacy and security.
- (f) Potable running hot and cold water should be available on wash-up facilities.
- (g) Floors and walls of the toilet and wash-up facilities must be constructed of an easily cleanable surface brought to a smooth finish.
- (h) Toilet facilities must be kept clean at all times, and provided with an adequate supply of toilet paper, soap and drying towels.
- (i) Toilet facilities should be maintained in good working order and in good repair at all times.

(3) Laundering facilities

- (a) Prisons must have access to a well managed laundry facilities for the effective laundering of bedding and clothing for prisoners.
- (b) Surface finishes of walls, floors, ceilings, fittings, tables and trolleys in the laundry should be smooth and easily cleanable.
- (c) The laundry facility must be properly ventilated by cross ventilation and adequately illuminated.
- (d) Drainage systems should be designed without open drains; with lockable inspection or rodding eyes; with a flow from clean to dirty areas; and not connected to storm water drainage.
- (e) Areas receiving soiled linen must be separated from areas handling clean linen.
- (f) Adequate ablution and toilet facilities should be provided, including an emergency shower or eye-wash facility in the wash-room where chemicals are handled.
- (g) Suitable and hazard-free storage for chemicals used for laundering must be provided.
- (h) The capacity and the condition of the equipment used for washing should meet the prisons laundering requirements.

21. STANDARDS FOR VACANT LAND

Vacant land must comply with the following norms and standards:

(1) Physical environment

- (a) Vacant land must comply with the relevant by-laws of a specific Local Authority;
- (b) Maintained clean at all times, free from:
 - (i) Accumulation of refuse, debris, including glass, paper, rags, tins, trash, ash and coal, including dead animals;
 - (ii) Overgrown weeds, trees, long grass, and existence of undergrowth, shrubs or any poisonous plants;

- (iii) Accumulation of wrecked motor vehicles, chassis, engine or other part of a motor vehicle which is unsightly and may pose a health nuisance;
- (iv) Offensive smells; stagnant waters;
- (v) Burning of refuse/waste material; and
- (vi) Any conditions resulting in the breeding of flies, mosquitoes or other insects and the harbourage of rodents and other vermin.

22. STANDARDS FOR OFFICE ACCOMMODATION

Office building and accommodation must comply with the following norms and standards:

(1) Toilet and ablution facilities

- (a) Adequate toilet and hand washing facilities must be available on the premises for use by employees, in line with the National Building Regulations and the Building Standards Act, 1977 (Act No. 103 of 1977).
- (b) At least 1 (one) toilet facility and 1 (one) hand wash basin should be provided for every 20 employees on the premises. 1(one) urinal should be provided for every 20 employees on the premises.
- (c) Potable running water should be provided at every hand wash basin.
- (d) Toilets facilities should be designated by sex.
- (e) Floors of the toilet facilities should be constructed of a smooth and easily cleanable surface.
- (f) Walls must be constructed of a smooth finish and painted with a light coloured washable paint.
- (g) Toilet facilities must be properly illuminated and ventilated and kept clean at all times.
- (h) An adequate supply of toilet paper, soap and drying towels should be maintained in all toilet facilities.
- (i) Toilet facilities must be cleaned daily and maintained in good working order and in good repair at all times.

23. STANDARDS FOR POINTS OF ENTRY PREMISES

(1) Points of entry premises must comply with the following Norms and Standards;

- (a) Building structure of a point of entry must comply with the requirements of the National Building Act and the National Building Regulations, 103 of 1977 and SANS 10400.
- (b) The premises must be in compliance with EH and occupational hygiene requirements.
- (c) Potable water must be available within 200m of the premises.
- (d) Sanitation facilities must be available within 200m of the premises.
- (e) The premises must promote the health and safety of travelers.
- (f) Conveyances and facilities at airports, ports and ground crossing kept free from sources of infection and prevent the international spread of diseases.

(2) Structural facilities

- (a) The building structures must comply with the requirements of the National Building Regulations and the Building Standards Act, 1977 (Act No. 103 of 1977) for office accommodation, as well as the SANS 10400, with regards to floors, walls, roofs, stairways, lighting and ventilation, drainage, sanitary disposal, storm water disposal, facilities for persons with disabilities, fire protection and waste management.
- (b) Adequate floor space is provided to allow unobstructed movement of travelers including sick passengers, mobile equipment, and staff and to ensure that the facilities adhere to an acceptable level of occupation density in all facilities.
- (c) The locality of all facilities, including lifts, fire escapes and general exits should be clearly indicated for convenience of travelers, staff and any visitors.
- (d) Facilities must be adapted to accommodate physically disabled persons.
- (e) Areas where work is performed in the Points of Entry must comply with requirements laid down by the Environmental Regulations for Workplaces R2281, with specific attention to thermal conditions in the work environment; lighting according to luminance values; visibility in areas immediately outside the workplace; unobstructed space for work performance; maintenance of buildings of workplaces;

assuring noise levels below 85 dB; measures regarding flooding during construction and fire precautions including emergency exits and emergency lighting at such exits.

(3) Air quality and waste management

- (a) Waste and air quality management plans should be in place and implemented at points of entry.
- (b) Records of all monitoring/sampling results of emission levels and waste management audits conducted must be kept.
- (c) The collection, handling, storage and disposal of waste on the premises must be in compliance with the National Environmental Management, Waste Act, 2008 (Act No. 59 of 2008) and conform to the requirements as set out in Chapter 7.
- (d) Policy and procedures should be available to ensure that all the facilities which may give rise to pollution operate effectively. The policy should clearly define the duties and responsibilities of relevant stakeholders and of designated staff members and establish levels of accountability.
- (e) Adequate refuse bins must be provided at strategic places on the point of entry premises to eliminate and minimize littering and illegal dumping of waste.

(4) Noise control

- (a) Disturbing noises emanating from vessels, aircrafts, vehicles, trains refrigeration machines, fan systems, compressors, air conditioners, etc. should be controlled not to exceed the "disturbing noise" level specified in the Noise Regulations promulgated in terms of the Environmental Conservation Act, 1989 (Act No. 73 of 1989).
- (b) Vehicles must not emit noise that exceeds the limits prescribed in Regulation R896 of 27 April 1990 (Noise Regulations) where the measuring point is described in SABS 0181 of 1981.
- (c) Information with regard to the measurement of noise levels must be recorded.

(5) Disease surveillance

- (a) An Integrated Disease Surveillance Program together with an emergency preparedness plan must be developed per Point of Entry and implemented for the control of disease, including any other event of international concern.
- (b) Procedure for reporting and responding to accidents should be provided by the competent authority as part of the contingency plan of the Point of Entry.

(6) Toilet and ablution facilities

- (a) Adequate sanitation and hand washing facilities should be available on the premises for use by employees and travelers, in accordance with Part F, P and Q of the SANS 10400; including those for people with disabilities.
- (b) Hot and cold running water must be provided at every hand wash basin.
- (c) Soap must be provided at hand wash basins.
- (d) Toilets should be designated by sex.
- (e) Floors of the toilet must be constructed of an easily cleanable surface.
- (f) Walls must be constructed of a smooth finish and painted with a light coloured washable paint.
- (g) Toilet facilities should be kept clean at all times, and provided with an adequate supply of toilet paper, soap and drying towels.
- (h) Toilet facilities must be maintained in good working order and in good repair at all times.
- (i) Toilet facilities should be adequately ventilated and illuminated in accordance with the provision of Part O of the National Building Regulations.
- (j) Toilets servicing travelers should be consistent with volume and frequency of travelers.

(7) Food preparation facilities

If foodstuffs is prepared, processed, handled, stored, produced, transported or served at the point of entry, the facilities of the premises, including vehicles used for transporting foodstuffs used in connection with the handling, preparation, storage, processing, production and serving of foodstuffs must comply with

the requirements as set out in the Regulations Governing General Hygiene Requirements for Food Premises and the Transport of Food, R962 of November 2012.

(8) Drinking water quality

Water supply at a point of entry comply must with the specifications of the SANS 241 with regards to its chemical, microbiological and physical quality and the monitoring thereof must be in accordance with the requirements as specified in Chapter 6.

(9) Medical facilities

If medical care is provided at the point of entry for travelers and employees, the facilities used in connection with the provision of medical care should be in accordance with the requirements as specified in Chapter 2, section 11 and the waste management of waste in the medical unit must be in line with Chapter 7.

(10) Record keeping at the point of entry

Information with regard to the following should be documented in a point of entry:

- (a) Waste, Air and Water quality management monitoring reports;
- (b) Database of other Points of entry and their contact officials and details within South Africa and any other countries connected to through sea, land and air;
- (c) Any reported or identified, even potential diseases or events of international concern; and
- (d) Data on cleaning operations including liquid and solid waste management in the various facilities must be kept for planning of future programs.

(11) Vector Control

- (a) Vector control management plan for the prevention and control of vector infestation must be made available, in line with Chapter 3.
- (b) All facilities within a point of entry should be kept free of all vectors.

AIRCRAFTS

All aircrafts must generally comply with the IHR and relevant guidelines. Airline operators must ensure that they inform passengers on health measures recommended by the WHO and adopted by South Africa. In addition, aircraft operators must keep their conveyances free from sources of infection and or contamination including vectors. The aircraft must in particular comply with the following requirements:

(1) Structural facilities

- (a) Aircrafts should be designed in a manner that meets international standards and recommendations.
- (b) Aircrafts should be designed and constructed in a manner that facilitates proper cleaning, disinfection and disinsection.
- (c) Aircraft interiors should be designed and constructed of suitable material to facilitate cleaning and to reduce the risk of harboring insects, rodents and other vectors.

(2) Air quality and waste management

- (a) The management of waste on board aircraft must adhere to the requirements as specified in the WHO Guide to Hygiene and Sanitation in Aviation.
- (b) Records of all monitoring/sampling results of emission levels and waste management audits conducted should be kept.
- (c) Sufficient waste containers should be provided on board aircraft for storage of all types of waste.
- (d) Waste containers should be promptly emptied from the aircraft on arrival and waste management procedures must be implemented as per National Environmental Management, Waste Act , 2008 (Act No.59 of 2008).

(3) Noise Control

Information with regard to the measurement of noise levels must be recorded.

(4) Disease surveillance

- (a) Procedures for responding to a suspected communicable disease on board should be available.
- (b) Crew members must be trained on communicable disease management on board aircrafts.
- (c) An Integrated Disease Surveillance Program should be developed per Points of Entry and implemented for disease control, including any other event of international concern.

(5) Toilet and ablution facilities

- (a) Adequate sanitation and hand washing facilities should be provided onboard the aircraft.
- (b) Hot and cold running water should be provided at every hand wash basin.
- (c) Toilet facilities must be kept clean at all times, and provided with an adequate supply of toilet paper, soap and drying towels.
- (d) Toilet facilities should be maintained in good working order and in good repair at all times.
- (e) Floors of the toilet must be constructed of an easily cleanable surface.
- (f) Sanitary waste on board aircraft must on arrival be discharged into a Municipal approved sewerage system by a designated service provider.

(6) Food safety and hygiene

Food safety and hygiene onboard an aircraft must conform to the specifications as per WHO Guide to Hygiene and Sanitation in Aviation:

- (a) All food onboard must be stored and maintained at the correct temperatures.
- (b) Onboard storage compartments must be cleaned and disinfected regularly.
- (c) Onboard storage compartments should be made of material that is easily cleanable.
- (d) All equipment must be maintained in a serviceable condition and must be kept clean at all times.
- (e) Containers used for serving of food must only be used for the intended purpose.
- (f) Walls, ceilings, floor and door of vehicles transporting food onto aircraft should be lined with smooth, impervious material for easy cleaning.
- (g) Vehicles transporting food onto aircraft should be in a serviceable condition and kept in clean condition.
- (h) All equipment used for the preparation and serving of food must be kept in clean condition.
- (i) All utensils and equipment intended for single use should not be re-used.
- (j) Food waste must be removed from the aircraft as soon as possible after arrival; and disposed off through in an approved manner.

(7) Vector Control

- (a) Aircrafts must kept free of any vectors/pests and flies.
- (b) Aircrafts from Yellow Fever and Malaria affected areas are disinfected in compliance with the IHR.

(8) Cargo Holds and Containers

Aircraft cargo holds should be kept in clean condition; free of infectious materials, vectors/pests and rodents; and constructed of a material that facilitates easy cleaning.

SHIPS

(1) Ships must comply with the following norms and standards

All ships must generally comply with the IHR and relevant guidelines. Conveyance operators must ensure that they inform passengers on health measures recommended by the WHO and required by South

Africa. In addition, ship owners must keep their conveyances free from sources of infection and or contamination including vectors. Ships should be subjected to ship sanitation inspection.

(2) Structural facilities

Design of ships must conform to relevant health standards and requirements.

(3) Accommodation Establishments

- (a) Accommodation establishments on board must conform to the specifications as per Handbook for Inspection of Ships and Issuance of Ship Sanitation Certificates.
- (b) Adequate ventilation and heating systems should be provided.
- (c) Sanitation facilities with hand washing and drying facilities must be provided in accommodation establishments.
- (d) All sanitation facilities must have adequate soap and toilet paper.
- (e) Bathrooms and showers should be provided.
- (f) Accommodation establishments must be kept clean at all times.
- (g) Natural or artificial lighting should be provided.
- (h) The management of waste on board must adhere to the requirements as specified in the WHO Guide to Ship Sanitation and the Handbook for Inspection of Ships and Issuance of Ship Sanitation Certificates.
- (i) Ships should be equipped with facilities for storage and managing wastes generated from all areas within the ship.
- (j) Waste containers should be designed appropriately to facilitate proper cleaning.
- (k) Waste holding rooms should be well ventilated and humidity and temperatures controlled.
- (l) Waste holding areas have accessible hand washing facilities with hot and cold water;
- (m) Health care waste must be stored and treated in a safe manner.
- (n) Facilities for treating and/or storing health care waste should be available on board.
- (o) Ships should be equipped with facilities for managing waste from toilets and urinals, medical facilities and food sources.
- (p) Ships discharging waste at the port must do so in compliance with National Environmental Management, Waste Act, 2008 (Act No. 59 of 2008) and the specific by-laws of the relevant Local Authority.

(4) Disease surveillance

- (a) Procedures for responding to a suspected communicable disease on board should be in place.
- (b) Captains and senior officers must be trained on communicable disease management onboard.
- (c) An Integrated Disease Surveillance Program should be developed per Points of Entry and implemented for any event of International concern.

(5) Toilet and ablution facilities

- (a) Adequate sanitation and hand washing facilities should be provided onboard the vessel.
- (b) Hot and cold running water must be provided at every hand wash basin.
- (c) Toilet facilities must be kept clean at all times, and provided with an adequate supply of toilet paper, soap and drying towels.
- (d) Toilet facilities should be maintained in good working order and in good repair at all times.

(6) Food Safety and Hygiene

- (a) Food safety and hygiene on board must conform to the specifications as per WHO Guide to Ship Sanitation and the Handbook for Inspection of Ships and Issuance of Ship Sanitation Certificates.
- (b) Only food that is fit for human consumption can be supplied on board.
- (c) Facilities on board should be suitable for safe food preparation and serving of food.
- (d) Facilities for storage of food must be provided and maintained at the correct temperatures.

- (e) Food storage facilities must be constructed in a manner as to avoid pest access and harbourage, allow for adequate maintenance and cleaning and provide an environment that minimizes the deterioration of food.
- (f) All equipment must be maintained in a serviceable condition and are kept clean at all times.
- (g) Containers used for serving of food should only be used for the intended purpose.
- (h) There must be a suitable and adequate space for the safe storage, preparation and service of food.
- (i) Adequate toilet and personal hygiene facilities should be provided for food handling personnel.
- (j) Hand wash and hand drying facilities should be suitably located for easy access by food handling personnel.
- (k) Food storage temperature logs must be in place.
- (l) Sufficient lighting and ventilation must be provided in food preparation area.
- (m) Food preparation areas must be kept clean at all times.

(7) Child care facilities on board the ship

- (a) Child-care facilities on board ship must conform to the specifications as per WHO Guide to Ship Sanitation and the Handbook for Inspection of Ships and Issuance of Ship Sanitation Certificates.
- (b) Adequate lighting and ventilation should be provided for the facility.
- (c) Cleaning and maintenance plans must be in place to keep the facility clean at all times.
- (d) Sanitation facilities with hand-washing facilities must be provided for use by the children.
- (e) Soap, toilet paper and hand drying facilities must be provided in the sanitation facilities at all times.
- (f) Potable water should be available for use by the children (for drinking and other uses in the facility).
- (g) The surface area must be constructed of a smooth and durable material to promote the safety of the children in the facility.

(8) Medical facilities

- (a) Medical facilities onboard ships must conform to the specifications as per WHO Guide to Ship Sanitation and the Handbook for Inspection of Ships and Issuance of Ship Sanitation Certificates.
- (b) Provision of medical care must comply with international standards and requirements (ILO, Maritime Labour Convention 2003, IMO, WHO, International medical guide for ships, International Convention on Standards Certification).
- (c) Medical facilities should be easily accessible, separated from other activities and only used for the intended use.
- (d) Facility must be kept clean with sufficient lighting and ventilation.
- (e) Adequate space for isolation of ill travelers should be provided.
- (f) Safe drinking water must be available.
- (g) Sanitation facilities with cold and hot water taps for hand washing should be provided.
- (h) Soap, toilet paper and hand drying facilities should be provided in the sanitation facilities at all times.
- (i) Adequate and appropriate containers for the disposal of medical waste must be provided.

(9) Recreational water environments

- (a) The recreational water environment onboard ship must conform to the specifications as per WHO Guide to Ship Sanitation and the Handbook for Inspection of Ships and Issuance of Ship Sanitation Certificates.
- (b) Adequate ventilation must be provided for indoor recreational water environment.
- (c) All recreational water environments should be kept clean on a regular basis and the water treated to ensure it is microbiologically safe.

(10) Engine rooms

- (a) Engine room's onboard ship must conform to the specifications as per WHO Guide to Ship Sanitation and the Handbook for Inspection of Ships and Issuance of Ship Sanitation Certificates.
- (b) Rooms must be constructed of material that facilitates cleaning.
- (c) Hand wash facilities with hot and cold water must be provided and should be within easy reach.
- (d) Bathing and changing facilities for engine department personnel must be provided.
- (e) Adequate ventilation and lighting must be provided.

(f) Adequate sanitation facilities with cold and hot water taps for hand washing must be provided.

(11) Sewage

Sewage disposal systems onboard ship must conform to the specifications as per WHO Guide to Ship Sanitation and the Handbook for Inspection of Ships and Issuance of Ship Sanitation Certificates.

(12) Cargo holds

- (a) Cargo holds must conform to the requirements as specified in the WHO Handbook for Inspection of Ships and Issuance of Ship Sanitation Certificates.
- (b) Cargo holds must be constructed of material that facilitates easy cleaning and are kept in clean condition at all times.
- (c) Cargo holds must be kept free of any infectious materials, vectors and rodents.

(13) Vector control

- (a) Vector control onboard ship conforms to the specifications as set out in the WHO Guide to Hygiene and Sanitation in Aviation.
- (b) An integrated vector control programme must be in place.
- (c) Rodent proofing measures must be installed and maintained.

(14) General requirements

- (a) Adequate natural or artificial lighting and ventilation should be available in all areas of the ship.
- (b) A cleaning and maintenance programme must be in place for all areas within a ship.
- (c) Documents outlining prevention, surveillance and control of public health risks onboard should be available.

MONITORING OF WATER QUALITY IN AIRPORTS

(1) Travel can facilitate the transfer of communicable diseases and one of the risks that are associated with air travel is posed by the potential for microbial contamination of aircraft water by animal or human excreta. This contamination may originate from source waters or may occur during transfer operations or while water is stored on board the aircraft. If proper procedures and safer sanitation practices are not continuously followed to ensure the safety of water for human consumption, the risk of water and food-borne diseases in aviation increases. The provision of a potable water source at the airport might not necessarily be an indication that the water on board the aircraft is safe as it may have been contaminated during transfer and storage or distribution in the aircraft. Generally, the aircraft drinking-water supply and transfer chain consists of four major components: the **source** of water coming into the airport; the **airport** water system, which includes the on-site distribution system and may also include treatment facilities if the airport produces its own potable water; the **transfer point** sometimes referred to as the watering point; and the **aircraft water system**, which includes the water service panel, the filler neck of the aircraft finished water storage tank and all finished water storage tanks, including refillable containers/urns, piping, treatment equipment and plumbing fixtures within the aircraft that supply water to passengers or crew.

(15) Water supplied in aircrafts must be obtained from a source that has well operated and maintained systems and that conforms to **SANS 241** and the WHO Guideline for sanitation and hygiene in aviation:

- (a) Potable water at airports must comply with the **SANS: 241** with regards to its bacteriological, chemical and aesthetic quality.
- (b) A Water Safety Plan covering water management within airports from receipt of the water through to its transfer to the aircraft must be in place for airports to ensure water safety in aviation.

- (c) The quantity of potable water on board must be sufficient to meet the needs of all people on board the aircraft, for drinking, food preparation, personal hygiene and other uses/purposes.
- (d) Potable water provided to airports and aircrafts must be from an uncontaminated source that is approved by the competent authority (DWA).
- (e) WQMP for aircraft and airport water should be developed and implemented.
- (f) WQMP should be implemented for compliance monitoring and audit sampling purposes. The said programmes should highlight the “**objectives**” for the sampling, location “**where**” to sample and assess the determinants “**what**” to be assessed, and the frequency “**how often**” to sample, for the purpose of monitoring of all water from catchment to consumer which has the potential to impact human health following use. The water transfer points from the water source to onboard storage and distribution system should comply with the WHO Guide to sanitation and hygiene in aviation 2009.
- (g) Aircraft water systems should comply with the requirements as specified in the WHO Guide to sanitation and hygiene in aviation 2009.
- (h) Surveillance of water supply in aviation should be accomplished by authorized and trained officers from public health authorities or qualified independent auditors and inspectors.
- (i) The amount of water required for hand washing and other sanitation needs should be taken into account in passenger aircraft designs.
- (j) All water quality monitoring/sampling should be well documented and records kept for assurance and analysis in the event of an incident.
- (k) Drinking water supply to airports and aircrafts must regularly be tested for fitness of human consumption both on an operational level and on compliance level.
- (l) Compliance monitoring should only be conducted from pre-determined representative sampling points and at the user points as outlined in the WQMPs.
- (m) Water supply should be monitored in accordance to deliberate water quality monitoring programmes for the purpose of quality assurance and to satisfy a quest to ensure optimum public health.
- (n) Only **SANAS 17025:2005** accredited laboratories or DWA-approved laboratories per method of analysis are utilized for analysis of samples, to ensure credible results.
- (o) Sampling should be done by professionally trained personnel only.
- (p) Compliance monitoring and safety audits should be conducted in the aircraft to ensure that the persons on board the aircraft are provided safe water.

MONITORING OF WATER QUALITY ON BOARD SHIP

- (1) Improperly managed water is an established route for infectious disease transmission on ships. The importance of water was illustrated in the review of more than 100 outbreaks associated with ships undertaken by Rooney et al. (2004), in which one fifth were attributed to a waterborne route. Most waterborne outbreaks of disease on ships involve ingestion of water contaminated with pathogens derived from human or other animal excreta. Illnesses due to chemical poisoning of water have also occurred on ships, although chemical incidents are much less commonly reported than microbial ones. Even if the water at the port is safe, this does not ensure that it will remain safe during the transfer and storage activities that follow.
- (2) Ships are only loaded with potable water obtained only from water sources and suppliers that provide potable water and that conforms to **SANS 241** in terms of chemical, microbial, physical and radiological quality, and must conform to the specifications as per WHO Guide to Ship Sanitation and the Handbook for Inspection of Ships and Issuance of Ship Sanitation Certificates:
 - a) Water transported to the ship must comply with the specifications of the **SANS 241** with regards to its chemical, microbiological and physical quality.
 - b) Water supply on board a ship should take into consideration the number of travelers and the intended use (i.e. preparation of beverages, hand washing, onboard showering facilities, cleaning of utensils and work areas etc.).
 - c) Tanks used for storing water must be kept clean and protected against contamination.
 - d) Water monitoring /sampling should be well documented and records must be kept.
 - e) A water supply delivered to ports should be suitable for distribution and consumption without further treatment as necessary to maintain water quality in the distribution system.

- f) Potable water in the ship, port and distribution system must comply with the requirements as outlined in the WHO Guide to ship sanitation, and as set out in the **SANS 241**.
- g) Ships should have a risk management plans in place. Each entity for the ship water supply; shore water distribution system; transfer and delivery system and ship water system should prepare and implement a risk management plan for that part of the process.
- h) Drinking water supply to the ships and the ports must be regularly tested for fitness of human consumption both on an operational level and on compliance level.
- i) PHOs should also develop and implement Water Quality Monitoring Programmes for ship and port water.
- j) WQMP should be implemented for compliance monitoring and audit sampling purposes. The said programmes should highlight the “objectives” for the sampling, location “where” to sample and assess the determinants “what” to be assessed, and the frequency “how often” to sample, for the purpose of monitoring of all water from catchment to consumer which has the potential to impact human health following use.
- k) Water supply should be monitored in accordance to deliberate water quality monitoring programmes for the purpose of quality assurance and to satisfy a quest to ensure optimum public health.
- l) Only **SANAS 17025:2005** accredited laboratories or Department of Water Affairs (DWA)-approved laboratories per method of analysis should be utilized for analysis of samples, to ensure credible results.
- m) Documentation for water quality monitoring is kept for assurance and analysis in the event of an incident;
- n) Surveillance of water supply in maritime must be accomplished by authorized and trained officers from public health authorities or qualified independent auditors and inspectors.
- o) Compliance monitoring should only be conducted from pre-determined representative sampling points and at the user points as outlined in the WQMPs.
- p) WQMP should be strictly followed and implemented; hence proper water quality monitoring records should be kept at all times.
- q) Only **SANAS 17025:2005** accredited laboratories or Department of Water Affairs (DWA)-approved laboratories per method of analysis should be utilized for analysis of samples, to ensure credible results.
- r) PHOs must acquaint themselves with and have an understanding of the ship drinking-water supply and transfer chain to be able to illustrate the points at which the water can become contaminated en route to the taps on board.
- s) Regular monitoring must be done for each parameter to ensure maintenance of safe water quality.
- t) The operational limits, monitoring of water quality and instituting of corrective action where required for the water in the distribution system must be in accordance with the requirements as specified in WHO Guide to ship sanitation.
- u) Drinking water on the ship and at the port must regularly be tested to ensure that it is fit for human consumption both on an operational level and on compliance level.
- v) Documentation for water quality monitoring must be kept for assurance and analysis in the event of an incident.
- w) Documents of inspection, maintenance, cleaning, disinfection (to include concentration and contact time of disinfectant) and flushing should be kept and be available for 12 months.
- x) Sampling must be done by Port Health Officials or other professionally trained personnel only.
- y) Sampling for ship water supply system, potable water for human consumption on the ship, for water with a temperature of between 25 °C and 50 °C must be done as prescribed in the GDWQ as well as in ISO 19458.
- z) Port Health Officials and the ship operators must have basic water treatment calibrated equipments at hand for basic testing of turbidity, pH and disinfectant residual.

(3) Bunkering of ship water

- a) Bunkering of water should be done in accordance with the standards as set out in Guideline 2.3 of the WHO Guide to Ship Sanitation 3rd edition.
- b) The ships operator must ensure that the quality and source water for ships conform to the **SANS 241** before bunkering.
- c) Port Health Officials must conduct compliance monitoring to ensure no contamination of water takes place during bunkering.

(4) Water production on board

When sea water is to be treated on board the ship for use as potable water, the processes conducted should be in accordance to the requirements as specified in Guideline 2.3 of the WHO Guide to Ship Sanitation 3rd edition.

(5) Potable water storage

- (a) The storage of potable water on board should be done in accordance to the requirements as specified in the Guideline 2.3 of the WHO Guide to Ship Sanitation to prevent contamination of water.
- (b) Port Health Officials must inspect empty tanks on a regular basis and take microbiological and chemical samples of the water.

(6) Ballast water

Ballast water can carry hazards such as toxicogenic vibrio cholera that can be associated with cholera outbreaks in port areas, including organisms that may affect the ecological balance of the marine environment:

- (a) Ballast water must be treated on board and sampled for the presence of hazardous pathogens and harmful organisms before it can be discharged into the marine environment.
- (b) Ships are not allowed to discharge ballast water or any liquid containing toxic waste or any form of contamination, in areas where water for water supply is drawn or any other restricted area for the disposal of waste by the local authority.
- (c) Ballast water must comply with specified concentrations in terms of human health standards as outlined in the WHO 4th Edition Guidelines for drinking water.
- (d) Hoses used to allow rapid discharge ballast water must suitably be labeled "FOR WASTE DISCHARGE ONLY".
- (e) Ballast water onboard ship must conform to the requirements as specified in the WHO Guide to Ship Sanitation and the Handbook for Inspection of Ships and Issuance of Ship Sanitation Certificates.
- (f) An approved Ballast water management plan must be in place.
- (g) A ballast water record book must be kept.
- (h) Ballast water must safely be treated and disposed off.

24. STANDARDS FOR OFFENSIVE TRADES

- (1) For the purpose of this document, Offensive trades refers to any trade in which the substances dealt with are, or are likely to be hazardous or dangerous to health and likely to pose a human health hazard and or risk. These include but are not limited to the following trades:
 - (a) Panel beating and spray painting
 - (b) (ii) Operating of a hazardous waste recycling plant;
 - (c) Oil and petroleum product recycling;
 - (d) Scrap yard or scrap metal dealing; blood boiling, bone boiling, tallow ,melting or fat extracting, soap boiling, tripe boiling or cleaning, skin storing, hide boiling, sin curing, blood drying, leather dressing, tanning or glue maing;
 - (e) Brick burning, lime burning; manure making and storing or compost making;
 - (f) Cement works, coke-ovens or slat glazing works;
 - (g) Viscose works;
 - (h) Ore or mineral smelting, tempering, hardening;
 - (i) Slaughtering of animals;
 - (j) Fish mongering and fish frying;
 - (k) Animal bristle, hair or storing and sterilising;
 - (l) Storage of raga;
 - (m) Wood saw-dust;
 - (n) Works for the production of carbon bisulphide, cellulose lacquer, cyan or its compounds, hot pitch or bitumen, pulverized fuel, pyridine, liquid or gaseous sulphur dioxide or sulphur chlorides;

- (o) Works for the production of amyl acetate, aromatic ethers, butyric acid, caramel, enamelled wire, glass, hexamine, lampblack, B-naphthol, resin products, salicylic acid, sulphated organic compounds, sulphurous paints, ultramarine, zinc chloride or zinc oxide;
- (p) Food-processing factories; bacon factories and meat-processing factories; chemical works; Dye works; Breweries and distilleries;
- (q) Malt and yeast manufacturing works;
- (r) Sugar mills and sugar refineries;
- (s) Works or premises used for the storing or mixing of manure, super phosphate or fertilizers;
- (t) Fat-melting or tallow-melting works and any similar works or establishments for dealing with meat, bones, blood or offal, or with other organic matter derived from animals or poultry;
- (u) Works or premises used for the manufacture, storage or mixing of meal derived from fish, crustacean, poultry, meat offal from animals or poultry, or other organic matter derived from animals or poultry;
- (v) works or premises used for storing, drying, preserving, or otherwise processing bones, horns, hoofs or other waste matter or excretions from animals or poultry;
- (w) Premises used for storing, sorting or dealing with hides and skins, or for fellmongery; and
- (x) Tanning and leather-dressing works; and any other activity deemed to be an offensive trade by a specific Local Authority.

(2) Premises used for offensive trades must comply with the following norms and standards:

- (a) The premises must be operated under a permit issued by the relevant local authority, authorizing such trade.
- (b) The premises must be operated under a Valid Health Certificate issued by an EHP, to the effect that the premises comply with EH requirements.
- (c) The building structure must comply with the requirements of the National Building Regulations and the Building Standards Act, 1977 (Act No. 103 of 1977).
- (d) Activities listed in the EIA Regulations 2010, as requiring environmental authorization must comply with all relevant requirements of such legislation.
- (e) The premises must comply with the requirements of the Regulations Relating to Smoking in Public Places and Outdoor smoking, R 264 of 30 March 2012.
- (f) The storage of waste on any premises must comply with the requirements as set out in Section 21 and 22 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008).
- (g) Premises must comply with the requirements of Section 26 of the National Environmental Management: Waste Act; with regards to the treatment, processing and disposal of waste.
- (h) Premises must comply with the requirements of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) and its Regulations with regards to prevention and control of pollutants in the air.
- (i) Premises must comply with the requirements of the National Water Act, 1998 (Act No.36 of 1998), with regards to prevention of pollution of water resources.
- (j) The release of any effluent into a water course must comply with Section 7 of the Water Services Act, 1997 (Act No.108 of 1997).
- (k) The emission of Noise from any activity on any premises must comply with the requirements of the Noise Control Regulations, Published in terms of the Environmental Conservation Act, 1989 (Act No.73 of 1989), as well as relevant noise regulations promulgated by the relevant provincial authority.

(3) Structural facilities

- (a) The floors of the premises must be constructed of cement concrete or a similar impervious material, brought to a smooth finish.
- (b) The floors of the premises must be adequately graded and drained for the disposal of effluent to an approved disposal system.
- (c) The inside walls, except where glazed or glass brick or glazed tiles are used, must be plastered, brought to a smooth finish and painted with a light-coloured, washable paint.
- (d) The surface of any backyard or open space must be paved with concrete or similar impervious material, brought to a smooth finish.
- (e) An adequate supply of running potable water must be provided on the premises.
- (f) Portable containers constructed of iron or another non-absorbent material equipped with closely fitting lids, must be provided for the removal of all waste and waste water from the premises.

- (g) Effluent arising from the manufacturing or other process performed on the premises must be disposed off in a manner approved by the Local Authority.
- (h) Accommodation should be provided for the storage of all finished products, articles or materials which are used in the manufacturing or other process and which may –
 - (i) Discharge offensive or injurious effluent or liquid; or
 - (ii) Decompose in the course of the work or trade.
- (i) The discharge in the open air of any noxious, injurious or offensive gas, fume, vapour or dust produced during any handling, preparation, drying, melting, rendering, boiling or grinding process or storage of material should be adequately controlled;
- (j) Sanitary fixtures should be provided as prescribed in the National Building Regulations and Building Standards Act.
- (k) A perimeter wall made of brick or some other impervious material, with a minimum height of at least 2 metres, should be constructed around the premises.
- (l) All gates to the premises should be of solid construction with a minimum height of at least 2 metres.
- (m) All perimeter walls and gates must adequately screen activities on the premises from public view; and all materials must be stacked or stored on the premises below the height of the perimeter screening.
- (n) Where five or more persons of the same sex are employed on the premises, separate change-rooms for males and females should be provided, containing the following:
 - (i) Individual metal locker for every employee;
 - (ii) A wash-hand basin provided with a supply of running hot and cold potable water; and
 - (iii) An adequate supply of soap and disposable towels at every wash-hand basin.
- (o) If no change-room has been provided in terms of paragraph (n) the following must be complied with:
 - (i) A wash hand basin with a supply of running hot and cold potable water, must be provided in an accessible position; and
 - (ii) An adequate metal locker should be provided for every employee in the work area.

(4) General requirements

- (a) The premises must be maintained in a clean, hygienic and good condition at all times.
- (b) All walls and floors should be maintained in a manner and condition that prevents the absorption of any waste or waste water.
- (c) All machinery, plant, apparatus, furniture, fittings, tools, implements, vessels, containers, receptacles and vehicles should be maintained in a clean, hygienic and good condition at all times.
- (d) Waste accumulating should be prevented on the premises.
- (e) The emission of noxious, injurious or offensive gases, fumes, vapours or dust generated during any handling, preparation, drying, melting, rendering, boiling or grinding process or storage of any material on the premises must be prevented.

25. STANDARDS FOR RODENT/PEST CONTROL ON PREMISES

- 1) Premises must comply with the following requirements for rodent or pest control purposes:
 - (a) Effective measures must be implemented to prevent and control infestation from rodents, insects and other pests on any premises.
 - (b) Pest control programs on premises should sets out procedures necessary to prevent and control pests within the premises. It includes identification of pests, level of infestation and measures implemented to prevent and control pest infestation in the internal and exterior perimeters of the premises.
 - (c) Pest control program should adopt an integrated pest management (IPM) approach which includes facility inspections, waste management, housekeeping, hygiene standards, structural maintenance and repairs of premises.
 - (d) Pest control program to include:

- (i) Regular inspection of premises to identify conditions that promotes harbourage of pests (i.e. availability of water, food, shelter that may be used by pests);
 - (ii) Clear prevention and control measures to be implemented in dealing with pest infestations within premises; and
 - (iii) Procedures on correct storage of food, management of waste and housekeeping to ensure proper management of conditions that may promote pest infestation.
- (e) Suitably trained and competent personnel should be designated for the implementation and maintenance of documented pest control programs.

General hygiene standards

(2) Waste management

- (a) Waste generated on premises should be properly removed and stored at all times.
- (b) Waste storage areas must be kept clean and waste removed regularly to eliminate potential food sources and harbourage for pests.
- (c) Containers used for the discarding or storage of waste material to be fitted with tight fitting lids, maintained rodent proof and constructed of material which may not be penetrated by rodents.
- (d) Waste storage containers must be kept closed, cleaned and disinfected regularly to avoid attracting pests.

(b) Housekeeping

- (a) Good housekeeping practices should be adopted to ensure premises are kept free of conditions that may attract pests.
- (b) A cleaning program should be in place which promotes the immediate cleaning of minor spills and filth (i.e. clean-as-you-go principle).
- (c) External environment should be maintained in good condition, including cutting and trimming of overgrown grass and vegetation to prevent harbourage of pests.

(3) Water and Food

- (a) Stagnant water should be emptied and removed to eliminate possible breeding area for mosquito and source of water for rodents and other pests.
- (b) Food products and any matter that may attract vectors must be covered at all times and stored correctly.
- (c) Premises should be maintained in a manner which does not allow the accumulation of water that may result in breeding or harbourage of any pest.

(4) Use of Baits on Premises

- (a) Bait stations must be placed in a locked, labeled, tamper-resistant container designed specifically for holding baits.
- (b) Baits containers should be securely placed to ensure container may not be moved or picked up.
- (c) Regular inspections on the bait station must be conducted to check for the presence of rodents.
- (d) Bait stations must be maintained in good condition and replaced regularly.
- (e) Bait stations should be placed in a manner so as not to be accessible by children or untargeted animals.
- (f) Schematic representation of areas where rodent bait stations have been placed must be recorded and updated when required.

(5) Rodent Proofing

- (a) Premises should be constructed and maintained in a rodent proof manner to prevent penetration of by rodents and other pests.

- (b) Rodent proofing in buildings must be conducted in terms of the SANS Code 080:1972 – Code of Practice for the Rodent Proofing of Premises.
 - (c) Any openings or gaps on the premises where rodents may enter must be repaired or sealed immediately.
 - (d) All rodent proofing must be maintained in good order and repair so as to be impervious to rodents and other pests.
- (6) Pesticide use
- (a) The frequency of pesticide application should be based on the level of pest infestation on the premises, e.g. high levels of pest infestation may initially require monthly pesticide application.
 - (b) Pest infestation must be identified prior to pesticide use as type of pest determines type of pesticide to be used.
 - (c) Pesticides should be used in a manner as not to cause harm to the environment and to human health.
 - (d) Pesticides must be applied only when control for a specific pest cannot be achieved in any other way, such as, including, but not limited to waste management, usage of traps, good housekeeping.
 - (e) In the case where an external pest control service provider is utilized, such a contractor must be registered in terms of the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act No 36 of 1947).
 - (f) Pesticides must be handled, stored and disposed of in terms of SANS 10206:2010 – The Handling, Storage and Disposal of Pesticides.
 - (g) Operators of pesticides must use proper personal protective clothing and gear during pesticide application.
 - (h) Pesticides must be applied according to the label/manufacturers instruction.
 - (i) In food establishments, the use of pesticides for pest control must be conducted in terms of SANS Code 10133:1977 – The application of pesticides in food handling, food processing and catering establishments.
 - (j) In food establishments, the use of pesticides for pest control must be conducted in terms of SANS Code 0133:1977 – Code of practice of practice for the application of pesticides in food handling, food processing and catering establishments.
 - (k) Pest control certificates for extermination must be issued by Pest control operators registered in terms of the Fertilizers, Farm Feeds, Agricultural Remedies and Stock remedies Act, 1947 (Act No. 36 of 1947) and such certificates must not be older than 6 months.
 - (l) The application of pesticides on the premises must be recorded and records must be made available at the request of an EHP.
 - (m) The application of pesticides on premises must be communicated to all in public areas within the premises prior to such application.
 - (n) Such communication to include:
 - (i) Purpose of pesticide application;
 - (ii) Registered name and number of pesticide used;
 - (iii) Precautions to be taken prior or after the application;
 - (iv) Date and time of application;
 - (v) Area of application; and
 - (vi) Contact details of responsible individual.
 - (o) The storage of pesticides for commercial use should be avoided on premises. In cases where such storage may not be avoidable, the following applies:
 - (i) Pesticides must be stored in dry, well ventilated, lockable storage areas where access is limited to relevant individuals;
 - (ii) Pesticide storage area must be located away from food or water handling and storage areas;
 - (iii) Pesticide storage area must specifically be designated for such storage and no other item to be stored in such area;
 - (iv) Stored pesticides must be correctly labeled and maintained free of leaks;
 - (v) Disposal of pesticides, pesticide containers and pesticide residues should be effectively conducted in terms of SANS 10206:2010 – The Handling, Storage and Disposal of Pesticides;

- (vi) Clear, visible warning signage must be placed on the entrance of storage areas;
- (vii) Spill control procedures must be documented and made available;
- (viii) Pesticides should be kept in their original containers and tightly closed at all times;
- (ix) Pesticide storage containers must be inspected regularly for leaks; and
- (x) An inventory of all stored pesticides must be kept away from the storage area.

(7) Records of pest control to be kept

The following records must be documented and kept on the premises:

- (a) Records detailing site inspections and chemical applications that have been conducted on the premises;
 - (b) Premises site- inspection records are to include, but not limited to:
 - (i) Date of inspection;
 - (ii) Pest sightings during inspection;
 - (iii) Area of pest infestation;
 - (iv) Location of baits, if used; and
 - (v) Recommendations made on rodent proofing, hygiene or food, waste and water storage.
 - (c) Records of chemical applications on premises may include, but not limited to:
 - (i) Name of pesticide used;
 - (ii) Target pest;
 - (iii) Method of application;
 - (iv) Specific area where pesticide has been applied;
 - (v) Amount of pesticide used at the application site;
 - (vi) Date of chemical applications; and
 - (vii) Details and signature of applicator.
 - (d) Records must be made available to an EHP on request.
- (8) General requirements

- (a) The effective execution of a pest control program of any premises must be regularly monitored.
- (b) Pest control examination certificates must accompany the registration certificate of the Pest Control Operator.
- (c) Any abnormal incidence of pests (e.g. mosquitoes and rodents) must be reported immediately to the EHP of the Local Authority concerned.
- (d) Personnel designated to coordinate, manage or implement the pest control plan should be adequately trained.
- (e) Adequate resources (chemicals required) must be provided to ensure the execution of the pest control program as required.

26. ENVIRONMENTAL POLLUTION CONTROL MEASURES APPLICABLE TO ALL PREMISES

- (1) All premises must comply with the following Norms and Standards for environmental pollution control:
 - (a) The storage of waste on any premises must comply with the requirements as set out in Section 21 and 22 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008);
 - (b) The collection and transportation services on any premises must be in accordance with the relevant By-laws of a local authority concerned;
 - (c) Premises must comply with the requirements of Section 26 of the National Environmental Management: Waste Act; with regards to the treatment, processing and disposal of waste;
 - (d) Premises must comply with the requirements of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) and its regulations with regards to prevention and control of pollutants in the air;
 - (e) Premises and persons must comply with the requirements of the National Water Act, 1998 (Act No. 36 of 1998), with regards to prevention of pollution of water resources;

- (f) The release of any effluent into a water course to adhere to the provisions of Section 7 of the Water Services Act, 1997 (Act No. 108 of 1997);
- (g) The emission of noise from any activity on any premises to be in line with the specifications of the Noise Control Regulations 1989, published in terms of the Environmental Conservation Act, 1989 (Act No. 73 of 1989), as well as relevant noise regulations promulgated by the relevant provincial authority.
- (h) EH inspections of any premises must include monitoring and assessment of the immediate environment, the quality of the air, water sources and the quality of water.
- (i) EH investigations must include but not limited to investigations of public complaints and monitoring of disease trends in the community.
- (j) In the immediate environment, inspections must be conducted to assess dirty or unsightly environmental conditions, including the following:
 - (i) Accumulation of refuse, debris, including long glass, paper, rags, tins, trash, ash and coal;
 - (ii) Overgrown weeds and long grass, existence of thicket, shrub or any poisonous plants;
 - (iii) Accumulation of wreck, chassis, engine or other part of a motor vehicle which is unsightly and may pose a health nuisance;
 - (iv) Offensive smells from any activity;
 - (v) Stagnant water resulting in the breeding of flies and mosquitoes;
 - (vi) Dumping or littering of waste, including rubbish, glass, tins, paper, dead animals;
 - (vii) Auditing of waste management systems on any premises;
 - (viii) Harbourage of rodents or other vermin; and
 - (ix) Burning of any waste material, including tyres, rubbish, garden refuse, paper or other material on any premises in such a way as to create a health nuisance or health hazard.
- (c) In the atmosphere, assessment must be conducted for emissions of ash, grit, dust and soot from any chimney, including but not limited to emissions of offensive, smoke, dust, ash, grit or soot from any burning activities on premises, either from chimneys or other material or objects in such a way as to be offensive, injurious or hazardous to health.
- (d) Environmental health inspections must also include the assessment of any pollution of any water course, including but not limited to:
 - (i) Any indication of blockages of any drain, pipe, manhole, sewer blockages on any premises and public open spaces, overflowing to the streets; the release of untreated effluent into any stream, river or watercourse;
 - (ii) Dumping or throwing of any waste into any river, stream or watercourse;
 - (iii) Construction of any pit toilets in a manner as to ensure proper erection to prevent pollution of ground water sources, health nuisance or health hazard;
 - (iv) The assessment of latrine construction to ensure proper siting (at least 5m from a house or from the boundary of the premises).

ANNEXURE B**STANDARDS FOR HEALTH RELATED WATER QUALITY MANAGEMENT ON PREMISES****1. ADEQUACY AND ACCESSIBILITY OF WATER SUPPLY**

Water supply to communities and water quality monitoring by EHPs must comply with and be in accordance to the following Norms and Standards:

- (1) Water supply to communities must be safe, adequate and accessible:
 - (a) "Safe": water that has been tested and does not present any significant risk to health over a lifetime of consumption (microbiological, physical and chemical quality);
 - (b) "Accessibility": water facilities easy to reach and located in a safe environment and technology that is easy to use and operate; and
 - (c) "Availability": total volume of water accessible to a consumer on frequent basis within a period of 24 hrs.
- (2) In terms of the Regulations under Section 9 of the Water Services Act, 1997 (Act No.108 of 1997): the minimum standard for basic water supply service is a minimum quantity of potable water of 25 liters per person per day or 6 kilolitres per household per month-
 - (a) At a minimum flow rate of not less than 10 (ten) liters per minute;
 - (b) Within 200 (two hundred) meters of a household; and
 - (c) With effectiveness such that no consumer is without a supply for more than 7 (seven) full days in any year.
- (3) Water must be available, easy to reach and the technology used is simple and easy to operate.

2. QUALITY OF TAP WATER

- (1) For lifetime consumption, the microbiological, physical, aesthetic and chemical quality of water provided by Water Services Institutions and Water Services Intermediaries must conform to the requirements as set out in the **SANS 241** for drinking water;
 - (a) Water must be suitable for all domestic uses (drinking, food preparation and personal hygiene);
 - (b) Water provided must not only be safe but also acceptable in appearance, taste and odour (aesthetically acceptable water);
 - (c) Water not to be harmful to water supply systems and household appliances e.g. geysers and kettles.

For the purpose of this document, the standard limit "not detected" as outlined in **SANS 241 shall mean nil or zero.**

3. QUALITY OF PACKAGED WATER

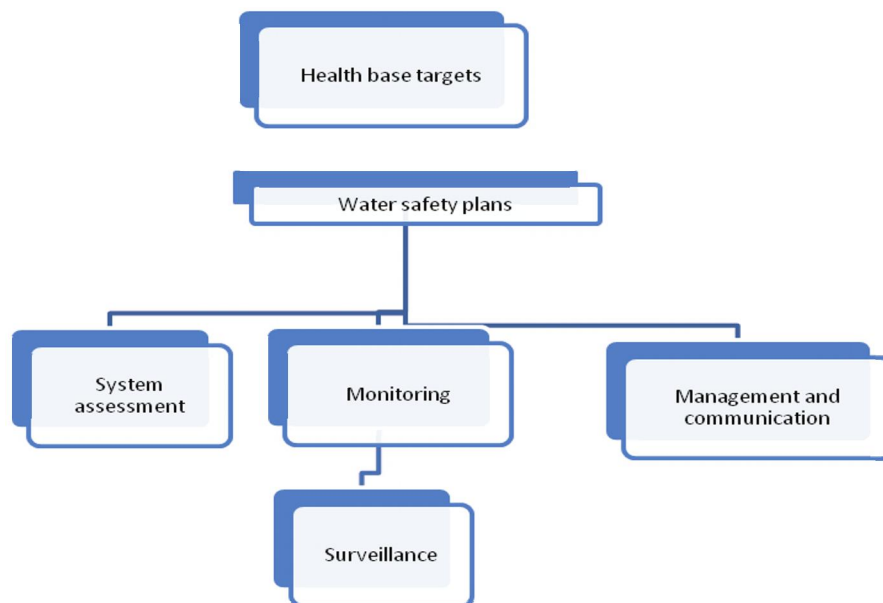
- (1) Packaged water must be suitable for human consumption, with regards to its microbiological, chemical and physical quality.
- (2) All packaged water shall comply with the standards as set out in the Regulations for Packaged Water, R718 of 28 July 2006, (as amended) published in terms of the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972).

4. WATER SAFETY PLANS

- (1) WHO has identified that the most effective means of consistently ensuring the safety of a drinking-water supply, is through the use of a comprehensive risk assessment and risk management

approach, which encompasses all steps in the water supply system, from catchment to consumer. Water Safety Plans are a powerful tool for the drinking-water supplier to manage the supply safely. They are also valuable to also assist surveillance of water supply safety by public health authorities (e.g. EHS). The Water Services Act and subsequent Strategic Framework on Water Services 2008 require that WSAs have Water Safety Plans in place; which must ideally be developed by multi-disciplinary team of experts, e.g. Engineers, Planning Officers, Architects, Infection Control Coordinators, Occupational Health and Safety, standard setting bodies, as well as public health or hygiene professionals.

- (2) The guiding framework for the development of these Norms and Standards is based on critical evaluation of health concerns in accordance to the Framework for Safe Drinking Water and the WHO Guidelines for drinking-water quality (WHO, 2011). The framework is depicted in figure 1 below:

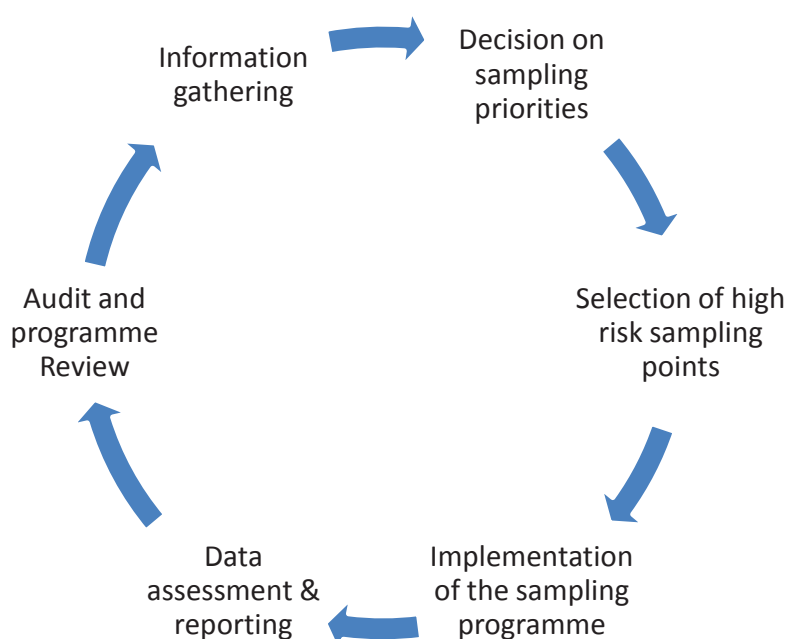


Adopted from the WHO Guidelines for Drinking Water Quality. Fourth edition

- (a) EHPs must form an intrinsic part of developing and reviewing Water Safety Plans for WSAs to ensure that health related aspects are considered, improve health surveillance and to open communication channels between the various role players in water quality management;
- (b) Water Safety Plans should also highlight the risk of water quality issues and water sources outside catchment areas, such as rivers and streams; and
- (c) EHS to provide public health oversight of drinking water supplies, which includes ensuring that communities and households without access to treated water are provided with information health related information on water treatment and the danger of untreated water.

5. WATER QUALITY MONITORING STRATEGIES

- (1) For effective Health related water quality monitoring, EH water quality monitoring strategies should be developed and implemented for the water quality management. The strategies should assist in identifying and mitigating risk to human health that may be caused by poor water quality, through the evaluation of EH water quality monitoring systems in place and those by other role players responsible for water quality management, e.g. WSAs and WSPs. The design of the strategy should be based on the following model below:



Adopted from the Ethekeeni metropolitan municipality WQM strategy

- (2) The WQM strategy includes the description of existing sample areas through the use of GIS maps to identify potential high risk areas not monitored:
- EH sampling should rather focus on water sources such as surface, recreational, potable water and waterborne diseases sampling monitoring. Water sources that are adequately monitored by WSAs should not be re-sampled, as the results thereof must be readily available from WSAs or WSPs;
 - Sampling points should be selected based on risk assessment of the high risk points. The selected high risk points should therefore be Geo coded to enable continuous monitoring to observe trends;
 - Sampling points should be selected in a manner that will ensure that the quality of water can be verified throughout the entire water supply chain (**from catchment to consumer**). Refer to **SANS 241**.

6. WATER QUALITY MONITORING PROGRAMMES

- Drinking water supply must regularly be sampled to assess its fitness for human consumption, both on an operational level and on compliance level. EHS should develop and implement WQMP for monitoring of water from catchment to consumer, which has the potential to impact human health following use (see **Appendix A for guidelines**). Dedicated personnel should be available to coordinate health related water quality monitoring within MHS in order to ensure effectiveness of EH water quality monitoring programmes.
- All required resources, such as material and equipment must adequately be provided to ensure sustainable and effective water quality monitoring. Hence, water quality monitoring should be adequately budgeted for within funding mechanisms of MHS. A WQMP to clearly define the **“objectives”** for sampling before any sampling is conducted e.g. to determine the quality of water at the point of use (prisons, schools for drinking and other purposes):
 - The objectives of the sampling programme must determine issues such as the location **“where”** to sample; the determinants of interest **“what to sample”**, the frequency **“how often”** to sample (refer to SANS 241).

- (b) Health related WQMP should include monitoring of all water sources, including monitoring quality issues outside the catchment areas e.g. rivers, streams, springs and waterborne diseases monitoring.
- (c) Water source mapping should be conducted and should include infrastructure coverage, water availability, functionality, number of people crowding per facility and record keeping for any health risks that may occur per water source; followed by water quality monitoring.
- (d) Sampling should be focused on water supplies that are likely to pose risk to human health; where credible water quality data is available from other sources (e.g. WSAs/BDS/GDS) re-sampling should be avoided to avoid duplication of efforts.
- (e) The WQMP to include the monitoring of all health risk determining parameters in terms of microbiological, chemical and physical qualities, as well as waterborne disease surveillance, to ensure overall quality of water fit for human consumption.
- (f) Sampling should only be conducted from pre-determined representative sampling points or prioritized focus areas, as outlined in the WQM strategies, unless in cases of emergencies.
- (g) Water supply should be monitored strictly in accordance to WQMPs for the purpose of quality assurance and to satisfy a quest to ensure optimum public health.
- (h) WQMPs should strictly be followed and implemented; hence proper water quality monitoring records are to be kept at all times.
- (i) Drinking water quality results must comply with the prescribed limits as specified in the **SANS 241** for drinking water.
- (j) Only **SANAS 17025:2005** accredited laboratories or Department of Water Affairs (DWA)-approved laboratories per method of analysis are to be used for analysis of water samples, in order to ensure credible results;
- (k) Mapping of water sources and mapping of critical water points that need to be monitored and reviewed should be conducted on yearly basis/annually to track changes in water supply and of monitoring of those water sources.
- (l) EH should familiarize themselves with the DWA Incentive-Based Regulation - Blue Drop and Green Drop criteria, as well as the Blue-Drop and Green Drop reports as a fundamental guide for strengthening EH interventions and to avoid duplication of efforts in sampling. Data accessible from the BDS/GDS should be utilize.
- (m) Community awareness and education must be conducted on proper and safe water usage, the dangers of untreated water sources and health and hygiene education as it relates to water supply and sanitation.

SAMPLING OF WATER SOURCES

Table 1: Recommended sampling frequencies.

SAMPLING POINT	MINIMUM PER POINT		RECOMMENDED PER POINT	
	Number of samples per year	Sampling frequency	Number if samples per year	Sampling frequency
River/stream/spring/dug-well	4	3-monthly	26	2-weekly
Dam	2	6-monthly	12	2-monthly
Borehole	1	-	2	6-monthly
Treatment works	4	3-monthly	12/52/365	Monthly/weekly/daily
Point of use (schools, prisons, health facilities etc)	4	3-monthly	12/52/365	Monthly/weekly/daily
Waterborne diseases (cholera, bilharzias)	4	3-monthly	12	3-monthly
Commercial and recreational water (swimming pools, spa, water world etc)	2	3-monthly	12	Monthly

- (a) In the event of non-compliance with water quality standards, sampling frequency should be increased (for example to **4 samples per month**). The microbiological quality of water should usually be sampled at a higher frequency than the chemical quality of the water.
- (b) The recommended frequency of sampling should be adhered to, to ensure optimal number of samples that will provide reliable results. A low frequency of samples will not reflect the correct variations in water quality changes at a specific site and too high frequencies will result in wastage on unnecessary sampling and analyses.
- (c) Water should be monitored in the distribution system and in the reticulation network on a monthly basis as part of compliance monitoring and a part of risk management to identify high risk areas.
- (d) Where communities are still dependent on unimproved water sources EHPs must ensure that surface water monitoring (e.g. rivers, streams, and springs) is included in the water quality monitoring programmes and timely health related interventions are provided.
- (e) Monitoring of unimproved water sources should be accompanied by the necessary community education, as well as advocacy for provision of proper services through the extension of coverage to high risk areas by WSAs, Community- Based organizations (CBOs) and other NON-Governmental Organizations (NGOs) should be trained on household water management (household water treatment, Oral Rehydration, good household and environmental practices etc.) as trainers of their own communities to ensure sustainability in community water quality education.
- (f) Regular area surveys must be conducted to monitor progress in coverage of communities with safe water supply systems.
- (g) Records of daily samples at water treatment works (turbidity, PH) should be made available to EHPs for inspection, on request.
- (h) To monitor the quality of water that the community accesses, water must be sampled from the point of use (taps/collection points). Where any non-compliance is identified, EHPs must conduct follow up sampling as part of the risk management approach in order to ensure compliance within a reasonable time, and in case of compliance, relevant feedback is necessary.
- (i) In the case of non-compliance and where the quality of water cannot be controlled in a sustainable way through the water reticulation system within a reasonable time, emergency measures must be instituted as prescribed in the WSAs Water Safety Plan.

7. WATER SAMPLING REQUIREMENTS

(1) Planning for sampling

- (a) EH water sampling must be planned.
- (b) Planning for sampling should include:
 - (i) Identification of the laboratory intended to be used for the analysis of the samples;
 - (ii) Communication with the laboratory and making inquiries on specific requirements (e.g. business times, sampling scope of analysis for the laboratory (e.g. bacteriological/ chemical/ physical analysis), and equipment requirements e.g. sampling bottle types;
 - (iii) Ensuring availability of transport to deliver the samples to the laboratory; and
 - (iv) Specifics on the period (date, month and year) in which samples will be taken.
- (c) Water sampling must be planned in such a way that it includes various seasons, to evaluate variation in terms of water sources contamination or the status of water quality.
- (d) Planning for sampling should be done together with the laboratory intended to be used to ensure the capacity of the laboratory to analyze the samples and provide the results within a reasonable time.

(2) Sampling equipment

- (a) Approved and proper methods of sampling must be applied when taking water samples, including the use of appropriate equipment, to prevent contamination of the samples and ensure credible water quality results during analysis.
- (b) For microbiological water sampling at point of use, including (lakes, streams, rivers and dams) the following equipment are applicable:
 - (i) Sterile sample bottles;
 - (ii) Sealed container or cooler box and ice to keep the samples cooled;

- (iii) A map showing sampling locations must be included when gathering sampling equipment;
- (iv) A gas burner;
- (v) Field notebook / data sheet(s); and
- (vi) Latex gloves to prevent contamination of samples by hands.

(c) For microbiological sampling at the treatment works, the following equipment are applicable;

- (i) Clean laboratory glass beaker or any well cleaned container large enough in volume for the probes of the instruments to be lowered in (at least 250ml in volume);
- (ii) Electrical conductivity meter;
- (iii) PH field instrument;
- (iv) Nephelometric turbidity meter (if required) or Secchi disk;
- (v) Temperature meter - electronic or field thermometer (if required);
- (vi) Distilled water for cleaning the probes;
- (vii) Field notebook / data sheet(s);
- (viii) Instrument for free available chlorine measurements; and
- (ix) A map showing sampling locations must be included when gathering sampling equipment.

(d) For chemical water samples, the following equipment are applicable;

- (i) Correct clean sample bottles; and
- (ii) Cooler box with ice packs.

WATER SAMPLING METHODS

Water sampling techniques utilized must be in line with the guidelines outlined in the DWA: Guidelines for Quality of Domestic Water Supplies; Volume 2 - Sampling Guide.

(1) Procedural considerations in sampling

- (a) When taking water samples, microbiological samples should be collected first to minimize contamination.
- (b) If the water sample contains residual chlorine, 1ml of a 10% sodium thiosulphate solution must be added for every liter of sample taken pre-sterilized 500ml plastic containers prepared with a freeze-dried concentration of sodium thiosulphate must be used.
- (c) Sampling bottles must be kept closed and clean until sampling / water collection;
- (d) Sample bottles must not be rinsed with water before sampling.
- (e) Field sampling equipment must be cleaned and calibrated before taking readings;
- (f) Equipment must be calibrated taking cognisance of optimum conditions to calibrate equipment (i.e. calibration of pH meters to be done at 25°C).
- (g) Sampling bottles must not be left uncovered in the sun.
- (h) Two separate samples will be required for chemical and microbiological samples and these must be kept separate at all times.
- (i) Caution must be taken to consult with laboratories with regards to equipment and procedures, times for delivering of samples, preservation methods for samples, and prior to submission of samples for analysis.
- (j) All samples for microbiological analysis should be transported to the laboratory within the period of 6 hours after sampling.

(2) Techniques in sampling

The technique for sampling must be dictated by the reason for sampling. If the reason for sampling is to establish quality of the source as delivered by the water provider, then flaming of the taps is essential. If, however the reason for sampling is to establish the quality of water as stored by the user in containers etc, then flaming is not required.

(3) Sampling at point of use

- (a) Flaming of the tap is required if the objective of the sampling is to determine the quality of water that the community accesses at the point of use as delivered by the water provider; and
- (b) The environmental conditions of the sampling point must be assessed and corrective action taken where necessary, such as if tap to be flamed and sampled is surrounded by long grass:

Step 1: The cap must be removed from the sample bottle; care should be taken not to contaminate the inner surface of the cap and neck of the sample bottle with hands.

Step 2: If water is obtained from the tap, let the water run to waste for at least 2 (two) minutes;

Step 3: The sample bottle must then be filled with water from the tap, container where community acquires the water or container with which community members collect water, the sample water must not be rinsed.

Step 4: Bottle cap must then be replaced immediately after sample bottle is filled. Ample air space must be left in the bottle (at least 2.5cm) to facilitate mixing by shaking before examination, if this is required by the lab.

Step 5: Label and sample sheet must be completed for each sample. The label should contain the sample or station number, date and location. The data sheet contains the more detailed information which needs to be recorded on-site on the day of sampling.

Step 6: The sample bottle must be placed in a cooled container (e.g. cool box with ice packs) directly after collection.

Step 7: the sample must be transported to the laboratory within 6 (six) hours.

(4) Sampling at the point of delivery

NB: Flaming of the taps is required if the objective of the sampling is to determine the quality of water that is being distributed to consumers:

Step 1: The tap or valve must first be opened.

Step 2: Let the water run to waste for at least 2 (two) minutes.

Step 3: Cap of the sample bottle must be removed without contaminating inner surface of the cap and neck of the sample bottle with hands.

Step 4: Sample bottle cap to be filled with water without rinsing and the cap replaced immediately. Ample air space must be left in the bottle (at least 2.5cm) to facilitate mixing by shaking before examination.

Step 5: Label and sample sheet must be completed for each sample. The label should contain the sample or station number, date and location. The data sheet contains the more detailed information which needs to be recorded on-site on the day of sampling.

Step 6: Place the sample bottle in a cooled container (e.g. cooler box with ice packs) directly after collection for transportation to the laboratory.

(5) Dams, rivers, streams or reservoir sampling:

Step 1: The cap of the sample bottle must be removed without contaminating the inner surface of the cap and neck of the sample bottle with hands.

Step 2: The sample must be taken by holding bottle with hand near base and plunge the sample bottle, neck downward, below the water surface and towards the flow (always wear gloves).

Step 3: The sample bottle must be filled without rinsing and the cap replaced immediately. Ample air space inside must be left in the bottle (at least 2.5cm) to facilitate mixing by shaking before examination, if this is required by the analytical laboratory.

Step 4: Label and sample sheet must be completed for each sample. The label should contain the sample or station number, date and location. The data sheet contains the more detailed information which needs to be recorded on-site on the day of sampling.

If you are sampling from a bridge, ropes and poles can be used to lower the sample containers into the water (refer to SANS 5667-6/ISO 5667-6). When sampling a river, dam or stream from a bridge, bank-side or in-stream, be sure to avoid contamination by disturbance of the bed or bank of the water course. When sampling from a boat ensure that you avoid contamination by discharges or sediment disturbance by the engine.

Step 5: Place the sample bottle in a cooled container (e.g. cool box) directly after collection for transportation to the laboratory within 6 hours.

(6) Sampling of boreholes

For compliance monitoring purposes, groundwater is usually sampled at the pump.

Sampling a borehole – without a pump:

- Step 1:** The sample container must be kept closed and in a clean condition up to the point where it has to be filled with the water to be tested.
- Step 2:** At sampling point, the cap must then be removed without contaminating the inner surface of the cap and neck of the sample bottle with hands. *Do not rinse the bottle.*
- Step 3:** Secure a weight under the sample bottle and lower a plastic sample bottle in borehole until the bottle is submerged in the water.
- Step 4:** The must then be filled with groundwater.
- Step 5:** The bottle must then be raised to the surface ensuring that the sample bottle does not get contaminated as a result of touching the inner walls of the borehole;
- Step 6:** Replace the cap immediately. Leave ample air space in the bottle (at least 2.5cm) to facilitate mixing by shaking before examination.
- Step 7:** Label and sample sheet must be completed for each sample. The label should contain the sample or station number, date and location. The data sheet contains the more detailed information which needs to be recorded on-site on the day of sampling.
- Step 9:** Place the sample bottle in a cooled container (e.g. cool box) directly after collection for transportation to the laboratory within 6 hours. Try to keep cooled container in a dust free place and out of any direct sunlight.

(7) Sampling a borehole with a pump:

- Step 1:** Find the nearest tap on the line where you must collect the water quality sample;
- Step 2:** Open the tap and let water run to waste for at least two minutes.
- Step 3:** At the sampling point remove cap without contaminating the inner surface of cap and neck of the sample bottle with your hands.
- Step 4:** Fill sample bottle without rinsing and replace the cap immediately. When the sample is collected leave ample air space in the bottle (at least 2.5cm) to facilitate mixing by shaking before examination.
- Step 5:** Label and sample sheet must be completed for each sample. The label should contain the sample or station number, date and location. The data sheet contains the more detailed information which needs to be recorded on-site on the day of sampling.
- Step 6:** Place the sample bottle in a cooled container (e.g. cool box) directly after collection for transportation to the laboratory within 6 (six) hours. Try and keep cooled container dust-free place and out of any direct sunlight.

(8) Treatment facility or distribution system sampling:

- Step 1:** The tap or valve must be opened and the water let to run to waste for at least two minutes.
- Step 2:** The cap of the sample bottle must be removed without contaminating the inner surface of the cap and the neck of the sample bottle with hands.
- Step 3:** The sample bottle must then be filled with water without rinsing and the cap replaced immediately. Ample air space should be left in the bottle (at least 2.5cm) to facilitate mixing by shaking before examination, if required by the laboratory.
- Step 4:** Label and sample sheet must be completed for each sample. The label should contain the sample or station number, date and location. The data sheet contains the more detailed information which needs to be recorded on-site on the day of sampling.
- Step 5:** Place the sample bottle in a cooled container (e.g. cool box) directly after collection for transportation to a laboratory within 6 hours.

8. MONITORING OF DRINKING WATER QUALITY FAILURES

- (1) In terms Section 5(4) of the Water Services Act, 1997(Act No. 108 of 1997), "should the results of the water samples taken by WSAs or WSPs indicate that the water supplied poses a health risk, the WSA or WSP must inform the Director-General of the Department of Water Affairs and the head of the relevant Department of Health and also must take steps to inform the consumers:
 - (a) That the quality of water that it supplies poses a health risk.
 - (b) Of the reasons of the health risk.
 - (c) Of any precautions to be taken by consumers.
 - (d) Of the time frame, if any, within which it may be expected that the water of a safe quality will be provided.
- (2) During water quality failures, EH must educate the community on health and hygiene aspects related to unsafe water supply and use.
- (3) The statistics of diarrhoeal cases in health facilities should be monitored by EH; outcomes interpreted and take reasonable steps to ensure proper intervention, where necessary.
- (4) All reasonable steps are to be taken to ensure that awareness is raised and the public informed and educated on taking all precautionary measures required during water quality failures i.e. emergency treatment of water at household level. Consideration should be made to consult with relevant community structures.
- (5) Communities must be educated on the use or application of the household emergency treatment methods below:
 - (a) Boiling water and cooling before consumption.
 - (b) Adding sodium or calcium hypochlorite solution, such as household bleach (one teaspoon) to a 20-25L bucket of water, mixing thoroughly and allow standing for about 30 min prior to consumption, turbid water should be clarified by settling and/or filtration before disinfection.
 - (c) Using sunlight or Solar Disinfection (SODIS) method for drinking water treatment by vigorously shaking small volumes of water in a clean, transparent container, such as a soft drink bottle, for 20 sec and exposing the container to sunlight for at least 6 (six) hours.
 - (d) Applying other approved products such as disinfectant tablets, or other dosing techniques to disinfect the water, with or without clarification by flocculation or filtration.
 - (e) In cases of relocation of settlements adequate supply of water must be ensured prior to relocation or settling.
- (6) Health and hygiene interventions are to be coordinated with health promotion activities with all role players charged with the responsibility of provision of these services e.g. health promotion, communicable disease coordinators.

9. REQUIREMENTS DURING INTERRUPTION IN PROVISION OF WATER SERVICES AND MONITORING OF TEMPORARY WATER SUPPLIES

- (1) For the purpose of this document, temporary water supplies shall refer to water provided in tankers or temporary water tanks, such as JOJO tanks, which are mainly used for short term events, mass gatherings (festivals, sporting events, community mobilization events etc) or to store water communities without treated water supplies.
- (2) In accordance with the Regulations published under the Water Services Act, 1997 (Act No. 108 of 1997) a WSA or Water Services Provider must take steps to ensure that should the provision of water services usually provided be interrupted for a period of more than 24hrs, consumers will have access to alternative water services comprising of at least:
 - (a) 10 Liters of potable water per person per day.
 - (b) Sanitation services sufficient to protect health (In an event that chemical closets are provided then regular emptying must be ensured).
 - (c) All reasons for failures should be dealt with in accordance with the incidence management protocol and recorded in the incidence management register. Risk levels have to be determined.

- (3) In cases of interruptions of water supplies and where temporary water supplies are supplied to communities in tankers, a WSA should inform the Department of Health/MHS of their plans of action, to enable the necessary water quality tests to be conducted by EH before water is supplied to communities:
- (a) The alternative water supply services must be monitored by EH in order to ensure protection of public health.
 - (b) Water supply during water services interruptions (water in water tankers and water tanks) must conform to the specifications as set out in the **SANS 241** for drinking water.
 - (c) Water tankers delivering temporary water supplies to communities during interruptions, must only be loaded with water from a treated supply.
 - (d) EHPs must always be equipped with a PH meter, chlorine and turbidity meters at hand at all times to be able to monitor residual chlorine and other determinants in water provided by water tankers on the spot.
 - (e) Potable water tanks should be monitored and samples taken to measure bacteriological and chemical parameters to ensure fitness for consumption, and to ensure that residual chlorine is maintained in water kept in storage tanks.
 - (f) During events (such as festivals, soccer games etc) coordination should exist among the event organizer, a local water supply entity and the relevant health authority (EHPs) to ensure drinking water safety. The roles and responsibilities of each party should be specified with regards to water quality management, which include water quality monitoring.
 - (g) Temporary water supply systems must be properly designed and managed to avoid contamination and transmission of disease.
 - (h) Care must be taken to ascertain water tankers used are suitable for delivering potable safe water.
 - (i) Water tankers are disinfected before used for potable water distribution.

(4) Design of temporary water storage tanks

- (a) Potable water tanks must be constructed of a rust-free and durable material that is suitable and safe for potable water storage to prevent the contamination of water.
- (b) Tanks must be designed so as to prevent contamination of the water by insects, flies, animals and human contact.
- (c) Cold potable water always must be stored at temperatures below 25°C to prevent the growth of *Ligionella* spp. Therefore the location of water storage tanks is such that the water is not exposed to the sun to prevent the water from reaching high levels in temperature.
- (d) Samples of water in temporary storage tanks must be taken by EHPs for bacteriological and chemical parameters to ensure fitness for consumption.
- (e) The design of the tanks must be such that it the tanker allows sampling to be conducted and tests are taken to verify water quality;
- (f) Water tankers must be made of material that allows disinfection and contact with flames for sterilizing, in the case where a tap must be flamed before a sample is taken;
- (g) Potable water storage tanks and any part of the potable water distribution system must be constantly cleaned by flushing with potable water and disinfected to prevent contamination of the water.

10. MONITORING OF THE DISPOSAL OF GREY WATER AND THE USE OF TREATED EFFLUENT

- (1) In terms of the Regulations under Section 9 of the Water Services Act, 1997 (Act No. 108 of 1997) a Water Service institution may impose limitations on the reuse of grey water within its area of jurisdiction, if the use thereof may negatively affect health, the environment and available water resources.
- (2) To protect the health of the public, grey water must never be used for drinking, cooking or personal hygiene purposes, the use of grey water should only be recommended for toilets flushing or for irrigation purposes under certain conditions:
 - (a) Grey water must be disposed off in a manner that will safeguard human health, the environment and water resources.

- (b) Household grey-water (generated from domestic activities such as laundry, dishwashing, and bathing) should be recycled on-site for uses such as landscape irrigation and constructed wetlands.
- (c) Users of grey water systems and communities must be educated by EHPs on health and hygiene aspects relating to the use and handling thereof.
- (d) The use of treated effluent for any purpose must not pose a health risk to human health; therefore before a Water Services Institution grants approval for the use thereof, an EHP should be consulted for health comments. Upon receipt of such application for the use of effluent, an EHP should sample the effluent for compliance monitoring.
- (e) Any tap or point of access through which effluent or non-potable water can be accessed, must be clearly marked with a durable notice indicating that it is "effluent" and that the "effluent" is not suitable for potable purposes.
- (f) Accidental or unintended cross connection between systems delivering potable water and systems delivering non-potable water should be avoided to prevent potable water system contamination.

11. SURVEILLANCE OF COMMUNITY DRINKING WATER SUPPLIES

- (1) Monthly surveillance of community-drinking water supplies must be conducted by EH on piped water systems, boreholes with hand pumps, dug well and protected springs continuously, including conducting sanitary inspections, in order to ascertain sufficient provision and quality compliance to highlight any EH related risks and to manage it for compliance.
- (2) Water may be contaminated in households during storage; therefore sampling of household-stored water should be conducted during surveillance, especially in disease surveillance. The information from the sources should be integrated/ overplayed with household information to determine possible reason for pollution to inform the required interventions.
- (3) Surveillance should include health education and health promotion activities aimed at improving healthy behavior and management of drinking-water supply and sanitation to establish effectiveness of interventions.
- (4) Information from various water sources should be consolidated by EHPs to enable understanding of the overall drinking water supply situation for a Water Services Authority's jurisdiction to influence public health centered policies and practices.
- (5) In the case where surveillance is coordinated by other external authorities, monthly, quarterly and annual reports prepared should be made available to the National Department of Health in order to effectively communicate reporting and provide feedback on the outcomes of surveillances.

12. COMMUNITY EDUCATION

- (1) Communities should be appropriately educated on:
 - (a) Water conservation and the correct use of water.
 - (b) Proper use and care of water taps and storage tanks.
 - (c) Safe storage of domestic water to prevent contamination.
 - (d) Good health and hygiene practices at the point of use.
 - (e) Proper household water safety management at the point of use, including the above; as well as the ability to take reasonable steps such as household water treatment where they suspect that the water is not of good quality.
- (2) Through education of the above mentioned, communities should develop the following competencies and hence be able to:
 - (a) Dispose off human excreta, grey water and household refuse in a manner that will not harm the environment or human health.
 - (b) Improve to practice safer hygiene behaviours relating to water and sanitation.
 - (c) Relate diarrhoeal disease and its effects, periodic outbreaks of diarrhoea, dysentery to poor water and sanitation in their community.
 - (d) Ensure that sanitation facilities in their communities do not pollute rivers, dams and groundwater sources.
 - (e) Understand the reasons for proper maintenance of their water supply and sanitation facilities.
 - (f) Understand what is meant by safe water and the consequences of using water from unsafe sources.

- (g) Properly exercise the following emergency household treatment of water on the following household treatment methods:
- (i) Boiling water and cooling before consumption;
 - (ii) Adding sodium or calcium hypochlorite solution, such as household bleach (one teaspoon) to a 20-25 liters bucket of water, mixing thoroughly and allow to stand for about 30 min prior to consumption, turbid water should be clarified by settling and/or filtration before disinfection;
 - (iii) Using sunlight or Solar Disinfection (SODIS) method for drinking water by vigorously shaking small volumes of water in a clean, transparent container, such as a soft drink bottle, for 20 seconds and exposing the container to sunlight for at least 6 hrs; or
 - (iv) Applying other approved products such as tablets, or other dosing techniques to disinfect the water, with or without clarification by flocculation or filtration.
- (h) Understand the importance of proper storage of household water to guard against contamination;
- (i) Demand the provision of adequate, safe and accessible water supply;
- (j) Save water and eliminate the wastage thereof;
- (k) Understand the relationship between health and hygiene.

13. RAINWATER HARVESTING

Rainwater is relatively free from impurities, except those impurities picked up by the rain from the atmosphere. The quality of rain water may also deteriorate during harvesting, storage and household use. Therefore:

- (a) Rainwater harvesting systems must be well designed with clean catchments to prevent contamination of harvested water.
- (b) Cisterns and storage tanks must be properly covered to prevent contamination, mosquito access and breeding inside the tanks.
- (c) The communities must be educated on hygiene practices related to rainwater harvesting and the use of rainwater at household level to prevent contamination and the spread of diseases.

14. MONITORING OF DRINKING WATER QUALITY IN HEALTH ESTABLISHMENTS

- (1) In the case where a health facility has additional building-specific sources of water used to augment the external supply, or have specific purposes that increase potential risk, a facility based risk management plan must be in place. Water in the facility must therefore be tested regularly to ensure fitness for consumption.
- (2) The bacteriological, chemical and physical quality of water supply to a health facility must comply with the requirements as set out **SANS241**:
 - (a) A health establishment should have access to a constant, safe and adequate water supply. If on-site storage facilities are available, storage capacity should be enough for 24hrs.
 - (b) Water supply to should be adequate to accommodate other uses in the facility, e.g. drinking, cooking, cleaning, personal hygiene and fire fighting in case of emergencies.
 - (c) Water storage facilities e.g. reservoirs and tanks are adequately protected from contamination. The water in the storage facilities must be tested for compliance and fitness from consumption;
 - (d) Water in reservoirs and tanks must continuously be monitored by EHPs for compliance and possible pollution activities.
 - (e) Water source e.g. borehole, must effectively be protected against contamination.
 - (f) If non-compliance is identified when testing of the water, the EHP should then trace the problem back to the possible source of contamination. The possible source of contamination must then be monitored as part of a risk management approach to ensure effectiveness of interventions.
 - (g) To prevent organisms that grow in temperatures between 25^oC and 50^oC e.g. Legionella spp, hot water temperatures, is kept above 50^oC and cold water below 20^oC.
 - (h) The water supply system that includes the sources (if applicable), pumps, purification plant, storage facilities and the distribution network linked to health facilities must be maintained in good working order.
 - (i) Taps and pipes containing water not fit for human consumption must be marked as such.

- (j) The necessary chemicals should continuously be available for water purification, where purification is undertaken by the hospital. Regular monitoring of the water system should be done by the designated staff.
- (k) EHPs must perform similar monitoring investigations and carry out regular quality and compliance monitoring.
- (l) Records of hospital water quality monitoring kept and maintained up to date.

15. MONITORING OF DRINKING WATER QUALITY DURING EMERGENCIES / DISASTERS

- (1) During emergencies and in cases of relocation of settlements, people affected by the emergency/disaster must be provided with an adequate supply of potable water and sanitation facilities.
- (2) Drinking water supplied in emergencies or disasters situations must conform to the specifications as set out in the **SANS 241** with regards to bacteriological, chemical and physical quality:
 - (a) If tankers are used, care must be taken to ascertain that they are suitable for delivering safe drinking water and it must first be disinfected before used for potable water distribution.
 - (b) Tankers must be loaded with water from a treated supply.
 - (c) Water supply during emergencies must be monitored closely for safety of consumption. Monitoring should include sanitary inspections, water sampling and analysis and monitoring of water treatment processes.
 - (d) A risk management approach should be implemented in emergencies in order to draw a risk profile to direct resources and interventions where required.
 - (e) Communities affected by an emergency situation must be made aware of and educated on the following:
 - (i) The risks to health of the use of contamination of water;
 - (ii) Possible contamination of water from the collection point to the point of use; and
 - (iii) The means to reduce or eliminate risks e.g. household treatment of water.
 - (f) Where there is a concern about drinking water quality that cannot be addressed through conventional treatment processes, then household treatment methods should also be evaluated and implemented.
 - (g) EHPs, Health Promoters and other stakeholders charged with the responsibility of providing health and hygiene education, should educate the community affected, and those that use unimproved water sources on the following household treatment methods:
 - (i) Boiling water and cooling before consumption;
 - (ii) Adding sodium or calcium hypochlorite solution, such as household bleach (one teaspoon) to a 20-25 liters bucket of water, mixing thoroughly and allow to stand for about 30 min prior to consumption, turbid water should be clarified by settling and/or filtration before disinfection;
 - (iii) Using sunlight or Solar Disinfection (SODIS) method for drinking water by vigorously shaking small volumes of water in a clean, transparent container, such as a soft drink bottle, for 20 seconds and exposing the container to sunlight for at least 6 hours; or
 - (iv) Applying other approved products such as disinfectant tablets, or other dosing techniques to disinfect the water, with or without clarification by flocculation or filtration.
 - (h) Chemicals used for the household/emergency of water are to be approved by the Department of Health prior to its use by the consumers, and to assess the sustainability of such chemicals, as well as its safety to human health.
 - (i) Containers that are hygienic and appropriate to local needs and habits should be made available for the collection and storage of water to be used for washing, cooking and bathing at household level during an emergency.
 - (j) Adequate sanitation facilities must be made available to people affected by disasters/ emergency.
 - (k) EHPs must ensure that indiscriminate defaecation is strongly discouraged, especially where water sources are close to dwelling areas and in high density areas.
 - (l) Monitoring of water quality in emergencies must also include water quality assessment and the investigation of disease outbreaks, or the evaluation of hygiene promotion activities as required.

- (m) During an emergency, water supplies must closely be monitored for residual chlorine at the treatment works. To ensure proper levels of turbidity and drinking water must be disinfected and an adequate disinfectant (residual chlorine) must be maintained in the system.
 - (n) Health information should be monitored to ensure that water quality can be rapidly investigated where there is a possibility that water quality may contribute to a health problem and that treatment processes, particularly disinfection –can be modified as required.
- (3) Emergency management/response planning
- (a) EHPs in collaboration with other role-players should ensure that an emergency management plan/emergency response plan is in place for emergencies such a sewage leaks, spillages and floods, should an emergency occur;
 - (b) The emergency management/response plan should be adapted at the time of the emergency to relate to the emergency at hand;
 - (c) The plan should include the following:
 - (i) A list of accredited laboratories in the area and their contact details;
 - (ii) Roles and responsibilities of various role players during an emergency;
 - (iii) A communication strategy with current contact details of regulatory bodies, e.g. DWA, DPH, Emergency response teams, such as police, hazardous spill clean-up teams etc;
 - (iv) Communication strategy with affected community e.g. the use of media;
 - (v) In the plan generic sampling protocols must be included e.g. point and non-point sampling sources of pollution. Most accidental spills or leaks will be point sources and floods or landslides will be non-point sources;
 - (vi) The frequency, location and the determinants to be sampled should be included in the plan;
 - (vii) Emergency response protocols must be communicated to all relevant role-players; and
 - (viii) Appropriate documentation and reporting procedures during an incident.
 - (d) Plans should be reviewed regularly and where appropriate, EHPs and other personnel involved in emergency response should receive regular training.
 - (e) Following an incident/emergency situation, a debriefing session should be undertaken with all involved stakeholders to discuss performance and address any issues or concerns. Plans should be advised to include lesson learnt from the incident to improve preparedness and planning for future incidents.

16. SURVEILLANCE OF WATERBORNE AND OTHER WATER RELATED DISEASES

- (1) Effective surveillance programmes are required for effective disease control programmes. Disease surveillance programmes should provide;
 - (a) Accurate and timely information on disease occurrence;
 - (b) Early detection and notification of outbreaks;
 - (c) Assessment of responses to outbreaks; and
 - (d) Efficient monitoring of intervention programmes.
- (2) Waterborne outbreaks disease surveillance should be linked in a pro-active way with existing outbreak reporting mechanisms (outbreak response teams, water regulatory systems, as part of a risk management system).
- (3) In the case of independent disease surveillance, timely and accurate information must be provided to public health authorities and the general public, through regular reporting mechanisms. "Hot spots should be highlighted and authorities be warned to institute action.
- (4) Full reports must be prepared at the end of outbreaks describing events, interventions, lessons learned and recommendation to prevent further occurrence and must be availed to health authorities (if the health authorities are not leading the investigations).
- (5) EHPs must be well acquainted with water borne and other water related diseases (**Appendix B**)
- (6) Health facility statistics on diarrhoeal diseases must be monitored on a monthly basis by EHPs to identify possible outbreaks and ensure adequate responses and strengthening of EH interventions.

- (7) Communities at risk (unsafe water supplies or inadequate sanitation) should be identified and informed about sources of contamination and ways to avoid infection.
- (8) The spread of a disease e.g. cholera must be monitored by EHPs in high risk areas by periodically sampling strategic sewage effluent (hospitals, prisons, sewage purification works) as an early warning system.
- (9) Sampling using Moore pads should only be done in high-risk areas where there is a definite chance of identifying the disease.

17. MONITORING OF THE QUALITY OF WATER FOR RECREATIONAL USE

- (1) A variety of microorganisms can be found in swimming pools and similar recreational water environments, which may be introduced in a number of ways. In many cases, the risk of illness or infection has been linked to faecal contamination of the water. The faecal contamination may be due to faeces released by bathers or a contaminated source water or, in outdoor pools, may be the result of direct animal contamination (e.g. from birds and rodents). Microbial colonization of surfaces can be a problem and is generally controlled through adequate levels of cleaning and disinfection.
- (2) Therefore for protection of public health in recreational environments, the following standards must be maintained:
 - (a) Pre-swimming hygiene education should be provided in both in public and semi public pools e.g. by displaying hygiene messages on the premises.
 - (b) The quality of water in swimming pools should be monitored by taking samples. Parameters that are easy and inexpensive to measure reliably and of immediate operational health relevance (such as turbidity, residual disinfectant and pH) must be monitored most frequently and in all pool types.
 - (c) Parameters (physical, chemical and microbial) should also be monitored, especially considering the intensity of use and local practice.
 - (d) Microbial quality of water in public and semi-public pools should be monitored as well as continuous monitoring of residual disinfectant levels, as the disinfectant is dosed.
 - (e) When taking water samples in a swimming pool, the samples should be taken at a depth of 5–30 cm. It is good practice to include as a routine sampling point the area of the pool where, because of the hydraulics, the disinfectant residual is generally lowest. Occasional samples should be taken from other parts of the pool and circulation system.
 - (f) The pH of swimming pool water should be controlled to ensure efficient disinfection and coagulation, to avoid damage to the pool fabric and ensure user comfort.
 - (g) The pH of swimming pools should be maintained between 7.2 and 7.8 for chlorine disinfectants and between 7.2 and 8.0 for bromine-based and other non-chlorine processes.

Table 2: Recommended sampling frequency for swimming pools:

Pool type	Heterotrophic plate count	Thermo tolerant coliform/ <i>E. coli</i>	<i>Pseudomonas aeruginosa</i>	<i>Legionella</i> spp.
Disinfected pools, public and heavily used	Weekly (<200/ml)	Weekly (<1/100 ml)	When situation demands (<1/100 ml)	Quarterly (<1/100 ml)
Disinfected pools, semi-public	Monthly (<200/ml)	Monthly (<1/100 ml)	When situation demands (<1/100 ml)	Quarterly (<1/100 ml)

- (3) In addition to routine sampling, samples should also be taken from public and semi-public facilities:
 - (a) Before a pool is used for the first time;
 - (b) Before it is put back into use, after it has been shut down for repairs or cleaning;
 - (c) If there are difficulties with the treatment system;
 - (d) As part of any investigation into possible adverse effects on bathers' health; and
 - (e) Frequency of sampling for swimming pools.

- (4) In case of an accidental faecal release or vomit, the pool management should take measures to prevent the use of the pool until the contaminants are deactivated.
- (5) EHPs should ensure that parents/caregivers of small children and other swimming pool users are educated on good hygienic behaviour at swimming pools to improve health safety at swimming pools and the reduction of accidental faecal releases.

18. WATER POLLUTION CONTROL

- (1) Rivers, streams and dams must be protected from pollution by human activity, including illegal dumping of waste, sewerage and from contamination by storm water runoffs:
 - (a) Ground water sources must be protected from pollution and contamination.
 - (b) Communities must be educated on health and hygiene issues relating to the use, handling and prevention of contamination of collected water at household level.
 - (c) Appropriate measures must be taken during emergencies and accidents e.g. oil and sewerage spillages, to contain and minimize the effects of the incident and undertake clean up procedures and remedy the effects of the incident.
 - (d) Environmental Health Impact Assessments should be conducted prior to and after any borehole drilling activities, following specific tariffs to predict and advice on mitigation measures for possible pollution of a water sources.
 - (e) If any pollution of water is occurring or has occurred, it has to be dealt with in accordance with the WSAs water safety plan and recorded in the incidence management register.
 - (f) Siting of sanitation facilities should be monitored to ensure that construction of such facilities is not such that any water source might be contaminated.
 - (g) EHPs should participate in all applications for environmental authorization for construction of sanitation facilities and any other activity that may result in contamination of a water source and have a negative impact on human health, in order to ensure that all health aspects are considered.

ANNEXURE C**STANDARDS FOR WASTE MANAGEMENT ON PREMISES****1. WASTE MINIMIZATION**

- (1) Waste management of any premises must comply with the following norms and standards:
- (a) Every waste handler and all activities used in connection with the management of any waste comply with the provisions of the National Environmental Management: Waste Act, 2008 (Act No 59 of 2008);
 - (b) All buildings used in connection with the handling, storage or treatment of waste complies with the provisions of the National Building Regulations and National Building Standards Act, 1977 (Act No. 103 of 1977) as amended.
- (2) Responsibilities of waste handlers with regards to minimization of waste:
- (a) Every waste handler complies with Section 16 and 17 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in terms of measures to be taken in terms of waste minimization.
 - (b) The motor vehicles scrapping or recovery facility complies with the provisions of the National Environmental Management : Waste Act, 2008 (Act No. 59 of 2008), National Standards for the Scrapping or Recovery of Motor Vehicles, No. 925 of 29 November 2013 and any amendments thereof in terms of the recyclable or reusable materials.
 - (c) The reuse, recycling and recovery of waste activities listed on Category A and B of the List of Waste Management Activities that have, or are likely to have, a Detrimental Effect on the Environment, No. 921 of 29 November 2013, and any amendments thereof, are in possession of a waste management license issued by the DEA and have a basic assessment process or a scoping and environmental impact reporting process conducted in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), Environmental Impact Assessment Regulations, No. R. 543 of 2010 as amended and as per outlined transitional provisions in the government notice.
 - (d) The landfill gas recovery facility complies with the provisions of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), Standards for Extraction, Flaring or Recovery of Landfill Gas, No. 924 of 29 November 2013 and any amendments thereof;
 - (e) The collection of recyclable waste , receptacles of recyclable waste , the frequency of collection of recyclable waste and drop off centers for recyclables, complies with the provision of the National Environmental Management : Waste Act, 2008 (Act No 59 of 2008), National Domestic Waste Collection Standards No. 21 of 21 January 2011 and any amendments thereof.
 - (f) The storage and the frequency of collections of recyclable waste do not create or allow any health hazard or nuisance to be created.
 - (g) All people involved in the recycling and recovery of waste as per Annexure 1 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), National Waste Information Regulations No. R 625 of 13 August 2012 and any amendments thereof, are registered on the South African Waste Information System that is administered by DEA , keep and submit record of information as per time periods provided in the Regulation.
 - (h) Premises used for waste recycling at business, industrial premises, and buy back or drop off centers complies with the following requirements:
 - (i) Are located, designed, constructed in accordance with approved building plans in terms of the National Building Regulations and National Building Standards Act, 1977 (Act No. 103 of 1977) as amended and approved municipal land use;
 - (ii) Have an approved fire protection plan, in accordance with Part T of the National Building Regulations and National Building Standards Act, 1977 (Act No. 103 of 1977), SANS 10400 to show fire protection measures;
 - (i) Have adequate supply of portable water.
 - (j) Have adequate sanitary fixtures as prescribed in Part F of the National Building Regulations and National Building Standards Act, 1977 (Act No. 103 of 1977) SANS 10400; and
 - (k) Are suitably enclosed to prevent any unauthorized entry, unpermitted removal of recyclable materials and unsightly view from public.

2. OBLIGATIONS FOR GENERAL AND HAZARDOUS WASTE HANDLING

- (1) All waste handlers must comply with Section 16 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in terms of waste avoidance and use of waste.
- (2) All generators of general and hazardous waste except for the listed wastes in Annexure 1 must classify their waste within 180 days of generation in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), Waste Classification Regulations and Management Regulations, No. R. 634 and any amendments thereof:
 - (a) Waste generators are responsible for their waste from point of generation to final disposal.
 - (b) The generation, recycling, storage, collection, treatment, transportation and disposal of waste is managed so as not to endanger the health of the public or the environment or become a nuisance.
 - (c) All people involved in the waste generation, waste treatment and waste disposal as per Annexure 1 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), National Waste Information Regulations No. R 625 of 13 August 2012 and any amendments thereof, must be registered on the South African Waste Information System administered by DEA, keep and submit record of information as per time periods provided in the Regulation.
 - (d) All waste generators must ensure that they have adequate, approved storage waste receptacles or containers.
 - (e) All generators of event waste must have Waste Management Plans in place, and such plans are submitted or accessible to the municipal environmental health department for evaluation, monitoring implementation, approval and record keeping, to ensure that waste is managed in a sound manner to protect the health of the public.
 - (f) The Waste Management Plan must include the following:-
 - (i) an assessment of the quantity of waste that will be generated;
 - (ii) type or characteristic of waste that will be generated;
 - (iii) a description of the services provided to store, collect, transport and dispose of such waste;
 - (iv) a contract with the service provider for collection and final disposal to the licensed waste disposal facility;
 - (v) a description on the separation of recyclable and non-recyclable waste at the point of source;
 - (vi) the waste minimization measures through reduction, reuse, reuse and recovery;
 - (vii) the pollution prevention measures; the impact or potential impact on the environment and the health of the public and any workers, that can be created by the waste generated;
 - (viii) the remedial measures that must be implemented on the impacts identified; and
 - (ix) Any additional information that the local council or municipality may require.
 - (g) All generators of hazardous waste must have an emergency preparedness plan as prescribed in the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), National Norms and Standards for the Storage of Waste, No. 926 of 29 November 2013;
 - (h) All hazardous waste generators have to prepare safety data sheet as prescribed in the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), Waste Classification Regulations and Management Regulations, No. R. 634 and any amendments thereof;
 - (i) Hazardous waste generators of waste listed in Annexure 1 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), Waste Classification Regulations and Management Regulations, No. R. 634 and any amendments thereof do not have to prepare safety data sheet, but if preparation of safety data sheet is considered, it is in accordance with the said Regulations;
 - (j) Persons involved in waste management activities (storage, treatment, disposal of general and hazardous waste and construction, expansion or decommissioning of facilities and associated structures and infrastructure for Category A or B waste management activities, and the construction of facilities and associated structures and infrastructure for Category B waste management activities) as listed on Category A and B of the List of Waste Management Activities that have, or are likely to have, a detrimental impact on the environment must be in possession of a waste management license issued by the DEA and have a basic assessment process or a scoping and environmental impact reporting process conducted in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), Environmental Impact Assessment Regulations, No. R. 543 of 2010 as amended and as per outlined transitional provisions in the government.

3. STORAGE OF GENERAL WASTE

(1) Storage of domestic, business, industrial, dailies and events waste

- (a) All generators of domestic waste as defined in the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), National Domestic Waste Collection Standards, No. 21 of 21 January 2011, must comply with the said Standards in terms of responsibility with regards to the refuse receptacle.
- (b) All service providers, must comply with the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), National Domestic Waste Collection Standards, No. 21 of 21 January 2011 in terms of providing approved refuse receptacle and guidelines to follow when selecting a refuse receptacle type.
- (c) All business, industrial, dailies and event waste generators must have an approved receptacle provided by the local council or municipality, which is leak proof, intact, corrosive resistant and have a close fitting lid or is able to close tightly.
- (d) The general waste storage area for business and industrial premises must have an impermeable floor.
- (e) All business, industrial, dailies and event waste generators comply with Part U of the National Building Regulations and National Building Standards Act, 1977 (Act No. 103 of 1977) SANS 10400 in terms of provision of refuse storage areas, access to storage areas and refuse chutes;
- (f) The general waste storage facility as defined in the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), National Norms and Standards for the Storage of Waste, No. 926 of 29 November 2013, comply with the said Norms and Standards as per transitional provisions stipulated.
- (g) The waste storage area for business, industrial, dailies and event waste must have a drainage system to collect all water runoff from the storage area in the event of rainy weather conditions.
- (h) Strong black, beige, white or transparent heavy-duty refuse bags which do not tear easily are used where no approved receptacles are provided.
- (i) Dailies must be placed in approved waste receptacles lined with heavy duty refuse bags which do not tear easily and are not stored for longer period that a nuisance occurs or is likely to occur.
- (j) Contamination of dailies to other waste streams must be avoided.
- (k) Condemned perishable foodstuffs must be stored in refrigerators not accessed by the patrons.
- (l) Condemned non perishable foodstuffs are stored in separate dry storage area not accessed by the public;
- (m) Every approved waste receptacle is kept closed when not in use, clean and in a hygienic condition at all times.

(2) Storage of garden refuse

- (a) The generated garden waste must be composted on the premises provided such composting does not cause a nuisance.
- (b) The generated garden waste must be stored in a composed heap or suitable, intact and strong bags.

(3) Storage of building refuse

- (a) The building waste generated must be kept in bulk/skip, steel containers.
- (b) The building waste container must be marked with the name, address and telephone numbers of the person in control of that receptacle so that he/she can be contacted should there be any nuisance emanating from the stored building waste.
- (c) The building waste containers must be fitted with reflecting chevrons or reflectors which must completely outline the front and the back thereof, to prevent any accidents due to non visibility.
- (d) The building waste containers should be covered when not receiving or emptying waste, to prevent displacement or waste from being blown away.
- (e) The building waste containers must be placed on or near the premises on which waste is generated, as approved by the municipality concerned.
- (f) No illegal dumping of building refuse should be allowed on any open land.
- (g) No health nuisance must be created as a result of accumulation of building rubble on any premises and no conditions favouring the breeding and harbouring of rodents and other vermin.

4. COLLECTION OF GENERAL WASTE

- (1) The collection of domestic, business, and industrial waste on premises must take place within reasonable time to prevent any nuisances and possible illegal dumping:
 - (a) The collection of event waste takes place such that no nuisance is created.
 - (b) The collection of dairies takes place such that the decomposition of waste is prevented.
 - (c) The waste container or bags are not placed on the public place/pavement except on the collection day.
 - (d) Unsound perishable foodstuffs are removed for disposal within reasonable time of identification from the premises such that no nuisance is created.
 - (e) Unsound non perishable foodstuffs are removed for disposal reasonable time of identification from the premises such that no nuisance is created.
 - (f) Unsound foodstuffs are recorded by an EHP and are collected in the presence of an EHP.
 - (g) The collection of recyclable waste, communal collection points, the frequency of collection and collection from drop-off centers for refuse bins, comply with the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), National Domestic Waste Collection Standards, No. 21 of 21 January 2011.
 - (h) The service provider complies with the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), National Domestic Waste Collection Standards, No. 21 of 21 January 2011 in terms provision of domestic waste collection services.
- (2) Collection of garden and bulky waste from premises.
 - (a) Garden waste and bulky waste is collected within reasonable time after the generation thereof to prevent the emanation of any nuisance;
 - (b) The bulk waste container is collected within prescribed period in the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), National Domestic Waste Collection Standards, No. 21 of 2011, once full or the use thereof is no longer in need.

5. TRANSPORTATION OF GENERAL WASTE

- (1) Collection vehicles must comply with the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), National Domestic Waste Collection Standards, No. 21 of 2011 in terms waste collection vehicles requirements and guidelines to follow when selecting a suitable type of collection vehicle:
 - (a) Any waste container loaded on the transportation vehicle must be in intact, not corroded and not rendered unfit for the transportation of waste.
 - (b) The transportation of waste complies with all other requirements as specified in the National Road Traffic Act, 1996 (Act No. 93 of 1996).

6. DISPOSAL OF GENERAL WASTE

- (1) Requirements on the disposal of general waste:
 - (a) No illegal dumping or littering of general waste is allowed on any premises.
 - (b) No burning of waste should occur at the general waste disposal facility nor any residential and business premises except at an approved and permitted incinerator.
 - (c) All general waste must be disposed at a designated, licensed landfill or waste disposal site or allowed transfer station in the local council or municipality.
 - (d) General waste landfill sites and treatment facilities listed on the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), Category A and B of the List of Waste Management Activities that have, or are likely to have, a detrimental impact on the environment must be in possession of a waste management license issued by the DEA and have a basic assessment process or a scoping and environmental impact reporting process conducted in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), Environmental Impact Assessment Regulations, No. R. 543 of 2010 as amended and as per outlined transitional provisions in the government notice.

- (e) Building waste must be disposed at designated and permitted landfill site or must be used for the purpose of reclamation or for recycling subject to written approval by the municipality.
- (f) Garden waste must be disposed at a designated, permitted garden waste disposal facility or any other approved facility by the local council or municipality.
- (g) Dailies and condemned foodstuffs should be covered immediately upon arrival at the disposal facility, in the presence of the EHP.
- (h) General waste listed in terms of Section 4 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) and the National Norms and Standards for Disposal of Waste to Landfill, No. R. 636 of 23 August 2013 must be disposed of at prescribed licensed landfill sites.
- (i) Waste disposal restrictions for general waste listed in Section 5 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), National Norms and Standards for Disposal of Waste to Landfill, No. R. 636 of 23 August 2013 are adhered to as per timeframes outlined.

(2) Requirements for waste transfer station and landfill sites:

Waste transfer stations must be equipped with the following:

- (a) A suitable enclosure to prevent unauthorized entry and to ensure windblown waste is contained.
- (b) A controlled entry gate to prevent unauthorized entry.
- (c) Adequate equipment required for the operation of the station.
- (d) A person in charge and personnel to administer and manage the facility during operational times.
- (e) Sanitary facilities as prescribed in Part F of the National Building Regulations and National Building Standards Act, 1977 (Act No. 103 of 1977) SANS 10400.
- (f) Wind screens to protect blowing papers, where necessary.
- (g) Water sprays to control dust, where necessary.

(3) Waste disposal facilities

- (a) No general waste or garden waste must be disposed off or littered in public places, open spaces, vacant land, pavement, street or watercourse other than at a permitted waste disposal facility; a spill kit and spilled general waste is picked up immediately.
- (b) An operating general waste disposal facility must have an approved site and layout plan, operational plan, and an end use plan. The site and layout plan; and operational plan indicate the layout design, equipments and all the required facilities. The end use plan includes the cover and landscape design, control of landfill gases, collection and treatment of leachate and environmental monitoring systems.
- (c) A waste disposal facility has a suitable enclosure to prevent unauthorized entry and to ensure windblown waste is contained; a controlled entry gate to prevent unauthorized entry; and a person in charge and personnel to administer and manage the facility during operational times is available.
- (d) There are adequate sanitary facilities for use by staff as prescribed in Part F of the National Building Regulations and National Building Standards Act, 1977 (Act No. 103 of 1977) SANS 10400.
- (e) An adequate changing area for all sexes, provided with wash hand basin provided with hot and/or cold portable running water supply and adequate supply of soap and disposable towel or hand drying material is available.
- (f) Unsafe excavations are protected by the person in charge of the waste disposal facility;
- (g) All waste disposal facility personnel have appropriate protective clothing, including industrial gloves, effective face masks, safety boots and overalls at all times while working;
- (h) Adequate drainage system and storm water diversion measures are in place to prevent stagnant water runoff.
- (i) Leachate and gas management system are in place when significant leachate is generated;
- (j) The waste disposal facility site is adequately maintained on a daily basis;
- (k) Windblown litter is removed daily and be contained in the facility by means of screens or barriers.
- (l) Odours are controlled by effective odour suppressants and air quality monitoring at the boundary of the facility and from any treatment facilities located on the landfill site;
- (m) Vermin and public health vectors are adequately prevented and controlled by daily cover and elimination of standing water.
- (n) Dust, is controlled by spraying water on the entrance, on internal road gravel access roads or by use of any suitable means.
- (o) Fire control prevention and measures must be in place.

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- (p) The containment barrier engineering design requirements for a landfill class suitable for general waste as prescribed in the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), National Norms and Standards for Disposal of Waste to Landfill, No. R. 636 of 23 August 2013 are adhered to.

7. CLASSIFICATION, PACKAGING, LABELLING, COLLECTION AND TRANSPORTATION OF HAZARDOUS WASTE

(1) Classification of hazardous waste

Hazardous waste is regarded as hazardous substances and dangerous goods, because of their chemical composition and toxicological properties involved. EHPs should monitor waste classification, packaging, collection and transportation of hazardous waste on all applicable premises to ensure conformance to the following requirement. All generators of hazardous waste except for the wastes listed in Annexure 1 classify their waste, within 180 days of generation in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), Waste Classification and Management Regulations, No. R. 634 and any amendments thereof.

(2) Packaging and labeling of hazardous waste

- (a) Hazardous wastes must be securely and efficiently packaged for storage, and transportation to prevent any leakages.
- (b) Hazardous waste packed for storage must be classified and labeled with appropriate international hazard signs and pictograms as prescribed in SANS 10234-Globally Harmonized System of Classification and Labelling of Chemicals.

(3) Collection of hazardous waste

- (a) Hazardous waste must be collected as close as possible to the hazardous waste generation point.
- (b) Hazardous waste should not be allowed to accumulate such that a risk to the public, workers and the environment can take place.

(4) Transportation of hazardous waste

- (a) Classified of hazardous waste must be transported is as prescribed in the SANS 10234-Globally Harmonized System of Classification and Labelling of Chemicals.
- (b) Hazardous waste to be transported must be labeled with appropriate international hazard signs and pictograms as prescribed in SANS 10234, where necessary.
- (c) Packaging of hazardous waste to be transported by road and rail modes must be as prescribed in the SANS 10229-1- Transport of dangerous goods- Packaging and large packaging for road and rail transport Part 1: Packaging.
- (d) Large packaging of hazardous waste to be transported by road and rail modes must be as prescribed in the SANS 10229-2 - Transport of dangerous goods- Packaging and large packaging for road and rail transport Part 1: Large Packaging.
- (e) Intermediate bulk containers for road and rail transport must be as prescribed in the SANS 10233 - Transport of dangerous goods- Intermediate bulk containers for road and rail transport.
- (f) Emergency information systems are as prescribed in the SANS 10232 Part 1 and 2: Transport of dangerous goods - emergency information systems.
- (g) Operational requirements for road vehicles are as prescribed in the SANS 10231 - Transport of dangerous goods- Operational requirements for road vehicles.
- (h) The design, construction, testing, approval and maintenance of road vehicles and portable tanks is as prescribed in the SANS 1518 – Transport of dangerous goods-design, construction, testing, approval and maintenance of road vehicles and portable tanks.
- (i) The provisions of the National Road Traffic Act, 1996 (Act No. 93 of 1996) as amended and applicable Regulations enforced by the dangerous goods inspector and the traffic officers, employed by the Department of Transport and municipalities.

8. TEMPORARY STORAGE OF HAZARDOUS WASTE

(1) Temporary storage areas for hazardous waste:

- (a) The area must be adequately illuminated and ventilated in accordance with the National Building Regulations and National Building Standards Act, 1977 (Act No. 103 of 1977).
- (b) The storage area should be rodent-proofed in accordance with the best available method.
- (c) The floor surface should be free from cracks and must have a firm waterproof base to prevent permeation of storm water and constructed of a fire proof and theft resistant materials.
- (d) The walls, fittings and shelving must be constructed of non combustible materials.
- (e) The storage area should be enclosed and secured to prevent unauthorized entry.
- (f) The storage area should be marked / labelled with the relevant hazard symbols of the relevant waste streams and has a written warning statement.
- (g) Hazardous waste material should be separately stored from other chemicals or products.
- (h) Hazardous waste must be stored separately to prevent possible reactions and spillages of material.
- (i) Hazardous waste must be stored away from sources of heat and materials that are flammable and can easily catch fire.
- (j) The use of wood pallets should be avoided.
- (k) Hazardous waste must be stored away from the door and areas with excessive pedestrian traffic.
- (l) Safe and convenient height storage should be maintained to avoid accidental tip over.
- (m) Hazardous waste containers should not be placed directly on the floor.
- (n) Overcrowding hazardous waste containers must be avoided.
- (o) The storage area must be kept clean and dry at all times.

(2) Management of accidental spillages of hazardous waste

- (a) The storage area must have a waterproof spillage area, with effective drainage system.
- (b) The storage area must have a spill kit equipped with appropriate waste containers and materials.
- (c) Hazardous substances dealer's premises must have an emergency response policy and strategy in place, to deal with spills of hazardous waste and such policy and strategy must include:
 - (i) Means to notify the person designated to supervise and execute the clean up;
 - (ii) Clean up procedure for each type of spillage;
 - (iii) A fully equipped spill kit, procedures for the protection of the public and other personnel;
 - (iv) Procedures for the containment and disposal of types of hazardous waste;
 - (v) Procedures for the remediation of any pollution caused;
 - (vi) Health and safety policy with proof that it has been communicated to all employees;
 - (vii) Means to notify the relevant authorities where necessary;
 - (viii) Arrangement of medical examination of all affected personnel, including preventative treatment cleaning procedures.
- (d) The spillage area must be marked, secured and demarcated to prevent unauthorized entry.
- (f) In case of spillages on the road, the EHP must be able to assist the driver where necessary and if possible, in notifying the disaster management center/department in the municipality, the municipal traffic police officers and / or provincial traffic police officials, fire department and emergency medical service.

1. DISPOSAL OF HAZARDOUS WASTE

- (1) All hazardous waste except for waste listed in Annexure 1 in the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), Waste Classification and Management Regulations, No. R. 634 of 23 August 2013 and any amendments thereof must be assessed prior to disposal for identification, sampling and analyses of chemical substances listed in Section 6 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), National Norms and Standards for the Assessment of waste for landfill disposal, No. R. 635 of 23 August 2013, as per period of commencement of the Regulations:

- (a) Hazardous waste assessed in terms of National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), National Norms and Standards for the Assessment of waste for landfill disposal, No. R. 635 of 23 August 2013 is disposed of at licensed landfill sites prescribed in Section 4 (1) of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), National Norms and Standards for Disposal of Waste to Landfill, No. R. 636 of 23 August 2013.
- (b) Hazardous waste classified in terms of minimum requirements for the Handling, Classification and Disposal of Hazardous Waste (2nd Edition, 1998; Department of Water Affairs and Forestry) comply with Section 4(4) of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), National Norms and Standards for Disposal of Waste to Landfill, No. R. 636 of 23 August 2013 in terms of landfill disposal requirements.
- (c) Waste listed in Section 2(a) of Annexure 1 in the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), Waste Classification Regulations and Management Regulations, No. R. 634 of 23 August 2013 and any amendments thereof, is disposed off at licensed landfill sites prescribed in Section 4(2) of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), National Norms and Standards for Disposal of Waste to Landfill, No. R. 636 of 23 August 2013.
- (d) Waste disposal restrictions for hazardous waste listed in Section 5 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), National Norms and Standards for Disposal of Waste to Landfill, No. R. 636 of 23 August 2013 are adhered to as per timeframes outlined.

TOXIC AND INFECTIOUS WASTE/HEALTH CARE RISK WASTE

(2) Waste management plan

- (a) A major generator health establishment must have an approved documented waste management plan in place.
- (b) Minor generator health establishment may prepare a waste management plan as a self regulatory measure.

(3) Waste management committee

- (a) A major generator health establishment must establish a waste management committee;
- (b) Minor generator health establishment may establish a waste management committee as a self regulatory measure;
- (c) The waste management committee should comprise but not limited to the following members:
 - (i) The designated or appointed Health Care Waste Management Officer;
 - (ii) A representative of the section responsible for Infection and Prevention Control ;
 - (iii) Chief Executive Officer/Facility Manager;
 - (iv) A representative of the section responsible for Quality Control;
 - (v) A representative of the section responsible for Procurement and Contract Management;
 - (vi) A nominated Health and Safety Representative;
 - (vii) A representative of the section responsible for Cleaning and Hygiene Services; and
 - (viii) A representative of the section responsible Occupational Health and Safety.
- (d) Committee members shall have the following duties and responsibilities:
 - (i) Facilitate and coordinate health care waste management issues within the health establishment;
 - (ii) Provide advice, guidance and technical support on health care waste management issues within the health establishment;
 - (iii) Develop strategies, policies, guidelines, protocols, schedules, plans, procedures, instructions, etc on health care waste management, training, personal and workplace hygiene, inspection and quality control, health and safety, emergency response, infection control and disinfection within the health establishment;
 - (iv) Develop, approve and disseminate information, education and communication materials on health care waste management within the health establishment;

- (v) Ensure training to all medical and non medical staff on proper health care waste management systems, record keeping as well as health and safety issues in terms of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) is conducted;
- (vi) Ensure routine inspections and record keeping of inspections concerning health care waste management compliance is conducted;
- (vii) Monitor the implementation of strategies, policies, guidelines, protocols, schedules, plans, procedures, and instructions;
- (viii) Monitor health care waste management systems in all the relevant wards and areas of the health establishment;
- (ix) Provide guidance in taking corrective action to remedy non compliance;
- (x) Review on the outcome of inspection reports and consider recommendations for actions.
- (xi) Manage and monitor the appointed health care waste management contractor;
- (xii) Monitor the financial management and budgeting for health care waste service;
- (xiii) Appointment of a chairperson and a secretariat for the committee;
- (xiv) Prescribe terms of reference for the committee;
- (xv) Prescribe the roles and responsibilities of each committee member with regards to functions relating to health care waste management;
- (xvi) Ensure that health care general waste minimization is sufficiently addressed; and
- (xvii) Perform any other function related to health care waste management within the health establishment.

(4) Health care risk waste collection and disposal by waste management contractors

- (a) Only licensed waste management contractors must be contracted to render treatment and disposal services for the health establishment;
- (b) Contracted service provider for the collection and disposal of HCRW must adhere to the terms of the contract with the health establishment.
- (c) Contractual requirements between the health establishment and the waste management contractor should include, but not limited to:
 - (i) The specification or description of the types (categories) and volume of health care risk waste to be collected for treatment or disposal (or both).
 - (ii) Where relevant, the treatment or disposal process to be used, taking account of any special requirements.
 - (iii) A method to account for the number of different health care risk waste units collected by the appointed waste management contractor.
 - (iv) The verification of the physical condition of the health care risk waste packages received.
 - (v) The responsibility to sort, count and collect the health care risk waste packages.
 - (vi) A timed collection schedule designed to ensure that the waste is timeously collected and transported.
 - (vii) The personal and environmental health and safety measures to be implemented, including immunization, personal protective equipment and management of spillage measures to be used to infection risks and other hazards associated with the waste.
 - (viii) The transitional arrangements during mobilization and termination of services, including interfaces with the current appointed waste management contractor and the succeeding appointed waste management contractor.
 - (ix) The acceptable behavior of personnel when collecting the waste at the health establishment.
 - (x) The reporting requirements, including the parameters, format and frequency.
 - (xi) Emergency backup response measures in terms of service delivery challenges.

(5) Classification of health care risk waste

All health care waste must be classified in accordance with the hazard and risk involved as per SANS 10234-Globally Harmonized System of Classification and Labelling of Chemicals as amended.

(6) Minimization, segregation, colour coding and labelling of waste at a health care facility

- (a) Segregation and minimization are the most important steps to successively manage HCRW. Therefore; health care facilities must comply with the Section 1, Chapter 4, of this Norms and

Standards in terms of responsibilities of waste handlers with regards to minimization of waste. Effective procurement and stock management practices are adopted at a health facility.

- (b) Health care waste is segregated correctly at the point of generation, and be containerized and correct liners used.
- (c) All workers/employees are trained in the correct identification and segregation of the waste generated.
- (d) Health care risk waste containers are labeled with colour codes and the international biohazard symbol for health care risk waste as prescribed in the SANS 10248- 1-Management of Health Care Waste , Part 1: Management of healthcare risk waste from a healthcare facility :

Table 1:

Waste	Waste sub-category	Colour coding	Labelling
Human or animal anatomical waste	Infectious human anatomical	RED	<ul style="list-style-type: none"> ▪ Marked "infectious waste" ▪ Have the appropriate international infectious hazard label as prescribed in the SANS 10248-1- Management of Health Care Waste, Part 1: Management of healthcare risk waste from a healthcare facility.
	Infectious animal anatomical	ORANGE	<ul style="list-style-type: none"> ▪ Marked "infectious waste" ▪ Have appropriate international infectious hazard label as prescribed in the SANS 10248-1- Management of Health Care Waste, Part 1: Management of healthcare risk waste from a healthcare facility
	Non infectious animal anatomical	BLUE	<ul style="list-style-type: none"> ▪ Marked non infectious animal anatomical waste ▪ No hazard label
infectious non anatomical waste	None	RED	<ul style="list-style-type: none"> ▪ Have appropriate international "infectious hazard" label as prescribed in the SANS 10248-1- Management of Health Care Waste, Part 1: Management of healthcare risk waste from a healthcare facility
Sharps	None	YELLOW,	<ul style="list-style-type: none"> ▪ Marked with the words "Danger contaminated sharps". ▪ Have appropriate international infectious hazard label as prescribed in the SANS 10248-1 Management of Health Care Waste, Part 1: Management of healthcare risk waste from a healthcare facility
Chemical waste including pharmaceutical waste	Chemical pharmaceutical or	DARK GREEN	<ul style="list-style-type: none"> ▪ Have appropriate international hazard label as prescribed in the SANS 10248-1- Management of Health Care Waste, Part 1: Management of healthcare risk waste from a healthcare facility. ▪ Marked with words - e.g. pharmaceutical waste-liquid or ▪ Pharmaceutical waste-solid. ▪ For flammable liquids or solids,

			<p>e.g. chlorinated organic solvent waste and a bold warning ‘“HIGHLY FLAMMABLE”’ or “FLAMMABLE”’</p> <ul style="list-style-type: none"> ▪ For oxidizing substances or organic peroxides ; e.g. “Oxidizing chemical waste” or “organic peroxide waste”
	Cytotoxic or genotoxic pharmaceutical	DARK GREEN	<ul style="list-style-type: none"> ▪ Cytotoxic or genotoxic contaminated sharps marked “Cytotoxic sharps” or “Genotoxic sharps” ▪ Cytotoxic and genotoxic pharmaceutical waste and contaminated waste marked “Cytotoxic waste” or “Genotoxic waste” ▪ Cytotoxic hazard label as prescribed in the SANS 10248-1- Management of Health Care Waste, Part 1: Management of healthcare risk waste from a healthcare facility.
Radioactive waste	None	No colour coding	<ul style="list-style-type: none"> ▪ Have the appropriate international radiation hazard label as prescribed in the SANS 10248-1-Management of Health Care Waste, Part 1: Management of healthcare risk waste from a healthcare facility. ▪ The name and contact number of the radiation officer, for emergency purposes.
General waste		Black, beige, white or transparent packaging can be used.	<ul style="list-style-type: none"> ▪ Marked general waste. ▪ No hazard label.

- (e) All health care risk waste containers clearly indicate the contents e.g. pharmaceutical waste, infectious waste, etc; and
- (f) The name of the health care facility, ward, date of containerization and the service provider also appear on each HCRW container.

(7) Packaging of health care general waste

- (a) Health care general waste must comply with table 1 in terms of colour coding and labeling of the waste container.
- (b) The storage of health care general waste complies with chapter 4, Section 3 of this Norms and Standards in terms of storage of domestic waste.

(8) Packaging of health care risk waste

- (a) The packaging of health care risk waste, infectious waste pathological (excluding sharps), sharps, and chemical waste is as prescribed in the SANS 10248-1- Management of Health Care Waste, Part 1: Management of healthcare risk waste from a healthcare facility.
- (b) Health care facilities and health care providers in rural and remote settings may use alternative measures as prescribed in the SANS 10248-2, Management of healthcare waste, Part 2: Management of healthcare risk waste for healthcare facilities and healthcare providers in rural and

remote settings, for the packaging of infectious health care risk waste, anatomical waste and sharps in case of emergency situations when there is a delay in the delivery of correct containers or bags.

- (c) Health care providers travelling to rural areas must be provided with health care waste containers as prescribed in the SANS 10248-2, Management of healthcare waste, Part 2: Management of healthcare risk waste for healthcare facilities and healthcare providers in rural and remote settings, for the collection of sharps waste and other infectious waste such as used cottons, gloves and bandages.
- (d) Health care facilities and health care providers in rural and remote settings may use alternative methods to close plastic bags provided they are securely closed and does not cause any injury, negative effect on the environment nor in any other way.
- (e) All sharps containers utilized should be manufactured according to SANS 452: Non reusable and reusable sharps containers.
- (f) Individual registered healthcare professionals or non-healthcare professionals use small volume containers to prevent delay in filling of the container and long periods of healthcare risk waste storage.
- (g) Spilled mercury waste and waste from dental amalgam should be handled as prescribed in the SANS 10248-3, Management of healthcare waste, Part 3: Management of healthcare risk waste from minor generators-Registered health care professionals and non-health care professionals.
- (h) Health care risk waste containers or bags including alternative containers or bags used for the packaging of health care risk waste must be labeled and colour coded as per table 1 above.

(9) Loading, storage and transportation and disposal of HCRW

Internal loading and transportation of Health care risk waste within a facility must be conducted as follows:

- (a) On wheeled trolleys, containers or carts, with sufficient storage space and designed to avoid spillages.
- (b) Waste at all major generators must be collected and removed from the wards and departments on a daily basis and be stored in locked central storage area.
- (c) The manual lifting of and carrying of waste should be avoided and minimized.
- (d) Access to transportation vehicles should be easy, safe and unobstructed.
- (e) Containers must be tightly close and are secured when loaded.
- (f) No waste container may be left unattended during loading and transportation.
- (g) The container, or trolley or cart wheels should always be locked when not in motion.
- (h) The equipment used for transportation is:
 - (i) Easy to load and unload;
 - (ii) Free from sharp edges that could damage containers during loading or unloading; and
 - (iii) Easy to clean and disinfect;
- (i) The mode of transport to treatment and final disposal site is labeled with appropriate pictogram as prescribed in SANS 10229-1- Transport of dangerous goods- Packaging and large packaging for road and rail transport Part 1: Packaging;
- (j) The following information must be recorded for offsite collection of HCRW:
 - (i) Signatures of both the person in charge of the central storage facility and the waste management officer or waste management team member responsible for effective management of waste;
 - (ii) Time and date of collection; and
 - (iii) The volume of waste collected for different categories of waste.

(10) Temporary storage of health care risk waste

- (a) The designated temporary storage for health care risk waste in all health care facilities must be located such that there is minimal risk of contamination to main operations of that area, medicines, foodstuffs, textiles, employees, patients and visitors.
- (b) All HCRW stored at minor generators must be removed to the final storage area regularly to prevent the occurrence of any nuisances.

- (c) HCRW storage areas should always be locked and must not be easily accessible to the public, patients and any unauthorized personnel.
- (d) The temporary HCRW storage area must be adequately ventilated and illuminated, and have non porous floor surfaces, be equipped with a spill kit as prescribed in the waste management plan, and marked with international hazard signs on or adjacent to the exterior doors or lids.

(11) Storage area for radioactive waste, infectious waste and non- infectious anatomical waste, chemical and pharmaceutical waste, health care general waste

- (a) All radioactive waste, infectious waste and non-infectious anatomical waste, chemical and pharmaceutical waste, health care general waste must comply with the storage requirements provisions outlined in the SANS 10248-1- Management of health care waste, Part 1: Management of healthcare risk waste from a healthcare facility.
- (b) All storage areas for health care risk waste streams should be appropriately marked and display the appropriate international hazard label as per table 1.
- (c) The provisions of Chapter 4, section 3 of this Norms and Standards must be adhered to in terms of storage of health care general waste.

(12) Central storage areas

- (a) The central storage area must be:
 - (i) Clearly demarcated marked with bio-hazardous warning signs on or adjacent to the exterior doors or gates;
 - (ii) Adequately ventilated and illuminated;
 - (iii) Protected from direct sunlight and be vermin proofed;
 - (iv) Floors and walls are smooth, slip resistant and non-porous and the floor surface is equipped with an appropriate drainage system connected to the council sewer.
 - (v) Locked at all times when containers are not stored and have regular security guard monitoring to prevent unauthorized entry; and
 - (vi) Has the name of the person in charge of the storage facility and contact numbers displayed on or adjacent to the exterior doors or gates.
- (b) The central storage area must not be overloaded such that ventilation is minimized and offensive odours emanate there from.
- (c) Storage containers must be stacked neatly and not at a height that will pose the risk of falling, breaking and spillages.
- (d) The area must have sufficient space to accommodate the volume of waste being generated and stored.
- (e) Health care risk waste must be weighed and recorded before removal.
- (f) Waste must be removed from the storage area for disposal as per the contract specifications;
- (g) Waste in the storage areas must be stored off the ground at all times.
- (h) Health Waste Care Officer of the health care facility must monitor the service provider to ensure adherence to contract specifications and agreements with regards to removal of the waste from the central storage area;
- (i) Refrigeration facilities must be provided for storage of waste that requires storage at low temperatures.
- (j) HCRW storage period between generation and treatment or disposal and the required storage temperature must be as per below table, as prescribed in SANS 10248-1, Management of healthcare waste, Part 1: Management of healthcare risk waste from a healthcare facility.

Table:

Waste category	Storage period	Storage temperature
Pathological waste	24 hours – 90 days Pathological waste not treated with 24 hours shall be stored at -2°C	-2°C
Infectious waste	72 hours – 90 days Infectious waste not treated with 72 hours shall be stored at -2°C	-2°C
Sharps container	90 days	Cool room temperature
Pharmaceutical waste	90 days	Cool room temperature

- (k) HCRW may not be stored for more than 90 days at the central storage area.
- (l) If an offensive odour emanate before 90 days, measures must be taken to make arrangements for the collection of HCRW.
- (m) In the event of lack of electricity, suitable back supply of electricity or propane or kerosene freezers must be available.
- (n) If the refrigeration or a backup source supply is unavailable in rural and remote settings, alternative measures prescribed in the SANS 10248-2, Management of Healthcare Waste, Part 2: Management of healthcare risk waste for healthcare facilities and healthcare providers in rural and remote settings, may be used for the storage of placenta.
- (o) Measures prescribed in the SANS 10248-2, Management of healthcare waste, Part 2: Management of healthcare risk waste for healthcare facilities and healthcare providers in rural and remote settings, must be adhered to in terms of placentas given for traditional home burial. The central storage area must be equipped with a fire extinguisher and a spill kit as prescribed in the waste management plan.
- (p) An EHP and the waste management officer of the health care facility monitor the temperatures of refrigerators used for the storage of HCRW.
- (q) Foodstuffs and HCRW must be stored separately at all times, the refrigerators used for the purpose of storing HCRW must be used solely for that purpose.

(13) Treatment and disposal of HCRW

- (a) All HCRW must be treated before disposal by a licensed treatment facility and must be disposed off only at a licensed disposal facility.
- (b) The provisions of Chapter 4, section 9 of this Norms and Standards are adhered to in terms of disposal of health care risk waste.
- (c) The provisions of Chapter 4, section 9 (d) of this Norms and Standards are adhered to in terms of disposal of health care general waste.

OCCUPATIONAL HEALTH AND SAFETY IN TERMS OF HCRW AND HAZARDOUS WASTE

(14) Personal Protective Equipment (PPE)

- (a) All employees handling HCRW and hazardous substances must be provided with appropriate PPE at all times.
- (a) PPE should not be laundered together with normal clothing, to prevent possible contamination.
- (b) PPE must be maintained in a clean condition and good state of repair at all times.

(15) Personal Hygiene

- (a) The importance of good personal hygiene to prevent contaminations and accidental exposures must be highlighted to all employees, engaged in the handling of HCRW and hazardous substances, including management.
- (b) Hand wash facilities with hot and cold running water supply, together with a supply of soap and hand drying equipment or material must be provided at all areas in the workplace where contact with HCRW or hazardous waste is or likely to take place.
- (c) Written hand washing procedures are communicated to all employees. The summary poster of the hand wash procedure with pictures should be displayed in the vicinity of all hand wash facilities.

(16) Training

Training and retraining on personal hygiene and the importance of personal hygiene to all waste handlers should be conducted. Records of such training need must be kept for a period of at least five years. Training must be conducted to include, but not limited to the following:

- (b) The health establishment's health and safety policy;
- (c) Work instructions and procedures, including equipment operation procedures;
- (d) Safety instructions and precautions;
- (e) Non compliant procedures and corrective action;
- (f) Management of spillages;
- (g) Dealing with and reporting of incidents and accidents; and
- (h) Interpretation of material safety data sheets.

(4) Immunization

The health establishment's health and safety policy should make provision for appropriate immunization in the event of accidental needle stick injuries and other accidents involving the handling of HCRW to prevent the spread of any communicable disease.

ANNEXURE D**STANDARDS FOR HAZARDOUS SUBSTANCES AND CHEMICALS/ PESTICIDES DISINFECTANTS ON PREMISES****1. REQUIREMENTS FOR PREMISES**

(1) Premises must comply with the following norms and standards for hazardous substances and chemical management control:

- (a) The use, handling, storage and disposal of hazardous substances and the control of chemicals safety must be in line with the requirements of the Hazardous Substances Act, 1973 (Act No. 15 of 1973) and other applicable legislation.
- (b) Hazardous substances dealer's premises should be operated under a license issued by an EHP to the effect that the premises comply with the requirements of the Hazardous Substance Act, 1973 (Act No. 15 of 1973) and EH requirements.

(2) Issuance of License / Permit

In terms of the Hazardous Substances Act, 1973 (Act No. 15 of 1973), all importers, manufacturers, whole distributors, registered pharmacists, general dealers, farmers, industries and factories, retailers (formal and informal), pest control operators, business premises, schools, laboratories, public and private premises and workplaces must be licensed/permitted on hazardous substances and chemical safety issues where applicable.

(3) The said license is not transferable from one person or owner to another

- (a) Any change in name and contents of the hazardous substances and chemicals render the license/permit to be invalid if the relevant authority is not informed.
- (b) An application must be made on the prescribed form as set out in Annexure A of the Group I hazardous substances regulations.
- (c) A license is issued in terms of the prescribed form as set out in Annexure B of the Group I hazardous substances regulations.
- (d) A license for Group I hazardous a substance is valid for one calendar year only (January to December).
- (e) The suspension and cancellation of a license/permit is based on the following:
 - (i) False, inaccurate, untrue or misleading information;
 - (ii) Contravenes or fails to comply with the conditions for which the license / permit was issued;
 - (iii) Contravenes or fails to comply with provisions of Hazardous Substances Act, 1973 (Act No. 15 of 1973), related Regulations or by-laws;
 - (iv) Ceases to carry on activities authorized by the license / permit.

(4) Conditions of sale or supply of Group I hazardous substances

The conditions of sale or supply of Group I hazardous substances shall be in terms of the requirements as stipulated in **Regulation 453 of 25 March 1977 under the Hazardous Substances Act, 1973 (Act No. 15 of 1973), or its amendments.**

(5) Records to be kept

- (a) Records shall be kept in terms of the requirements as stipulated in R 453 of 25 March 1977 for Group I hazardous substance under the Hazardous Substances Act, 1973 (Act No. 15 of 1973);
- (b) Every hazardous substance or chemical is provided with a safety data sheet (SDS).
- (c) Records are kept in a form of book, register, computer, cardex or any other suitable means.

2. STORAGE OF CHEMICALS / DISINFECTANTS OR DETERGENT-DISINFECTANT AND HAZARDOUS SUBSTANCES / PESTICIDES

(1) Factory construction, layout and conditions

- (a) Factory buildings shall be made of sound construction, in good repair and large enough to prevent crowding of equipment and to permit adequate cleaning and the maintenance of product quality.
- (a) A system of control must be maintained to keep the factory free from birds, rodents, insects and other vermin and to ensure that the disinfectant or detergent-disinfectant is not contaminated and that the quality of the disinfectant or detergent is not compromised in any way.

(1) Roof and ceilings

Roofs must be weatherproof and impermeable/waterproof and firm, and the ceiling (or underside of the roof if there is no ceiling) must be smooth and reasonably dustproof.

(2) Walls, floors and doors

- (a) Outer walls must be weatherproof and impermeable to water;
- (b) Doors and door frames are made from corrosion-resistant material or protected to prevent corrosion.
- (c) Floors must be constructed of concrete or other durable, impervious and non-slip material that is resistant to wear and corrosion and easy to clean.
- (d) Provision is made for adequate drainage.

(3) Illumination

General illumination shall be such as to permit operations during the manufacture and production of the disinfectant or detergent-disinfectant.

(4) Ventilation

- (a) Provision must be made for an adequate supply of fresh air and the prevention of a buildup of toxic gases.
- (b) Natural ventilation shall be augmented, if necessary, by mechanical means.

(5) Storage facilities for packaging materials

Containers, closures, cartons and labels for the packing and packaging of the disinfectant or detergent-disinfectant must be stored in clean, reasonably dustproof, and dry storage facilities.

(6) Storage facilities for finished disinfectants or detergent-disinfectants

- (a) Finished disinfectants or detergent-disinfectants awaiting dispatch must be stacked, but not direct upon the floor, in well ventilated storage facilities.
- (b) A separate quarantine area should be provided for the storage of rejected materials.

(7) Refuse

- (a) A separate refuse room or other equally adequate refuse facility must be provided on the premises.
- (b) Litter and wastes should be disposed of promptly and efficiently in a way that will not compromise the environment and will comply with requirements of the municipality.

(8) Housekeeping

The factory and its equipment should be cleaned and maintained in such a way that the quality of the disinfectant or detergent-disinfectant can be maintained and the safety of personnel ensured.

(9) Water

Every factory has an adequate supply of clean potable water and water used for cleaning the factory and equipment that is free from suspended matter and substances that are deleterious or injurious to health.

3. GENERAL REQUIREMENTS FOR THE STORAGE OF HAZARDOUS SUBSTANCES / PESTICIDES IN TERMS OF R 453 UNDER THE HAZARDOUS SUBSTANCES ACT, 1973 (ACT NO. 15 OF 1973) AND SANS 10206: 2010

(1) No operation should commence on any premises unless approval has been granted by the relevant municipality concerned; and

- (a) A certificate of occupancy has been issued by the relevant municipality concerned in accordance with the national building regulations.
- (b) All permits are renewed as necessary and as required by the relevant municipality concerned.
- (c) The continuation of operation without a prescribed permit is not permitted.
- (d) The operation of a hazardous facility on any premises shall be based on:
 - (i) Nature of the goods to be stored, proposed stock levels and the degree of hazard that will be presented to be considered;
 - (ii) The zoning or land use requirements of the municipality;
 - (iii) Fire protection, security and general service facilities in the area;
 - (iv) Proximity to houses, schools, hospitals, shopping areas, food manufacturers and offices;
 - (v) Proximity to water courses (surface and underground) and to open storm water channels;
 - (vi) Proximity to combustible vegetation;
 - (vii) Prevailing winds and climatic factors;
 - (viii) The highest recorded flood level in the proposed storage area, and the susceptibility of the area to flooding;
 - (ix) Water table depths, soil types and the location of existing boreholes within 500 m of the site;
 - (x) Access to the site and in particular to buildings, by emergency services vehicles, preferably from two sites;
 - (xi) Safe escape from the effects of fire or other hazards in each of the buildings on site; and
 - (xii) Suitable access for the loading and unloading of delivery vehicles.

(2) Construction

- (a) The building design and construction must comply with the requirements of the National Building Regulations.
- (b) The recommendations of SANS 10139 shall be taken into account with regard to the fire prevention and firefighting aspects of the building.
- (c) The building shall be closed, lockable and shall not have more windows or open spaces in the walls or roof than are necessary to provide an adequate degree of natural lighting during the day and the necessary ventilation at all times.
- (d) Load bearing construction elements, walls, floors, doors and gates must be made of non-combustible materials that are impervious to the hazardous substances/pesticides to be stored.
- (e) The frame shall be concrete or steel. If steel frame used, it is fire protected to give the required stability.

(3) Floors and spillage containment

- (a) Floors must be constructed of concrete or of another material impervious to liquids.
- (b) Floors must have sufficient load bearing capacity to withstand the weight of stock, racking and any mechanical handling equipment to be used.
- (c) Floors must be smooth but not slippery (even when wet), free from cracks to facilitate cleaning and designed to contain leakage and contaminated firefighting water by means such as surrounding sill, kerb, or bund wall.

- (d) Retention facilities are provided, marshalling areas and loading zones to contain any spills or firefighting water and to allow safe treatment prior to disposal;
- (e) The kerb, sill or bund wall that forms the perimeter of the floor should at least be 200 mm high and 110 mm wide (two layers of bricks).
- (f) The floor and the bund wall must be plastered and sealed with ramps inclined to a gradient of 1 in 10 to allow for vehicle access. Alternatively, a sump of capacity 10% of the total available storage volume can be constructed.
- (g) Provision of closing off existing drains should be included in order to minimize the risk of contaminated water reaching natural water sources.

(4) Walls

- (a) External walls must be made of masonry or clad with metal (steel or similar) cladding; Aluminum cladding shall not be used.
- (b) Internal division walls designed as fire breaks must provided at least 90 minutes resistance and extend to a height of 1 meter above the roof.
- (c) Where piping, ducting and electric cables penetrate a separating wall, they must either placed in fire retardant sand cups or so sealed as to prevent the spread of fire.

(5) Windows

- (a) Windows must allow enough daylight for product labels to be read. Where natural light is inadequate, artificial lighting should be supplemented.
- (b) All windows shall be weatherproof and burglar-barred.
- (c) The window frames must be manufactured of steel and are fitted with wire glass of minimum thickness 8 mm and have window panels of maximum size 450 mm x 450 mm.
- (d) No windows must be openable.

(6) Doorways and emergency exits

- (a) Sufficient entrance and exit doorways or openings must be provided to enable normal operations to be carried out without security being compromised.
- (b) All exit doors must be easy to open in the dark or in dense smoke.

(7) Roofs

- (a) Roofs of solid construction must be provided with ventilation panels for early removal of smoke and heat to improve visibility of the source of the fire and to retard the lateral spread of fire.
- (b) The recommended fire rating for roofs is 30 min to 60 min.
- (c) If roof insulation is used, it must be constructed of non-combustible material such as mineral wool or glass fibre.
- (d) Metal roof support constructions should be protected against thermal impact.

(8) Lighting protection and discharge of electrostatic chargers

- (a) Adequate protection against lightning must be provided.
- (b) Lighting protection systems must be maintained and inspected.
- (c) In areas where flammable substances are stored, appropriate measures must be taken to prevent the accumulation of electrostatic charges or to discharge electrostatic charges under controlled circumstances.

(9) Ventilation, air conditioning and heating

- (a) Covered storage areas must be provided with either adequate natural ventilation or mechanical draught ventilation that ensures at least five changes of air per hour.
- (b) Good air circulation is necessary to ensure that excessive temperatures are not reached;

- (c) Where highly flammable gases liquids are stored, effective extraction should be provided at or near floor level and the ventilation shall be efficient as to prevent the formation of an explosive atmosphere.
- (d) Air conditioning should preferably be of the ducted type with air conditioning plant situated well away from the storage area;
- (e) Individual electric air conditioners should not be used in areas where flammable materials are stored.
- (f) The air conditioning system must be designed as to prevent the distribution of products of combustion in the event of a fire.
- (g) Heating systems should preferably be based on hot water or steam.
- (h) The heat source, pipes, radiators, etc that are likely to become hot should be positioned as to prevent direct heating of the stored product.
- (i) Facilities for the heating of a circulation medium must be located outside the storage area or in a separate room. Any insulation material used shall be non-combustible.
- (j) Direct electrical room heating equipment and portable gas fired room heaters should not be used in areas where flammable materials are stored.

(10) Lighting

- (a) Artificial lighting need must not be installed where operations are only carried out during the daytime and natural lighting provides a sufficient level of illumination.
- (b) Artificial lighting must be installed in accordance with SANS 10114-1 and are such that undue warming or stored products is avoided. Lights should be located above entrances and aisles and not above product stacks.
- (c) Wiring for electrical lighting must be in accordance with SANS 101142-1 and the necessary certificate(s) of compliance shall be obtained.
- (d) Where electrical lighting installed is used for flammable products, it should be protected in accordance with the relevant provisions of SANS 10108 for the class and division of hazardous location.
- (e) Electric switches may not be installed inside for flammable products. Main switched shall be positioned outside and shall be protected against the weather.
- (f) Emergency lights should be placed at strategic positions along escape routes.
- (g) All electrical installations must comply with the provisions of SANS 10142-1 and the necessary certificate(s) of compliance must be obtained.
- (h) Electrical equipment other than that for permanent lighting, such as power points, power tools or hand lights, that is used for flammable pesticides may not be installed.
- (i) Operating procedures provide for the isolation of non-essential electrical equipment during periods when the operations are unmanned.

(11) Racks and shelving

- (a) Pesticides shall not be stored directly on the floor.
- (b) Adequate racks and shelves provided for small packages but in general, provision should be made to store goods on pallets or in standardized storage containers.
- (c) Racks and shelves must be non-combustible.

(12) Storage facilities for flammable substances

- (a) Flammable liquids must be stored in a separate area or room and must be enclosed with a fire resistant material that can resist fire for at least 120 minutes from any room, cabinet or enclosure.
- (b) The floor of the storage area must be constructed in such a way that in case of a spillage, a volume equal to the quantity of the flammable liquid ordinarily kept in the store, plus 10 % of that quantity can be obtained.
- (c) The flammable liquids store must be clearly marked with the flammable liquid hazard class diamond and the applicable symbolic safety signs in accordance with SANS 1186-1. The type and amount of flammable liquid stored should be indicated at the entrance to the store.
- (d) An adequate amount of firefighting equipment should be provided, as required by the local fire authority.

- (e) Flammable non-toxic solids must be segregated from flammable toxic liquids and non-flammable toxic liquids.
- (f) Flammable toxic solids should be segregated from non-flammable toxic liquids.
- (g) Flammable toxic solids should be stored in a separate area or room that is clearly marked with both the flammable solid hazard class diamond and the toxic hazard class diamond and with symbolic safety signs in accordance with SANS 1186-1.
- (h) An adequate amount of firefighting equipment should be installed as recommended by the local fire authority.

(13) Security

- (a) Only the warehouse controller and those appointed by him or her shall have access to the warehouse. An appropriate entry-pass system must be implemented.
- (b) Outside normal working hours, all doors and windows must be locked unless they are required to remain open for ventilation.
- (c) If a warehouse is part of a larger complex of buildings, or stands in its own grounds, the perimeter of the property must be protected by means of a wall or a fence of height at least 2.5 m that has, preferably, at least two strands of electric wiring or a coil of razor wire, or similar protection on top. The warehouse building itself may be burglar-proofed as necessary.
- (d) The number of gates in the perimeter wall or fence must be the minimum necessary to allow normal operations, except that if possible, emergency service vehicles are able to gain access to the warehouse from at least two sides.
- (e) Names and contact telephone numbers of persons to be called in an emergency must be given to security personnel, the local police and fire authority. A system must be in place to ensure that the persons called have access to the keys of the warehouse. All keys must be labeled.
- (f) If the warehouse is situated in a relatively heavily populated or environmentally sensitive area and if the scale of operations permits, 24 hour manning of the security function, with regular patrols is carried out. In such a case, a procedure shall be instituted to verify that patrols actually take place, especially at night.

(14) Fire protection, emergency planning and emergency training

- (a) A sprinkler system is most effective in racked storage facilities. Sprinklers must always be installed if the storage racks are more than 6 m high.
- (b) Depending on the risk profile of the warehouse, the local fire authority could require that the premises be equipped with an internally audible alarm.
- (c) The health safety representative(s) or the health and safety committee of the warehouse must develop an on-site emergency plan in consultation with the local emergency services. Any risks related to the health and safety of the public in the event of an incident must be taken into consideration.
- (d) The on-site emergency plan must be updated at least once every three years in consultation with the local emergency services. A copy of the emergency plan must be signed by the warehouse controller in the presence of two witnesses who attest the signature.
- (e) All operators must be conversant with the on-site emergency plan and it is readily available at all times for implementation and use.
- (f) The on-site emergency plan must be tested (by means of an emergency exercise) at least once a year and a record shall be kept of each emergency exercise.
- (g) All operators must be trained in the use of the different types of fire extinguishers on site, and practice their duties as set out under the emergency plan.
- (h) The emergency training include initiation of the alarm; correct use of the firefighting equipment; evacuation procedures; roll calls and fire drills.

(15) Labeling

- (a) The label for Group I Category A and B hazardous substances conforms to the requirements as stipulated in **R 453 of 25 March 1977** under the Hazardous Substances Act, 1973 (Act No. 15 of 1973).

- (b) For hazardous substances labeling should also include the name of the manufacturer and active ingredients/s.
- (c) For chemicals labeling must include directions for use, expiry and manufacture date, list of ingredients, weight of product and cautions, keep out of reach of children, in eye or skin contact, wash immediately, if ingested accidentally, consult medical practitioner immediately;
- (d) In addition, all hazardous substances and chemicals, where possible, must conform to the SANS 10234-globally harmonized system (GHS) labeling and classification requirements.
- (e) Disinfectants must conform to the requirements as stipulated in R 908 of 1977 (Labelling and Advertising Regulations) under the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972) as amended as well as VC 8054:1999: **Compulsory Specification for Disinfectants and Detergent-Disinfectants** under the Standards Act, 1993 (Act No. 29 of 1993);
- (f) Pesticides or agricultural remedies conforms to the requirements as set out in R 935 of 2006 (Regulations Relating to Agricultural Remedies) under the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act No. 36 of 1947).

(16) Packing of hazardous substances and chemicals / pesticides / disinfectants

- (a) Pesticides must be packed in terms of the requirements as stipulated in R 935 (Regulations Relating to Agricultural Remedies) under the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act No. 36 of 1947) as well as SANS 10229.
- (b) Disinfectants and detergent-disinfectants must be packed in terms of VC 8054: 1999: Compulsory Specification for Disinfectants and Detergent-Disinfectants under the **Standards Act, 1993 (Act No. 29 of 1993)** as well as the SANS 10229-1: 2010: Transport of Dangerous Goods-Packaging and Large Packaging for Road and Rail Transport, Part 1: Packaging.
- (c) Hazardous Substances should be packaged in terms of SANS 10229.

(17) Transportation of chemicals and hazardous substances

Hazardous substances and chemicals must comply with the standards and requirements as prescribed in the National Road Traffic Act and SANS.

(18) Disposal of empty containers

- (a) Each Group I Category B hazardous substances must be disposed off in terms of the requirements as stipulated in **R 453 of 25 March 1977** under the Hazardous Substances Act, 1973 (Act No. 15 of 1973). No container shall be perforated, flattened and buried in the ground.
- (b) All expired or obsolete hazardous substances and chemicals must be disposed off at a licensed landfill site or licensed incinerator.
- (c) No hazardous substances and chemical containers may be disposed off into a watercourse, sewerage system or drainage system.

4. OCCUPATIONAL HEALTH AND SAFETY

- (a) All employees or workers must be provided with personal protective equipment (PPE) (gloves, boots, aprons and mask) at all times.
- (b) PPEs must be maintained in a clean and hygienic condition at all times.
- (c) All employees or workers must be trained on hazardous substances and chemical safety issues.
- (d) Procedures and plans must be in place for accidental spillages and leakages.

5. SAMPLING OF HAZARDOUS SUBSTANCES

This is conducted in terms of Section 9 of R 453 of 25 March 1977 under the Hazardous Substances Act, 1973 (Act No. 15 of 1973).

6. IMPORT AND EXPORT OF HAZARDOUS SUBSTANCES AND CHEMICALS/PESTICIDES/DISINFECTANT

The import and export of hazardous substances and chemicals complies with the **R 453 of 25 March 1977** under the Hazardous Substances Act, 1973 (Act No. 15 of 1973) and with the procedures as set out in the various multi-lateral environmental agreements, which include, amongst others, the Stockholm, Rotterdam, Minamata and Basel Conventions.

7. REPORTING OF PESTICIDE / CHEMICAL POISONING INCIDENTS

- (a) All pesticide/chemical poisoning incidents must be reported in terms of pesticide/chemical incident report form as adapted from the Rotterdam Convention.
- (b) All reported cases of pesticide and chemical poisonings from the Poison Information Centre must be reported to the municipality concerned.
- (c) All cases of pesticide and chemical poisonings must be investigated by an EHP.

APPENDIX 1**GUIDELINE FRAMEWORK FOR DESIGNING WATER QUALITY MONITORING PROGRAMME**

Effective monitoring requires careful design and planning. Monitoring calls for determining the required information that is useful at a minimum cost. This can be achieved with a monitoring programme that focuses on obtaining only the necessary information/data in a cost-effective manner.

EHPs should monitor all water that has the potential to impact human health following use and therefore should develop Water Quality Monitoring programmes that will include monitoring of aspects of untreated water/unimproved water sources, routine monitoring of all surface water and monitoring of water under emergency situations.

The following should be born in mind in designing a water quality monitoring programme:

1.	Identifying key stakeholders	<p>Various role players should be identified in order to initialize and sustain the monitoring programme.</p> <p>I.e. <u>Monitoring coordinator</u>: a person to be responsible to coordinate all activities required to start the programme and ensure its continuity.</p> <p><u>External stakeholders</u>: <u>DWA</u> for e.g. may be interested in the result and can assist with in providing background on other water quality monitoring programmes, surface water quality challenges etc. <u>Engineers, town planners</u> can assist with their knowledge of the treatment plant and or the distribution system and be able to advice on the appropriate parts of the system to sample.</p> <p><u>Laboratories</u>: accredited laboratories which can perform the analysts needed and that are equipped to analyze the number of samples delivered.</p> <p><u>Samplers</u>: EHPs that will be responsible for sampling, the preservation of the samples and the delivery to the relevant labs should be identified.</p> <p><u>Data interpreter and reporter</u>: an EHP should be identified, to analyze the data and converting it into information and for the preparation and distribution of the relevant reports.</p>
PRE –MONITORING PLANNING		
2.	Defining clear monitoring objectives	It is important to clearly define the monitoring objectives of each monitoring exercise before embarking on monitoring. What do you want to achieve by conducting monitoring?
3.	Defining the scope monitoring	The scope of the monitoring programme must be defined in terms of the objectives.
4.	Choosing monitoring sites	Before conducting monitoring, background information on the situation and environmental conditions of the monitoring sites must be known, indicators and tools used for monitoring should be collected.
5.	Choosing the monitoring frequency	It is important to understand where, when and at what frequency to sample and to also define what constituents (determinants) to test e.g. turbidity, residual chlorine, PH, Ecolietc as per SANS 241, to comply with best practice and to achieve the objectives of the monitoring programme.
CONDUCTING MONITORING		
6.	Conducting monitoring	Monitoring should be conducted with objectives of the monitoring programme in mind, the determinants (microbiological, chemical or physical) to be measured and the frequency for sampling. It is also vital to design quality assurance and control protocols for conducting monitoring.
7.	Analyzing monitoring results	The data gathered (sampling results) should be compared with

		water quality standards (SANS 241) for drinking water quality.
8.	Evaluating/ interpreting the monitoring data	Evaluation or interpretation of the monitoring data is the most critical step in the monitoring process as it assists an EHP in taking decisions on what EH corrective actions or interventions to institute.
9.	Reporting/presenting the results	This includes presenting a reporting with regards to trends analysis. Graphics can be utilized to present this for reporting purposes.
POST MONITORING		
10.	Decision making and instituting corrective action	This involves decision making by an EHP and deciding on EH interventions necessary in case of non-compliance and well as monitoring of water quality after corrective action are taken by the WSA or WSP.

APPENDIX 2:**LIST OF WATER-RELATED DISEASES MOST COMMON IN THE SOUTHERN AFRICAN REGION**

Waterborne diseases are caused by pathogenic microorganisms that are most commonly transmitted in contaminated fresh water. Infection commonly results during bathing, washing, drinking, in the preparation of food, or the consumption of food thus infected.

Protozoal infections			
Disease and Transmission	Microbial Agent	Sources of Agent in Water Supply	General Symptoms
Amoebic dysentery (hand-to-mouth)	Protozoan (<i>Entamoebahistolytica</i>) (Cyst-like appearance)	Sewage, non-treated drinking water, flies in water supply.	Abdominal discomfort, fatigue , weight loss, diarrhea, bloating, fever
Cryptosporidiosis (oral)	Protozoan (<i>Cryptosporidium parvum</i>)	Collects on water filters and membranes that cannot be disinfected, animal manure, seasonal runoff of water.	Flu-like symptoms , watery diarrhea, loss of appetite, substantial loss of weight, bloating , increased gas, nausea
Cyclosporiasis	Protozoan parasite (<i>Cyclosporacayetanensis</i>)	Sewage, non-treated drinking water	cramps , nausea, vomiting , muscle aches, fever, and fatigue
Giardiasis (fecal-oral) (hand-to-mouth)	Protozoan (<i>Giardia lamblia</i>) Most common intestinal parasite	Untreated water, poor disinfection, pipe breaks, leaks, groundwater contamination, campgrounds where humans and wildlife use same source of water. Beavers and muskrats create ponds that act as reservoirs for Giardia.	Diarrhea, abdominal discomfort, bloating , and flatulence
Parasitic infections			
Schistosomiasis (immersion)	Members of the genus Schistosoma	Fresh water contaminated with certain types of snails that carry schistosomes	Rash or itchy skin. Fever, chills, cough and muscle aches
Taeniasis	Tapeworms of the genus Taenia	Drinking water contaminated with eggs	Intestinal disturbances, neurologic manifestations, loss of weight, cysticercosis
Hymenolepiasis (Dwarf Tapeworm Infection)	Hymenolepis nana	Drinking water contaminated with eggs	Abdominal pain, severe weight loss, itching around the anus, nervous manifestation
Ascariasis	Ascarislumbricoides	Drinking water contaminated with feces (usually canid) containing eggs	Mostly, disease is asymptomatic or accompanied by inflammation , fever, and diarrhea. Severe cases involve Loffler's syndrome in lungs, nausea, vomiting, malnutrition , and underdevelopment .

Bacterial infections			
Cholera	Spread by the bacterium Vibrio cholerae	Drinking water contaminated with the bacterium	In severe forms it is known to be one of the most rapidly fatal illnesses known. Symptoms include very watery diarrhea, nausea , cramps , nosebleed , rapid pulse , vomiting, and hypovolemic shock (in severe cases), at which point death can occur in 12–18 hours.
Campylobacteriosis	Most commonly caused by Campylobacter jejuni	Drinking water contaminated with faeces	Produces dysentery like symptoms along with a high fever. Usually last 2-10 days.
E. coli Infection	Certain strains of Escherichia coli (commonly <i>E. coli</i>)	Water contaminated with the bacteria	Mostly diarrhea. Can cause death in immunocompromised individuals, the very young, and the elderly due to dehydration from prolonged illness.
Gastroenteritis	Salmonella enteritis and E.Coli	Drinking water contaminated with the bacteria. More common as a food borne illness.	Symptoms include diarrhoea, fever, vomiting and abdominal cramps.
M. marinum infection	Mycobacterium marinum	Naturally occurs in water, most cases from exposure in swimming pools or more frequently aquariums ; rare infection since it mostly infects immunocompromised individuals	Symptoms include lesions typically located on the elbows, knees, and feet (from swimming pools) or lesions on the hands (aquariums). Lesions may be painless or painful.
Dysentery	Caused by a number of species in the genera Shigella and Salmonella with the most common being Shigelladysenteriae	Water contaminated with the bacterium	Frequent passage of feces with blood and/or mucus and in some cases vomiting of blood.
Legionellosis (two distinct forms: Legionnaires' disease and Pontiac fever)	Caused by bacteria belonging to genus Legionella (90% of cases caused by Legionella pneumophila)	Contaminated water: the organism thrives in warm aquatic environments.	Pontiac fever produces milder symptoms resembling acute influenza without pneumonia . Legionnaires' disease has severe symptoms such as fever , chills , pneumonia (with cough that sometimes produces sputum), ataxia , anorexia , muscle aches, malaise and occasionally diarrhea and vomiting

Leptospirosis	Caused by bacterium of genus Leptospira	Water contaminated by the animal urine carrying the bacteria	Begins with flu-like symptoms then resolves. The second phase then occurs involving meningitis , liver damage (causes jaundice), and renal failure
Otitis Externa (swimmer's ear)	Caused by a number of bacterial and fungal species.	Swimming in water contaminated by the responsible pathogens	Ear canal swells causing pain and tenderness to the touch
Swimmer's Itch	Caused by blood flukes (parasitic flatworms)	Swimming water contaminated by eggs	Irritating dermatitis. Causes an allergic reaction or local irritation of the skin
Typhoid fever	Salmonella typhi	Ingestion of water contaminated with feces of an infected person	Characterized by sustained fever up to 40°C (104°F), profuse sweating , diarrhea, less commonly a rash may occur. Symptoms progress to delirium and the spleen and liver enlarge if untreated. In this case it can last up to four weeks and cause death.
Leptospirosis	Caused by bacterium of genus Leptospira	Water contaminated by the animal urine carrying the bacteria	Begins with flu-like symptoms then resolves. The second phase then occurs involving meningitis , liver damage (causes jaundice), and renal failure
Viral infections			
Hepatitis A	Hepatitis A virus (HAV)	Can manifest itself in water (and food)	Symptoms are only acute (no chronic stage to the virus) and include Fatigue , fever, abdominal pain, nausea, diarrhea, weight loss, itching, jaundice and depression .
Poliomyelitis	Poliovirus	Enters water through faeces of infected individuals	90-95% of patients show no symptoms, 4-8% have minor symptoms (comparatively) with delirium, headache, fever and occasional seizures and spastic paralysis, 1% have symptoms of non-paralytic aseptic meningitis. The rest have serious symptoms

			resulting in paralysis or death.
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APPENDIX 3:**GUIDELINE TEMPLATE FOR HEALTH CERTIFICATES
PREMISES**

Issuing authority.....

HEALTH CERTIFICATE SCHOOL

CERTIFICATE NUMBER.....

VALIDITY PERIOD:

NAME OF SCHOOL.....**PHYSICAL ADDRESS****NAME OF OWNER/PERSON IN CHARGE**.....**ID NUMBER**.....**RESIDENTIAL ADDRESS**.....

It is hereby certified that the above-mentioned premises adheres to the prescribed environmental health norms and standards for school premises.

INDOOR SPACE/ CLASSESS FOR LEARNERS

Number of learners permitted per class.....

Maximum number of learners to be accommodated on the premises.....

Total number of girls: Total number of boys..... Total staff.....

Total number of learners residing on the premises/boarders.....

SANITATION AND ABLUTION FACILITIES**GIRLS**

No. water closets.....

No. wash hand basins.....

No. showers/baths...

BOYS

No. water closets.....

No. Wash hand basins.....

No. Urinals.....

No. showers/baths...

STAFF

No. water closets.....

No. wash hand basins.....

No. showers/baths.....

WATER SUPPLY

Piped running potable water available: Yes/No

Storage tank supply: Yes/No

FOOD HANDLING FACILITIES

Certificate of acceptance issued: Yes/No/ Not applicable

This certificate is not transferable from one premises to another

Name of issuing person (manager for MHS) _____

Signature: _____

Date of issue: _____

GUIDELINE TEMPLATE FOR HEALTH CERTIFICATES**CHILD CARE CENTRE (B)**

CERTIFICATE NUMBER.....

VALIDITY PERIOD.....

NAME OF INSTITUTION.....**PHYSICAL ADDRESS**

.....

NAME OF OWNER/PERSON IN CHARGE.....**ID NUMBER**.....**RESIDENTIAL ADDRESS**.....

It is hereby certified that the above-mentioned premises adheres to the prescribed environmental health norms and standards for child care center premises.

INDOOR PLAY AREA

Total number of children to be accommodated on the premises in terms of floor space.....

Age groups of children permitted.....

Operation hours: Full day care/half day care

No of care givers.....

SANITATION AND ABLUTION FACILITIES**GIRLS**

No. water closets.....

No. wash hand basins.....

BOYS

No. water closets.....

No. Wash hand basins.....

STAFF

No. water closets.....

No. hash hand basins.....

No. Urinals.....

WATER SUPPLY

Piped running potable water available: Yes/No

Storage tank supply: Yes/No

Other: Specify.....

FOOD HANDLING FACILITIES

Certificate of acceptance issued: Yes/No/ Not applicable

This certificate is not transferable from one premise to another

Name of issuing EHP _____**Signature:** _____**Date of issue:** _____

GUIDELINE TEMPLATE FOR HEALTH CERTIFICATES**NURSING/MATERNITY HOME/HEALTH ESTABLISHMENTS/OLD AGE HOME(C)**

CERTIFICATE NUMBER.....

VALIDITY PERIOD.....

NAME OF INSTITUTION.....**PHYSICAL ADDRESS**

.....

NAME OF OWNER/PERSON IN CHARGE.....**ID NUMBER**.....**RESIDENTIAL ADDRESS**.....

It is hereby certified that the above-mentioned premises adheres to the prescribed environmental health norms and standards for premises.

NUMBER OF BEDS PERMITTED ON THE FACILITY

Total number of beds permitted on the facility.....

SERVICES RENDERED ON THE PREMISES:

List services permitted to conduct on the premises

.....

.....

FOOD HANDLING FACILITIES

Certificate of Acceptability issued: Yes/Not applicable

COA number.....

MORTUARY FACILITIES

Certificate of competence issued to the premises.

COC number:

This certificate is not transferable from one premise to another

Name of issuing EHP _____**Signature:** _____**Date of issue:** _____

**GUIDELINE TEMPLATE FOR HEALTH CERTIFICATES
PREMISES**

OTHER PREMISES (E)

CERTIFICATE NUMBER..... VALIDITY PERIOD.....

NAME OF INSTITUTION.....
TYPE OF BUSINESS (Salon/offensive trade/tattoo parlour/accommodation establishment/).....
PHYSICAL ADDRESS
.....
.....

NAME OF OWNER/PERSON IN CHARGE.....
ID NUMBER.....
RESIDENTIAL ADDRESS.....

It is hereby certified that the above-mentioned premises adheres to the prescribed environmental health norms and standards for premises.

THE PREMISES IS SUITABLE FOR THE FOLLOWING SERVICE
Name service.....e.g. hairdresser/tattoo parlour etc

FOOD HANDLING FACILITIES
Certificate of Acceptability issued: Yes/Not applicable COA number.....

This certificate is not transferable from one premise to another

Name of issuing EHP _____
Signature: _____
Date of issue: _____

APPENDIX 4:**GUIDELINE FOR RISK ASSESSMENT FOR CHILD CARE CENTRES****1. Identifying hazards and risks:****ASSESSING HAZARDS AND RISKS IN A DAY CARE CENTRE:**

Hazards	<ul style="list-style-type: none"> A hazard is defined as anything that has a potential to cause harm to children on the premises: e.g. a substance, piece of equipment or a work procedure. 	<p>Make a list of possible hazards on the premises. E.g.</p> <ul style="list-style-type: none"> Toys and equipment Chemical hazards, such as cleaning equipment unattended children security and entry points and exits Food preparation, handling and storage methods. 	
Risks	<ul style="list-style-type: none"> A risk is defined as the likelihood that harm will occur from the hazard. Likelihood can range from "never" to "certain" and depends on a number of factors. 	<p>E.g. The risk of a child tripping an falling over a pair of stairs will depend on:</p> <ul style="list-style-type: none"> The extent of the damage; the number of people walking over it; the number if times they walk over it; whether they are wearing sensible shoes; The level of lighting. <p>The risk of a child being exposed to chemical poisoning on the premises will depend on:</p> <ul style="list-style-type: none"> Accessibility to a chemical (from storage practices) The number of times children are exposed to chemicals. The active ingredient of the chemical; The type of exposure i.e. ingestion/skin contact The amount of chemical exposure The resistance of the child; 	
Consequences of injury or harm to children	<ul style="list-style-type: none"> Consequences of harm as a result of a risk can range from "minor" to "severe". 	Minor Skin irritation Digestive upsets	Severe 3 rd degree skin burns Death
Developing and/or	<ul style="list-style-type: none"> Control measures 	Risk	Control measure

		<u>Poisoning by cleaning material</u>	<ul style="list-style-type: none">▪ <u>Proper storage out of reach of children</u>▪ <u>Use of chemical away from children</u>
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APPENDIX 5:
GUIDELINE RISK ASSESSMENT TOOL FOR CHILD CARE CENTERS

Hazard severity _____ **Hazard likelihood**

- Major _____ 3 high – certain harm will occur
 2 serious _____ 2 medium = could occur frequently
 1 Slight _____ 1 = seldom occurs

Example for EH risk assessment

Area	Hazard	Who is at risk	severity	Likelihood	Risk estimate	Control measures needed
<u>Kitchen</u>	<u>Food handling and storage methods</u>	<u>Children and staff</u>	<u>3</u>	<u>2</u>	<u>6</u>	<u>Hot food to be stored at 650C and cold food to Be stored at temperatures below Refrigerator facilities must be provided.</u>
<u>Outdoor play area</u>	<u>Play equipment</u>	<u>Children</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>Broken equipments must be replaced. Children not to be allowed to use broken equipment.</u>
<u>Sanitation facilities</u>	<u>Toilet facilities</u>	<u>Children</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>Facilities to be provide to ensure the optimal use of toilets by children. Provide reduced toilet seat and step in toilets.</u>
<u>Ablution facilities</u>	<u>Communal approach in hand washing</u>	<u>children</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>Use of tippy tappy approach for hand washing</u>
<u>Water supply</u>	<u>Water storage and availability</u>	<u>Children and staff</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>Water storage tanks to be cleaned and disinfected at least regularly. Water to be protected from contamination by use of storage containers with lids</u>
<u>Building structure</u>	<u>Floor surfaces</u>	<u>Children</u>	<u>3</u>	<u>2</u>	<u>6</u>	<u>Damaged floors to be fixed</u>
<u>General hygiene practices</u>	<u>Cleanliness</u>	<u>Children and staff</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>Play rooms to be cleaned daily. Toilet paper and soap to be provided in toilet facilities are all times.</u>

APPENDIX 6:

GUIDELINE RISK CLASSIFICATION AND PROFILING IN FOOD HANDLING PREMISES

Purpose of categorizing food premises on the basis of risk:

- ✦ It is generally not possible for EHP to inspect all food handling premises/establishments frequently because of factors such as time, cost, and lack of human resources; nor is it desirable to inspect all premises with the same frequency.
- ✦ Risk profiling will involve the classification of food handling premises in categories, from the highest risk category to the lowest risk category.
- ✦ The purpose of classifying food businesses according to risk category is to allow EHP responsible for food inspection to prioritize inspections of food businesses on the basis of the degree of risk they pose to the community. Risk Classification will therefore essentially provide guidance on determining inspection frequency for food handling premises.
- ✦ Essentially, premises in higher risk classifications will require higher levels of surveillance and inspection than those in a lower classification, because of failure to comply with Food Safety legislation and standards and as a result that they present a greater likelihood of serious consequences or harm to the consumer.
- ✦ Risk category will range from priority 1-4.

Types of food premises

Box 1: Types of food handling businesses in South Africa

Primary producers are food businesses at the primary production stage producing raw food for human consumption such as rice farms, fish farms, fruit and vegetable farms, poultry farms, dairy farms and beef cattle farms etc.

Manufacturers/processors are food businesses at the secondary production stage participating in food manufacturing/processing and/or food packaging such as the milk industry, canning industry, bakery industry, various food manufacturers, flour mills etc.

Distributors include particularly importation, wholesaling, wholesale storage and multipurpose wholesalers who distribute not only to retailers but also to restaurant owners or consumers).

Retailers are food businesses dealing in food retail activity that sell the food to the final consumer such as supermarkets and market stalls commonly found in traditional markets.

Caterers and others selling or servicing directly to consumer includes all forms of catering, including take-away food stalls and catering school areas in hospitals firms, schools, restaurants and other public institutions preparing and serving food on the premises.

APPENDIX 7:**GUIDELINE RISK CATEGORISATION**

Risk categorization will be based on the assessment of the following risk factors

- ✦ Assessment of the type/category of foods handled/processed/manufactured
- ✦ Identification of the method of handling/processing/manufacturing
- ✦ Assessment of food safety management systems
- ✦ Types of consumers at risk
- ✦ Compliance history
- ✦ Scale of the operation/volume of food
- ✦ Public complaints

1. Assessment of the type of foods handled and intended for use:

Foods can be categorized into high-risk, medium-risk and low-risk, based on the possibility of the presence of microbiological or chemical hazards in foods.

High-risk foods:

Ready to eat foods that support the growth of pathogenic bacteria easily, and do not require any further heating or cooking

Low-risk foods:

Foods that do not support the growth of pathogenic bacteria. These foods are unlikely to be implicated in food poisoning.

Medium-risk foods:

Those foods may support the growth of pathogenic bacteria, but require heat processing or other processing to eliminate or reduce pathogens to an acceptable level.

High risk foods	Medium risk foods	Low risk foods
<p>High-risk foods that are ready-to-eat when sold or served.</p> <p>E.g. cooked meat and poultry such as; beef, pork, ham, lamb, chicken, turkey, duck</p> <p>Cooked meat products such as; meat pies & pasties, meat stock & gravy, cook-chill meals.</p> <p>Dairy produce such as; milk, cream, artificial cream, custards, products containing unpasteurised milk, ripened soft & moulded cheeses</p> <p>Egg products such as; cooked eggs, products containing uncooked or lightly cooked eggs, e.g. mayonnaise, mousse, home-made ice cream</p> <p>Shellfish and other sea-foods such as; mussels, cockles, cooked prawns, raw oysters</p> <p>Farinaceous dishes including;</p>	<p>Medium-risk foods that are ready-to-eat when sold or served</p> <p>E.g. Herbs and Spices</p> <ul style="list-style-type: none"> • Bottled Water • Fruits & Vegetables: (Frozen) • Fruits and Vegetables (dried) • Prepared but not ready to eat foods (pizza, pot pies, etc) <p>Acidic foods, such as pickled foods, vinegar, fruit.</p> <p>Breads, rolls, frozen dough</p> <p>Fruit juices</p>	<p>Low-risk foods that may or may not be ready to eat</p> <p>E.g. Dry goods those that contain minimal amounts of moisture, such as; bread, flour, biscuits, cereal etc.</p> <p>Foods that have been preserved e.g. smoked or salted fish.</p> <p>Fermented products such as; salami, pepperoni.</p> <p>Foods with high sugar/fat content for example; jam & chocolate.</p> <p>Tinned food, whilst unopened.</p> <p>Sugar, tea, coffee</p>

cooked rice, pasta, couscous		
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2. Identification of methods of handling/processing/manufacturing

- Assessment of methods of food handling and preparation. Whether food high-risk foods is extensively handled or not and identifying whether the foods handled or food preparation procedures used are high-risk, focus should be on those foods or procedures that are most likely to cause food-borne diseases if uncontrolled. This should include identification and assessment of identification of food-borne diseases risk factors, such as :

3. Equipments and facilities

This will include the assessment of the availability and condition of equipments and facilities used in connection with food preparation and handling, and include other risk factors such as .

- Food from unsafe sources;
- Inadequate cooking;
- Improper holding temperatures;
- Contaminated equipment; and
- Poor personal hygiene

Other examples of widely identified risk factors for food-borne disease are:

- Cross contamination (e.g. from a raw to a ready-to-eat product);
- Water quality; and
- The presence of pests.

4. Assessment of food safety management systems

- Identification of food safety management systems applied on the premises, if any, e.g. HACCP or ISO 20 000 and the assessment of employee and management food safety knowledge.

5. History of compliance

The history of compliance of a food handling premises to food safety regulations and requirements is taken into consideration.

High compliance food premises are likely to pose less risk in food safety those businesses where compliance is low.

6. Consumers at risk

Where consumers are the vulnerable members of society, e.g. infants/young children or the elderly or Immuno compromised individuals, the risk is likely to be higher.

7. Scale of consumers

Where food is prepared for a lot of people or a large number of consumers are serviced, then the risk of a food borne diseases being spread at a large scale are higher.

8. Public complaints

Where more than 2 (two) food safety complaints have been received in a month or a clinically confirmed outbreak has occurred at the facility within the last year under the same management, then the likelihood of a outbreak re-curing and or other complaints being registered is high.

APPENDIX 8**GUIDELINE FOR RISK CATEGORISATION/SCORING TOOL FOR FOOD HANDLING PREMISES**

Each risk fact will have corresponding weighted values or scores based on the level of risk posed. A score will be given to each risk factor, then the total scores will determine whether a food handling premises will fall into a high-risk, medium-risk or low-risk category.

Table1: Example of questionnaire of all risk factors

<u>1.Type of food handled/processed/manufacture</u>	<u>a,b,c,d,e, or f</u>	<u>Circle corresponding score</u>
a) <u>High-risk food that are ready to eat when served or sold</u>		
b) <u>Medium-risk-foods that are ready to eat</u>		
c) <u>Low-risk foods that may or may not be ready to eat</u>		
<u>2. Food preparation/handling</u>		
a) <u>Extensive handling or preparation of high-or medium-risk foods</u>		
b) <u>Limited handling or preparation or high or medium risk</u>		
c) <u>Handling or preparation of unpackaged low-risk-foods</u>		
d) <u>a, b or c don not apply</u>		
<u>3. Equipments and facilities</u>		
a) <u>Insufficient refrigeration equipment or hot holding equipments to maintain food temperatures at correct standards</u>		
b) <u>Food preparation area/kitchen is small, insufficient space, has poor layout, inadequate lighting, ventilation</u>		
c) <u>Surfaces of equipments not easily cleanable, needs replacing</u>		
d) <u>Equipments and facilities are satisfactory</u>		
e) <u>Drinking water systems are poorly maintained/ has no running water</u>		
f) <u>Potable drinking water is constantly available</u>		
<u>4. Food safety Management Systems</u>		
a) <u>Demonstrate littler no knowledge/training of food safety practices</u>		
b) <u>Demonstrate some knowledge/training of food safety practices</u>		
c) <u>Demonstrate good knowledge/training of food safety practices</u>		
<u>5. Food safety management systems</u>		

a) <u>No documented food safety management programme is in place</u>		
b) <u>Documented food safety management programme in place without an audit programme</u>		
c) <u>Audited food safety management programme in place</u>		
d) <u>Not applicable because of the type of food</u>		
6. <u>Regulatory compliance</u>		
a) <u>Continual non-compliance usually during inspections on critical risk factors</u>		
b) <u>General compliance usually during inspections on critical factors</u>		
c) <u>High compliance usually during inspections on critical risk factors</u>		
7. <u>Types of consumers</u>		
a) <u>Provides food service primarily to vulnerable members of society including immune compromised individuals (e.g. hospitals, nursing homes)</u>		
b) <u>Provides food service directly to vulnerable members of society that may not include immune-compromised individuals (e.g. child care centers, old-age homes etc)</u>		
c) <u>Provides food service to the general public</u>		
8. <u>Scale of operation</u>		
a) <u>Servicing more than 250 meals a day or food service employing more than 10 people</u>		
b) <u>Servicing less than 250 meals per day and food retail employing less than 10 people</u>		

Table 2: Risk categorization based on the total score obtained

Risk	Score	Total
<u>Low</u>	<u>105 or less</u>	
<u>Moderate</u>	<u>110-160</u>	
<u>High</u>	<u>160 or more</u>	

Determination of inspection frequency

Inspection priority	
Top Inspection priority	Business compliance is low and risk classification is high
Medium inspection priority	Business compliance is high and risk classification is high; or Business compliance is low and risk classification is low
Low inspection priority	Business compliance is high and risk classification is low

REFERENCES

Acts of Parliament

1. The Constitution of South Africa, 1996 (Act No. 108 of 1996);
2. The National Health Act, 2003 (Act No. 61 of 2003), as amended; and Regulations
3. Occupational Health and Safety Act, 2003 (Act No. 85 of 2003); and Regulations
4. National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended; and Regulations
5. National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004);
6. National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008); and Regulations
7. Building Regulations and the Building Standards Act, 1977 (Act No. 103 of 1977);
8. Children's Act, 2005 (Act No. 38 of 2005);
9. Older Persons Act, 2006 (Act No. 13 of 2006);
10. The Water Services Act, 1997 (Act No. 108 of 1997);
11. Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972), as amended; and Regulations
12. Environmental Conservation Act, 1989 (Act No. 73 of 1989);
13. The Explosives Act, 2003 (Act No. 15 of 2003);
14. Hazardous Substances Act, 1973 (Act No. 15 of 1973) as amended; and Regulations
15. Mine Health and Safety Act, 1996 (Act No. 29 of 1996);
16. National Road Traffic Amendment Act, 1996 (Act No. 93 of 1996);
17. National Water Services Act, 1998 (Act No. 36 of 1998);
18. Nuclear Energy Act, 1999 (Act No. 46 of 1999) as amended;
19. Health Professions Act, 1974 (Act No. 56 of 1974); and Regulations;
20. Tobacco Products Control Act, 1993 (Act No. 83 of 1993); and Regulations
21. Animal Health Act, 2002 (Act No. 7 of 2002); and
22. National Radioactive Waste Disposal Institute Act, 2008 (Act No. 53 of 2008).

Regulations

1. Regulations Governing General Hygiene Requirements for Food Premises and the Transport of Food, R962 of 12 November 2012;
2. Regulations Relating to the Management of Human Remains R363 of 22 May 2013;
3. Regulations Defining the Scope of the Profession of Environmental Health, R888 of 26 April 1991, as amended;
4. Environmental Impact Assessment Regulations, No. 543 of April 2010;
5. Environmental Regulations for Workplaces, GN R2281 of 16 October 1987 as amended;
6. Facilities Regulation GN R2362 of 5 October 1990, promulgated in terms of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993);
7. Noise Control Regulations, R896 of 27 April 1990;
8. Waste Classification and Management Regulations, No. R. 634 of 23 August 2013;
9. National Norms and Standards for the Assessment of waste for landfill disposal, No. R. 635 of 23 August 2013;
10. National Norms and Standards for Disposal of Waste to Landfill, No. R. 636 of 23 August 2013;
11. List of Waste Management Activities that have, or are likely to have, a Detrimental Effect on the Environment, No. 921 of 29 November 2013;
12. National Domestic Waste Collection Standards, No. 21 of 2011;
13. National Norms and Standards for the Storage of Waste, No. 926 of 29 November 2013;
14. National Waste Information Regulations No. R 6 25 of 13 August 2012;
15. Standards for Extraction, Flaring or Recovery of Landfill Gas, No. 924 of 29 November 2013;

SABS Specification and Codes of Practice

1. SANS 241: Drinking water;
2. SANS 10248-1:- Management of health care risk waste, Part 1: Management of healthcare risk waste from a healthcare facility;

3. SANS 10248-2, Management of healthcare waste, Part 2: Management of healthcare risk waste for healthcare facilities and healthcare providers in rural and remote settings;
4. SANS 10248-3, Management of healthcare waste, Part 3: Management of healthcare risk waste from minor generators-Registered health care professionals and non-health care professionals;
5. SANS 452:2008: Non reusable and reusable sharps containers;
6. SANS 10400: application of the National Building Regulations;
7. SANS 0146: Laundry process and management;
8. SANS 0181 of 1981: "Code of Practice for the Measurement of Noise Emitted by Road Vehicles when Stationary";
9. SANS 10229-1&2: Transport of dangerous goods – Packaging and Large Packaging for Road and Rail Transport
10. SANS 10233: Transport of Dangerous Goods-intermediate Bulk Containers for Road and Rail Transport;
11. SANS 10234-Globally Harmonized System of Classification and Labelling of Chemicals;
12. SANS 1518 – Transport of dangerous goods-design, construction, testing, approval and maintenance of road vehicles and portable tanks;
13. SANS 10231 -. Transport of dangerous goods- Operational requirements for road vehicles.

World Health Organisation

1. Guidelines for recreational water Environments, Volume 2, Swimming pools and Similar Environments;
2. National Health Care Waste Management plan Guidance Manual;
3. Guidelines to drinking water quality, 4rd Edition, 2011.
4. Guidelines for Drinking Water Quality, Third Edition, Incorporating the first and second Addenda, Volume 1 (Recommendations)
5. Guide for Water Safety in Buildings, 2011
6. Guide to Ship Sanitation, Third Edition,
7. Guide to Sanitation in Aviation, Third Edition, 2009
8. Guidelines for Safe Recreational Water Environments, Volume 2, Swimming Pools and Similar Environments, 2006
9. Water, Sanitation and Hygiene Standards for Schools in Low-Cost Settings.
10. Environmental Health Impact Assessment of Development Projects practical guide for WHO Eastern Mediterranean Region, 2005

Municipality By-Laws

1. City of Tshwane Metropolitan Municipality, 1998, Health By-laws for Child Care centers
2. City of Tshwane Metropolitan Municipality, 2004, Health By-Laws for Homes for the Aged
3. Ekurhuleni Metropolitan Municipality, 2009, Public Health By-Laws
4. City of Johannesburg Metropolitan Municipality, 2004, Public Health By-Laws
5. City of Johannesburg, 2004, Waste Management By-Laws
6. City of Cape Town, 2009, Waste Management By-Laws

National policies

1. National Environmental Health Policy

Other literature

1. DEA, 1995, Guidelines for the design, installation and operation of incinerators
2. DEA, 1998, Minimum requirements for the Handling, classification and Disposal of Hazardous Waste, 2nd Edition
3. DEA, 1998, Minimum requirements for Waste Disposal by Landfill
4. DEA, 2012, National Waste management Strategy
5. DEA,2000, White Paper on Integrated Pollution and Waste Management for South Africa

6. DOH, primary Health Care package – a set of Norms and Standards DWAF, Regulations under Section 9 of the Water Services Act, 1997 (Act No. 108 of 1997): Norms and Standards for quality water services (explanatory notes and guidelines)
7. DOH, 2009, Environmental Health Impact Assessment Guidelines
8. DWA, 2011, Draft Municipal Water Quality Laboratory Strategy
9. DWAF, DOH &WRC, Quality of domestic water supplies, volume 2: Sampling Guide. WRC: No: TT 117/99
10. DWA, SALGA, National Treasury, 2003. Strategic Framework for Water Services
11. DWA, 2008, Incentive-based Regulation
12. HST and DOH, 2001, Norms and standards for Environmental Health and Occupational Hygiene at District Hospitals, A research report
13. Norms and Standards for Environmental Health and Occupational Hygiene at District Hospitals, A research report, Port Elizabeth Technikon for EH research, 2001
14. Gauteng Department of Health, 2004, Health Care Risk Waste Regulations
15. DOH, Guideline for Pest Control at Government Institutions
16. DOH, 2011, Core Standards for Health Establishments in South Africa