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GENERAL NOTICES

NOTICE 3001 OF 2003

GAUTENG DEPARTMENT OF AGRICULTURE, CONSERVATION, ENVIRONMENT AND LAND AFFAIRS

PUBLICATION OF THE POLICY FOR ENVIRONMENTALLY SUSTAINABLE HEALTH CARE WASTE MANAGEMENT IN GAUTENG PROVINCE

Notice is hereby given that the Member of the Executive Council for Agriculture, Conservation, Environment and Land Affairs, Ms Mary Metcalfe intends to prescribe a Policy for Environmentally Sustainable Health Care Waste Management as published in this Provincial Gazette.

Any person or organization wishing to comment on this proposed notice may lodge written comments or representations on or before the 13 October 2003 by postage, facsimile or handing them in at the following address:

Attention: Ms. Dee Fischer
(Deputy Director: Integrated Waste Management and Pollution Abatement)

Postal Address: Department of Agriculture, Conservation, Environment and Land Affairs
P.O. Box 8769
Johannesburg
2000

Physical Address: Department of Agriculture, Conservation, Environment and Land Affairs
Diamond Corner Building
68 Eloff & Market Street
Johannesburg
2000

Telephone: (011) 355 1956
Fascimile: (011) 355 0667
E-Mail Address: DeeF@gpg.gov.za

Addressing the Health Care Waste Problem in Gauteng

A Policy for Environmentally Sustainable Health Care Waste Management in Gauteng Province

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0. Executive Summary

The special risk that Health Care Risk Waste (HCRW) poses to society, together with the present poor level of Health Care Waste (HCW) management in Gauteng, has resulted in the need for general improvement of HCRW standards.

In meeting its constitutional responsibility to ensure that every South African lives in an environment that is not harmful to his/her health or well-being, the Department of Agriculture, Conservation and Environment (DACEL) together with the Gauteng Department of Health (DOH), embarked on a comprehensive programme to improve the quality of the environment through the prevention of pollution, the promotion of conservation and the securing of ecologically sustainable development. The formulation of this Policy therefore forms part of the process of facilitating the implementation of sustainable HCW management in Gauteng, in accordance with the following vision:

To ensure that integrated, environmentally sustainable and occupationally safe HCW management be established in Gauteng; within the frames and principles of the National Waste Management Strategy (NWMS), and covering the full HCW stream.

The Policy sets the frame for the more detailed HCW management strategy and action plans. It also provides guidance for both HCW generators and HCW service providers when planning investments, preparing for increased performance standards and future market conditions, as well as when developing suitable treatment facilities and equipment for service delivery to the HCRW generators. The Policy appreciates the principles of the NWMS that requires:

- Improved delivery of basic waste management services.
- A shift in emphasis away from end-of-pipe treatment to pollution prevention and waste minimisation.
- Reduced risk to human health and environment from improved waste management practices.
- More effective integration of waste management across all environmental media (land, water and air), through the adoption of a more effective integrated approach to legislation.

HCW is a combination of Health Care General Waste (HCGW) - similar to domestic waste, and HCRW that is considered to be the hazardous component of health care waste. HCRW is further made up of a number of components such as infectious waste (including sharps), chemical waste (including pharmaceutical waste) and radioactive waste. The generators of HCW are generally grouped into two categories that represent major generators like hospitals and clinics, as well as minor generators like health practitioners, dentists and pharmacies. The 600 major generators are responsible for some 90% of HCRW generated in Gauteng, with the 9 700 minor generators being responsible for the remaining 10%.

Incineration is the only treatment process presently used in Gauteng, and of the 70 incinerators, only 54 are operational. It is unlikely however, that any of these are meeting the

present Department of Environment and Tourism (DEAT) emission guidelines. Hence, the introduction of improved treatment technologies including various non-burn technologies as well as environmentally acceptable incinerators is encouraged with the phasing out or up grading of unacceptable treatment facilities.

The health care waste management problems identified during the Status Quo Study, as well as in subsequent investigations, were grouped into 12 problem categories. All these having a potential impact on the environment or the occupational health and safety of humans. The problems were then transformed into needs. These were listed as several groups, each with its own distinct impact on either the environment or on humans.

The first group of needs relates to the environment, with the main emphasis on the environmentally sound treatment and disposal of HCRW. Secondly occupational health and safety considerations that affected patients and visitors, health care professionals, waste management workers and the public, were considered. The problems identified were then transformed into needs.

The third group focussed on organisational needs. These included aspects such as the development and implementation of uniform registration, record-keeping, and reporting systems for parties involved in HCW management. The equipment and technical needs related to various aspects starting from generation and continuing through collection, transport and treatment, to final disposal.

Because any HCW management system must be sustainable, the other group of needs focussed on financial and legislative needs. These deal primarily with the lack of appropriate legislation, as well as the ineffective enforcement thereof. To some extent, the legislative needs lead to the need for information and awareness. These needs consider the inadequate training and awareness of HCW management in the healthcare industry. Finally, public health needs were been identified.

Based on the needs analysis, the overall policy statement for health care waste management was formulated. As the overall policy statements consist of relatively broad requirements, a set of Interim Minimum Requirements for HCW Management has been developed.

By recognising the financial and logistical impact that the minimum requirements for HCW management will have on the industry, the Provincial Government proposes a phased implementation of the policy. This will be developed in a HCW Management Strategy and Action Plan with specific targets for implementation. In the period until the Strategy is implemented, the Interim Minimum Requirements for HCW Management shall form the basis for monitoring, for the issuing of permits and for the planning of HCW management activities.

1. Policy Formulation Process.

1.1 Background to the Gauteng HCW Management Policy

Gauteng embarked on the development of this policy because Health Care Waste (HCW) poses a special risk to society, including health care professionals, patients and visitors, workers at transport companies and treatment plants, as well as people being exposed to spills and unsuitable disposal practises. In addition, illegal dumping of health care risk waste poses a risk to adults and children, for instance when scavenging on waste disposal sites.

The main concern for infection centres around the spread of hepatitis and Human Immune Deficiency Virus (HIV), but other diseases are also of concern.

Although most health care facilities have established some form of HCW management system, investigations have revealed that there is generally a shortage of both human and financial resources, a lack of awareness and limited training in the various roles and functions required for responsible HCW management, all contributing towards a need for improved standards of HCW management. Poor standards of HCW segregation further increases the costs of HCRW treatment and disposal, as HCGW is, in many instances, treated and disposed of as HCRW. This costs much more than the disposal of general waste. The financial implications of this are often not known by the health care workers and health care facility managers.

Other problems arise from the collection of HCRW. At present this is predominantly undertaken by means of a non-returnable cardboard box system. This results in the unnecessary destruction of cardboard, and also creates a health and safety risk for health care service providers.

Approximately 70 HCRW treatment facilities exist in Gauteng. These are incinerators that are mostly still operational. The incinerators have small treatment capacities - as little as 9 kg/hour, increasing to a maximum of 350 kg/hour. Based on the results of a Status Quo Study undertaken in 2001, it is clear that these small capacity units are not able to meet the current DEAT air emission guidelines which, when compared to international standards, (cf. Box 5.10) are lenient. . The large number of pollution sources created by this aggravates the problem. Hence, it is believed that non-compliance with the existing guidelines is a general problem for almost all of Gauteng's incinerators. The problem is further aggravated by a lack of suitable minimum air emission standards, as there are no legally binding emission limits set at present. This results in the DEAT guidelines being used in Gauteng.

It is not feasible to upgrade the vast majority of the existing incinerators in Gauteng so that they include flue gas cleaning. This is because of the design of the incinerators. It is assumed that the operation of most of the incinerators would be discontinued if the DEAT emission guidelines were to be enforced.

Non-burn technologies are being introduced as an alternative to the existing incinerators. The use of alternative technologies may have been a result of public pressure to address concerns around

air emissions. There is, however, still a lack of national and/or provincial standards and guidelines to manage, control and monitor both burn- and non-burn HCRW treatment technologies. This shortcoming makes the setting of conditions during permitting, as well as verification and auditing during operation, difficult.

Finally, the absence of any requirements for an integrated reporting system on the transport as well as the treatment and disposal of HCRW, makes it difficult to strategically plan for the future of HCRW management facility requirements, but also prevents any form of HCRW tracking to control the illegal disposal of, or inappropriate treatment of HCRW.

Environmental management and pollution control are constitutionally, functional areas of concurrent national and provincial competence. Provincial planning is exclusively a function of the provincial legislative. Cleansing, refuse removal and solid waste disposal are described as a local government competence, while the role of provincial government is to monitor and support local government. In broad terms it can therefore be stated that constitutionally, HCW implementation is the function of local government, while planning for sustainable HCW management is the role of the province. The role of national government with regard to HCW management is to ensure that a sustainable management system is in place, in line with the Constitutional requirement.

In order to meet the Constitutional right of every South African to live in an environment that is not harmful to his/her health or well being, DACEL together the Gauteng DOH have embarked on a comprehensive programme to improve the quality of the environment through the prevention of pollution, the promotion of conservation and the securing of sustainable ecological development. The Environmental Impact Assessment (EIA) regulations, promulgated under the Environmental Conservation Act (Act 73 of 1998), are used to ensure the environmental compliance of new developments that include Health Care Waste management facilities.

Although other related legislation is not to be ignored, the primary legislation and strategies driving the Policy are:

- The South African Constitution[1];
- The National Environmental Management Act[2];

together with:

- The National Waste Management Strategy;
- The White Paper on Integrated Pollution and Waste Management

1.2 The Vision of the Gauteng HCW Policy

[1] Act 108 of 1996.
[2] Act 107 of 1998.

The Vision of this Policy is to ensure that:

Integrated, environmentally sustainable and occupationally safe health care waste management is established in Gauteng and that this is done within the frames and principles of the National Waste Management Strategy, covering the full health care waste stream.

The Vision of the Policy represents the final goal, or the ideal situation, for health care waste management in Gauteng Province. It is therefore considered ambitious in the short term. The action plans to be developed will however, provide a time frame for implementation that is reasonable and progressive within the context of available resources.

The Policy sets the framework for the more detailed HCW management Strategy and Action Plan. It also provides guidance for both HCW Generators and HCW Service Providers when planning investments, preparing for increased performance standards and future market conditions; as well as when developing suitable treatment facilities and equipment for service delivery to the HCRW generators.

1.3 Context in which the Policy will Function

The Gauteng HCW Management Policy appreciates the National Waste Management Strategy (NWMS) that was adopted by DEAT in 2000. The NWMS has started a process that is intended to transform the current approach to waste management in South Africa. In particular the NWMS aims to:

- Improve the delivery of basic waste management services to a large section of the population who currently receive inadequate services. This requires that all health care facilities be supplied with appropriate waste collection and transportation systems, as well as access to proper treatment facilities. This in turn requires the strengthening of legislation to allow for effective enforcement, proper planning, the supply of appropriate equipment as well as training and information.
- Shift emphasis away from end-of-pipe treatment to pollution prevention and waste minimisation. This means an improved emphasis on the recycling of packaging, as well as HCRW minimisation through improved segregation and green procurement. It should however, be kept in mind that the enforcement of high standards for hygiene and cleanliness is a priority, and in certain cases this will prohibit any recycling and waste minimisation other than effective segregation
- Reduce the risk to human health and environment through improved waste management. This is one of the primary objectives of sound HCW management, as HCRW poses a special risk to both humans and the environment.
- More effectively integrate waste management across all environmental media (land, water and air), through the adoption of a more effective integrated approach to legislation and institutional structures. This is important for HCW management as, for instance, the thermal treatment of HCRW should not result in excessive air pollution, whilst trying to

reduce the impact on water and soil. On the institutional front there is a need for a stronger demand-driven influence by the health care sector with regards to the type and quality of services being provided by the service industry. There seem to be a lack of suitable environmental standards for controlling the performance and emission from both incinerators and the emerging non-burn treatment technologies.

The process for developing this Policy is based on the "problems" observed within the health care sector, identified among others through the Status Quo Study. The problems were then transformed into "needs", to fulfil the overall vision of the policy, which in turn were guided by the "principles" formulated in the National Waste Management Strategy and the White Paper on Integrated Pollution and Waste Management.

Based on the HCW Management Policy, a more detailed HCW Management Strategy and Action Plan will be developed for Gauteng. This will provide the "how" and "when". By implementing the Policy, Strategy and Action Plans, the sustainability of the results will be assured.

Apart from the HCW Management Policy, Strategy and Action Plans for Gauteng Province, detailed HCW Management Guidelines for a broad spectrum of HCW Management activities will serve as the practical tools for implementing the Strategy. The guidelines will broadly include waste segregation and containerisation, waste collection and transport as well as waste treatment and disposal. In addition to this, a feasibility study, to evaluate various options for service delivery, will be undertaken.

A further component is the development of a HCW Information System (HCWIS). This will be developed with the intention of recording the information required for effective waste management planning and the implementation of sustainable systems, whilst being able to keep track of HCRW movement.

Finally, selected pilot projects will be implemented to develop, test and demonstrate some new concepts introduced to improve the existing HCW management systems.

The Policy is formulated as part of a DANCED-supported project on Sustainable Health Care Waste Management in Gauteng. It should, where applicable, be used at a national level as a blue print for other South African provinces.

The Policy is formulated by Gauteng Department of Agriculture, Conservation, Environment and Land Affairs (DACEL) in co-operation and in full consultation with all key stakeholders. These include:

- Gauteng Department of Health (GDoH)
- Gauteng Department of Transport and Public Works (GDTPW)
- National Department of Health (NDoH)
- Department of Environment and Tourism (DEAT)
- Department of Water Affairs and Forestry (DWAF)
- Danish Cooperation for Environment and Development (DANCED)

- Infection Control Association of Southern Africa (ICASA)
- South African Non- Governmental Organisation Council (SANGOCO)
- National Education and Health Workers Union (NEHAWU)
- South African National Civics Organisation (SANCO)
- South African Society of Occupational Medicines (SASOM)
- South African Bureau of Standards (SABS)
- Gauteng Association of Local Authorities (GALA).

2. What is Health Care Waste and where is it generated?

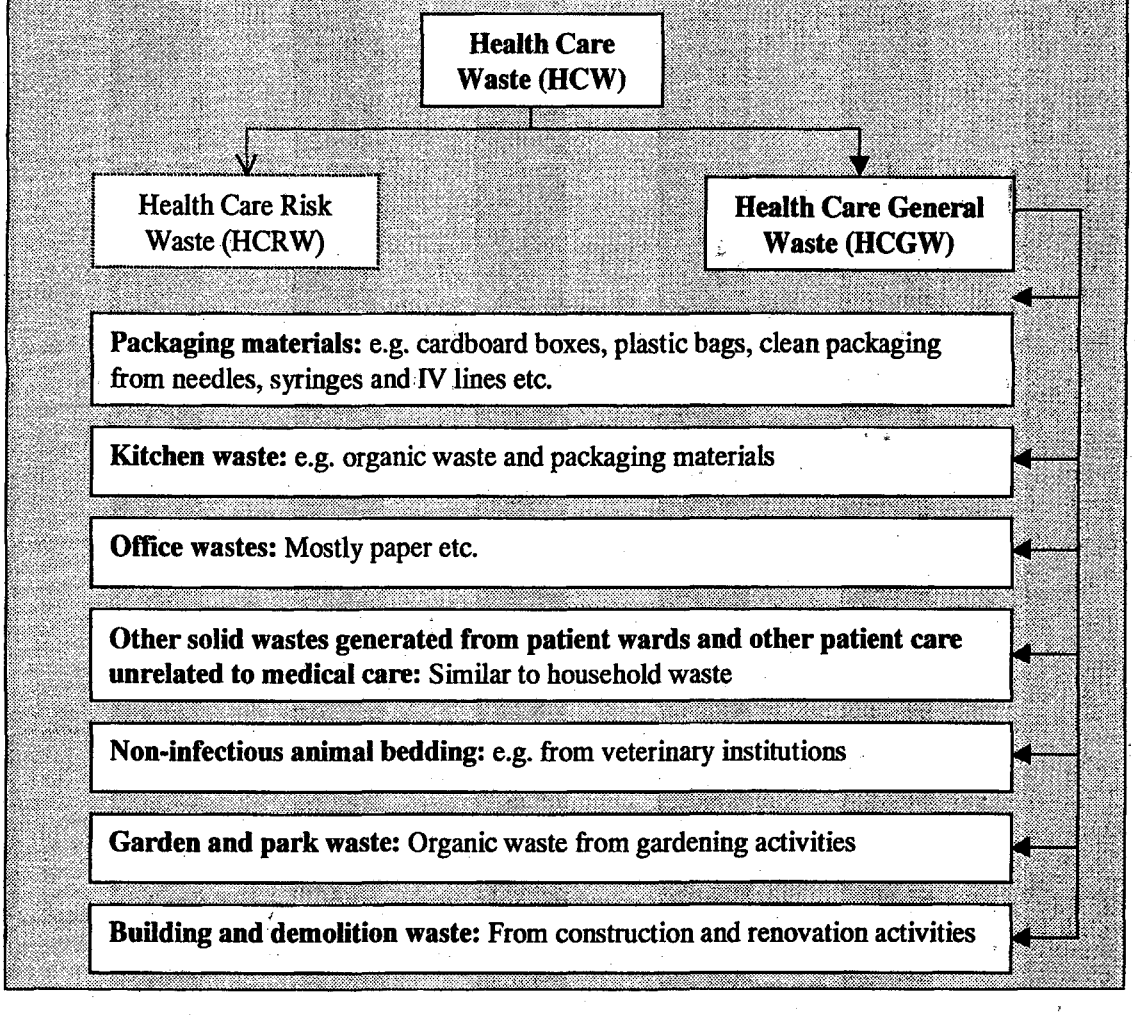
The HCW Policy covers all types of waste from health care facilities, excluding animal carcasses and radioactive waste[3]. (Radioactive waste is addressed by the National Nuclear Regulator Act, 1999 (Act 47 of 1999)) The policy covers HCW through its complete life cycle from generation, through treatment, to disposal. It covers HCW generated not only from major sources like hospitals and clinics, but also from minor sources of HCRW like laboratories, general practitioners and dentists etc.

The Health Care Waste (HCW) stream is divided into Health Care General Waste (HCGW) and Health Care Risk Waste (HCRW).

2.1 Health Care General Waste

[3] The problems created by radioactive HCRW are to be confronted through co-operative governance with other agencies such as the National Nuclear Regulator

Box 2.1: Examples of Health Care General Waste

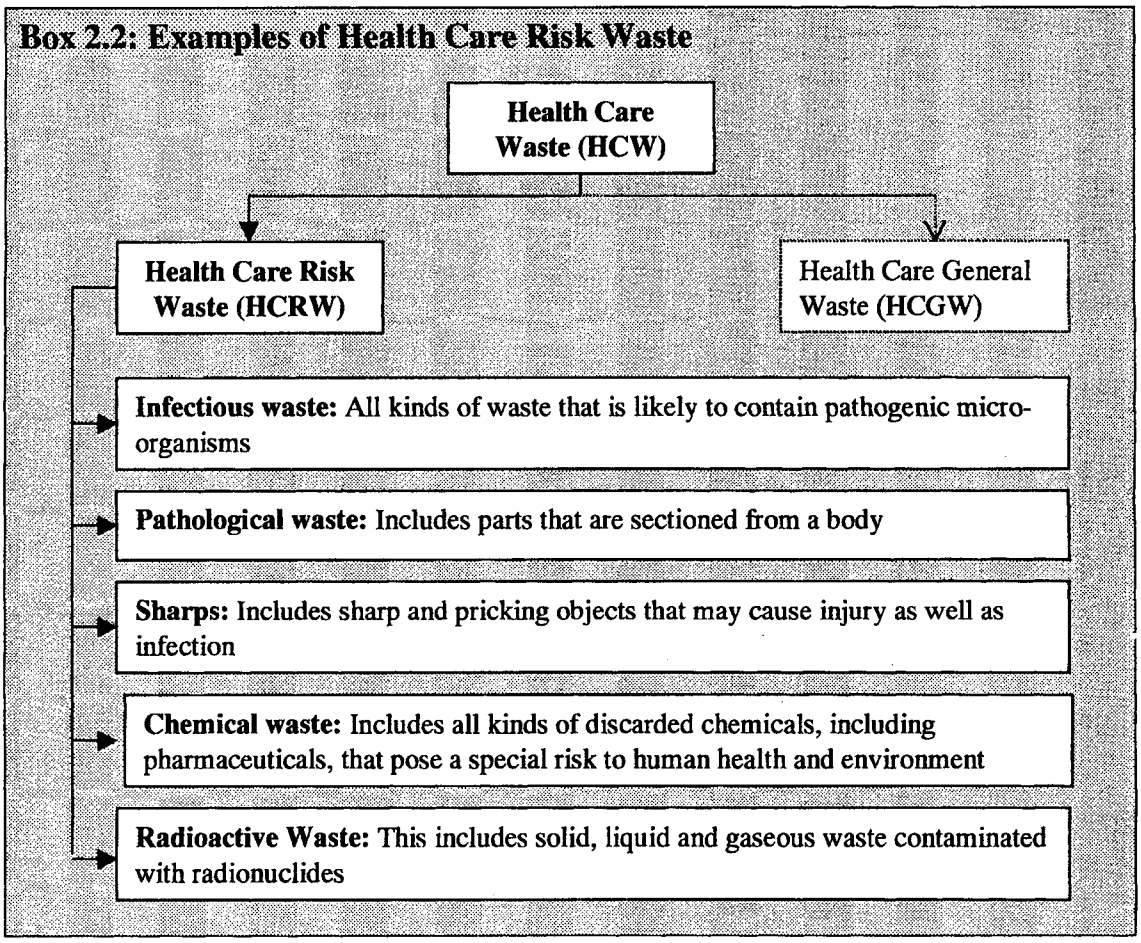


Health Care General Waste (HCGW) is the non-hazardous component of HCW from health care facilities. It includes many of the same substances as domestic waste. HCGW is generated during the administrative and housekeeping functions of health care facilities - among others - and may include a number of recyclable materials.

2.2 Definition of Health Care Risk Waste

Health Care Risk Waste (HCRW) is considered to be the hazardous component of Health Care Waste (HCW) generated in both large and small health care facilities. HCRW has the potential to create a number of environmental, health and safety risks, depending on the particular type of HCRW, the way it is handled, as well as the way in which exposure takes place.

Box 2.2: Examples of Health Care Risk Waste



In **Box 2.2** the five different categories of health care risk waste are defined and examples given of the most commonly found components.

Three of the components of HCRW may be infectious (infectious waste, pathological waste and sharps), but since pathological waste and sharps have additional features, they constitute a separate component.

2.3 Health Care Risk Waste generators

The sources/generators of HCRW include a range of different institutions within the health care sector, and the type of HCRW generated corresponds to the service provided. The sources can be divided into two distinct groups: major and minor generating sources, based on their contribution towards the overall HCRW stream.

Box 2.3 Definition of Major and Minor HCRW Generators:

For the purpose of this policy, the following definitions will be applied:

Major generators: Health Care Facilities or similar, generating more than 10 kg of HCRW per day (cf. Box 2.2 for examples)

Minor generators: Health Care Facilities or similar generating up to 10 kg HCRW per day (cf. Box 2.2 for examples)

The Policy focuses on the major HCRW sources as, in Gauteng, some 600 existing major sources of HCRW were found to contribute about 90% of the HCRW stream whilst the 9 700 minor sources of HCRW identified were found to contribute about 10% of the HCRW stream. The HCRW sources were identified as follows:

Box 2.4: The HCRW Generators

Major Generators (90% of HCRW stream in Gauteng)	Minor Generators (10% of HCRW stream in Gauteng)
Major Generators (600 sources)	**Minor Generators (9700 sources)**
Hospitals: Owned and operated by provincial government, the private sector, the defence force and mines.	**Laboratories:** Private and public pathology laboratories as well as research laboratories.
Clinics: Owned and operated by provincial government, local government, the private sector and industries' including day-care clinics.	**Pharmaceutical industry:** Pharmaceutical manufacturers and outlets.
Blood transfusion services: Blood banks and its associated laboratories.	**HC practitioners:** Doctors, dentists, specialists and allied practitioners like acupuncturists, chiropractors and various therapists etc.
	Veterinary Services: Veterinary hospitals and veterinary surgeons.
	Specialised institutions: Psychiatric hospitals, rehabilitation centres, prisons, old age homes, hospices, mortuaries
	Private homes: Private health care treatment, domestic health care, home nursing.

With the duty of care principle being entrenched in the NWMS, health care facilities have the primary responsibility of ensuring that the waste generated at the respective facility, is treated and disposed of in an environmentally sound manner, whilst meeting the relevant occupational health and safety requirements.

3. Need for Change

3.1 What are the problems?

The following list of typical problems identified, is organised according to the flow of the HCW from its origin at the health care facility to its final disposal. These problems were identified during the Status Quo Study, subsequent site visits and discussions with various stakeholders:

Box 3.1: The typical HCRW management problems identified in Gauteng.

The following categories of problems were identified for HCRW management in Gauteng:

- **Awareness and Training:**
  - Limited HCW awareness and HCW Management training
- **Segregation:**
  - Poor segregation of HCW
  - Poor health care-facility infrastructure design
- **Internal HCW management Equipment:**
  - Poor HCW management equipment design
  - Inappropriate handling of HCRW containers
- **Tendering and Contracting:**
  - Inappropriate pricing system for service delivery
- **Safety and Health:**
  - Appropriate Personal Protective Equipment (PPE) not used
  - Inadequate response to needle stick injuries (e.g. inoculation and retroviral treatment not provided effectively or not available) This sounds as if inoculation and retroviral treatments do not work properly when they are given – i.e. that there is a problem with the medicines.)
- **Storage:**
  - Inappropriate internal and external storage procedures
  - Inappropriate / insufficient external HCRW storage facilities
- **Transportation:**
  - Poor / inappropriate off-site transport equipment
  - Poor handling during collection and transport
- **Record-keeping and Reporting:**
  - Inappropriate / no HCRW recording system
  - No reporting procedures in place
- **Treatment Facilities:**
  - Inappropriate storage procedures at treatment facilities
  - Poor siting of HCRW incinerators considering the present operational standards
  - Poor HCRW treatment facility design
  - Ineffective operation of HCRW treatment facilities;
- **Disposal of Residues:**
  - Unsafe and environmentally inappropriate disposal of HCRW incinerator ash
- **Enforcement, Permitting and Monitoring:**
  - Inadequate enforcement of guidelines and standards
- **Inadequate capacity of public agencies**
  - Lack of resources
  - Insufficient guidelines

3.2 What are the Needs?

3.2.1 Environmental Needs:

Inappropriate handling, storage, transport, treatment and disposal of HCRW pose a risk of pollution to the soil, water or air. At the same time they also creat a health risk to both humans and animals. The HCRW Policy will therefore provide for the movement of waste to be monitored from beginning to end, with an effective tracking system to ensure that all components of the HCW management system meet the required environmental standards. Clear identification of containers will make it possible to assess the HCRW generation rates for the respective activities performed in health care facilities.

To ensure environmentally sound HCRW management, that the HCRW processes from generation to final disposal, should be environmentally sound. For example, it is believed that there is generally a lack of compliance with the DEAT air emission guidelines, as most incinerators probably exceed the maximum permissible emission limits on substances like acidic gases and heavy metals. The lack of legislated emission standards is not sustainable, and therefore calls for immediate action. There is a need to stop the disposal of untreated HCRW at landfills due to mis-handling as well as stopping the mis-placement of certain types of anatomical waste.

Box 3.2: Environmental needs identified for HCRW Management:

The following environmental needs were identified for HCRW management in Gauteng:

- The proper design of HCRW containers to prevent spillage
- The development and enforcement of a uniform labelling and colour coding system to effectively mark, record and track waste
- The prevention/limitation of HCRW spillage inside and outside health care facilities during handling, storage, transport and treatment; and to immediately remove spillage that may have occurred
- The provision of sufficient appropriate storage facilities at health care and treatment facilities to prevent HCRW from being exposed to the elements during storage
- To ensure that, as a point of departure, all incinerators are brought in compliance with the DEAT emission guidelines or are discontinued
- To ensure that acceptable ambient air quality contributions are achieved by limiting emissions and securing the adequate dispersion of flue gasses
- To introduce control systems and /or the provision of sufficient training to prevent the overloading of incinerators
- To ensure correct disposal of incinerator ash
- To ensure all facilities in operation are permitted and in compliance with the required standards
- To allow for the upgrading or closure of non-compliant facilities, thus reducing the number of point sources of pollution
- To secure sufficient compliant treatment capacity at affordable rates
- To set appropriate norms and standards for non-burn technologies
- To ensure a uniform reporting system is introduced and maintained
- To ensure a uniform monitoring of operational parameters to control pollution
- To encourage the use of alternative treatment technologies where appropriate.

3.2.2 Occupational Health and Safety Needs:

The occupational health and safety needs relate to the different parties that may be affected either directly or indirectly. The parties directly affected by HCRW are the health care professionals as well as HCRW service providers both inside and outside health care facilities. Other persons that may be affected by HCRW are patients and visitors to health care facilities, as well as members of the public that may be contact with HCRW after it has been removed from the health care facility premises.

The Occupation Health and Safety Act and Regulations (Act 85 of 1993) covers a wide spectrum of responsibilities and aspects that are to be attended to by both the employer and the employees.

Box 3.3: Occupational health and safety needs identified for HCRW Management:

The following occupational health and safety needs were identified for HCRW management in Gauteng:

- To ensure that the design and use of HCRW containers will prevent injuries and infection of workers, patients and visitors
- To ensure that re-usable containers are effectively sterilised and handled before use
- To provide suitable HCW storage areas with effective security and access control that will prevent containers from being placed inside wards or where it they are accessible to both patients and visitors while protecting containers against the elements
- To prevent the prolonged HCRW storage resulting in the release of odours and possible pathogens
- To prevent injuries by minimising the manual handling of HCRW containers
- To ensure access to safe and sheltered HCRW storage facilities for internal transport of HCRW
- To ensure effective access control at incinerators to prevent unauthorised entry
- To ensure that appropriate Personnel Protective Equipment (PPE) is supplied to protect workers
- To ensure that inoculation is provided to all workers that may be exposed to HCRW and that details on the treatment programme are recorded
- To ensure that retroviral treatment is effectively applied to all persons that may have been infected by HCRW and that details are recorded.

3.2.3 Organisational Needs

One of the possible reasons for the low environmental standards of treatment facilities is the relatively large number of small, on-site incinerators that are based on technology that is often more than 30 years old, together with the inadequate training provided to the operators of these incinerators. The Status Quo Feasibility Study found the regional approach to be cost effective, whilst at the same time reducing the number of point sources of pollution. It revealed that such regionalisation of the HCRW treatment facilities would be beneficial.

Together with regionalisation, the principle of proximity should be enforced to minimise the distance between the point of HCRW generation and the treatment plant and to control the movement of HCRW across provincial borders.

There is a need to register all parties involved in the HCRW generation and transportation as well as treatment and disposal with the appropriate professional bodies or regulating authorities. Ongoing reporting by the parties involved is also required.

Finally, clarification of the roles and functions of the three tiers of regulating authorities is important - not only for the authorities, but also for the HCRW management industry.

Box 3.4: Organisational needs identified for HCRW Management:

The following organisational needs were identified for HCRW management in Gauteng:
The need to:

- Develop and implement an effective registration and reporting system. This needs to be done together with the implementation of a corresponding and validated system in the affected local and provincial authority
- Have sufficient regulatory authority capacity, with trained staff to receive, audit, control and manage the registrations and reporting submitted by the HCW management industry in terms of the HCWIS
- For authorities to have sufficient staff and capacity for the effective enforcement of legislation and permit conditions
- Ensure that all HCRW generators, transporters and treatment facilities record the HCRW handled according to the agreed categories by mass and to ensure that they submit reports and data to the respective professional bodies or regulating authorities as and when required
- Have a management system that will allow for linking permits, permit conditions and annual reports with the registrations
- Have sufficient legal and fiscal tools, as well as the tendering mechanisms for services to provincial health care facilities, to make sure that regionalisation takes place, and that the principles of proximity are adhered to
- For authorities to control the movement of HCRW to provinces where less stringent treatment standards may apply
- Have sufficient data and monitoring tools in place to plan the HCRW available treatment capacity in the short, medium and long term
- Secure the establishment of sufficient compliant treatment capacity with the optimum utilisation of available resources to enable closure of non-compliant facilities.

3.2.4 Equipment and Technical Needs

The standard of the HCRW equipment and the HCRW facilities varies significantly within the health care sector. This results in the inefficient handling and treatment of the waste. It also results in unnecessarily high levels of pollution and an increased risk of injury and infection. This situation prevails in health care facilities, with transporters, in treatment facilities and at the disposal sites.

There is therefore the need to upgrade both facilities and equipment to a standard that will not only make the HCW Management more effective, but will also make it safer and healthier.

Box 3.5: Equipment and Technical needs identified for HCRW Management:

In terms of equipment and other infrastructure there is a need:

- To ensure that health care waste management equipment is designed and selected by health care professionals in accordance with their needs;
- To ensure that trolleys of an appropriate design are supplied for the internal transport of HCRW, which will limit the manual handling of HCRW as well as the risk of damage to containers that could result in spillage;
- To ensure safe and effective access for internal transport of HCRW between the generation areas, intermediate storage areas and collection areas;
- To ensure that appropriately designed HCRW storage facilities are provided at health care facilities as well as at HCRW treatment facilities;
- To ensure that safe and suitable HCRW collection vehicle access and loading facilities with sheltered loading areas are provided at the health care facilities, as well as the HCRW treatment facilities;
- To ensure that HCRW collection vehicles are appropriately designed to allow for securing of containers whilst being transported and for optimum use of available capacity in loading bays;
- To ensure that the required human and physical resources are made available at health care facilities as well as at HCRW treatment facilities;
- To ensure that realistic backup is provided for human and physical resources;
- To ensure that HCRW storage and treatment facilities are appropriately located in accordance with the types of waste treatment processes being used.

3.2.5 Financial Needs

A balance is to be struck between the standard of service to be rendered, and the affordability thereof within the South African context. It is therefore important that sound financial planning be undertaken and that cost effective, safe and environmentally sound systems be implemented to ensure sustainability of the strategy in the long term.

The financial needs stem from a variety of areas and can be grouped as a need by health care facilities to have an effective HCRW management system implemented, the HCRW industry for rendering an affordable yet profitable HCRW management service and, finally, the regulatory authorities for controlling the HCRW industry.

Box 3.6: Financial needs identified for HCRW Management:

The following financial needs were identified for HCRW management in Gauteng:

- To ensure that the standards set are meeting the environmental, health and safety requirements whilst being affordable, to give effect to the constitutional right of all citizens to have access to affordable health care;
- To ensure implementation of an appropriate pricing system for service delivery that will facilitate accurate recording of data for use in HCWIS based on mass (thus also preventing overloading of containers);
- To ensure the financially viable supply, commissioning and operation of environmentally sound regional HCRW treatment facilities that will enable the closure of non-compliant, poorly designed facilities;
- To ensure that sufficient funds are made available to public health care facilities to be able to enter into affordable, yet environmentally sound, HCRW management service agreements;
- To ensure that budgets make provision for sufficient funds for regulating authorities to enable them to undertake the required permitting and auditing functions;
- To ensure that there are sufficient financial incentives for health care facilities to optimise the HCW segregation and use of equipment;
- Ensuring the introduction of more cost effective HCRW management systems that are safe and environmentally sound.

3.2.6 Legislative Needs

Promulgation of just environmental legislation, together with effective enforcement thereof, is the cornerstone for the implementation of an environmentally sound HCRW management system.

There is currently a general lack of legislation with regards to thermal as well as non-thermal treatment of HCRW. DEAT for instance only set air emission *guidelines* rather than promulgated standards and very few incinerators in Gauteng meet the recommended *guidelines* in terms of the maximum permissible emission limits regarding substances such as acid gases, dioxins and heavy metals. When comparing the existing DEAT emission *guidelines* with similar international legislation it becomes evident that the SA *guidelines* are relatively lenient (cf. Box 4.13).

This situation is obviously not sustainable and therefore calls for immediate action, especially since Gauteng is a highly industrialised province with considerable background pollution. Regulation of the emission standards for HCRW treatment facilities is not only required from an environmental point of view, but also from a health point of view.

There is thus a need for the setting of standards for the emissions from thermal and non-thermal treatment technologies, for effective monitoring and reporting systems, for permitting of HCRW transporters and treatment facilities, as well as a fiscal penalty system to be used by authorities against under-performing service providers.

Box 3.7: Legislative needs identified for HCRW Management:

The following legislative needs were identified for HCRW management in Gauteng:

- To promulgate requirements for the registration of HCRW generators, transporters and treatment / disposal facilities;
- To introduce a permitting system for HCRW transporters and treatment / disposal facilities and to secure compliance with the permit conditions;
- For authorities to have clear guidance as to the requirements for permitting conditions and monitoring procedures (performance requirements);
- For authorities to be able to require the effective implementation of external auditing and reporting by permit holders, using approved laboratories and approved monitoring systems (parameters/on-line or grab sampling);
- For authorities to be able to control / direct the flow of HCRW to allow for effective use of available treatment facilities, thereby avoiding establishment of unnecessary treatment capacity. This would include provisions for controlling the transport of HCRW across the provincial borders;
- For authorities to control the import and export of HCRW generated inside/outside of Gauteng for treatment / disposal at facilities in other provinces that are not meeting the same standards;
- For authorities to be able to prescribe the use of a particular reporting and record-keeping system by HCRW generators, transporters and treaters/disposers;
- For authorities to be able to demand adjustment and renewed application for permitting in case of non-compliance or development of the "Best Practical Environmental Option" (BPEO).
- For authorities to be able to decline applications for establishing treatment capacity / facilities if the government assesses that there is sufficient compliant capacity in place.

3.2.7 Information and Awareness Needs

It is believed that many of the existing problems, in part, are related to the limited education and awareness that exists with respect to the risks associated with HCRW, the operational procedures for effective use of HCRW equipment, as well as the practical procedures required to avoid or minimise such risks. The consequential costs to rectify the effects of poor HCRW management are also not recognised.

This not only applies to the personnel at health care facilities, but also at HCRW treatment facilities, disposal sites and amongst HCRW transport companies. In addition to this, patients and visitors also lack awareness regarding this problem. Lastly, there is a need for capacity building amongst health and environment officers.

Hence, there is a need to ensure that these sectors all receive the required information and training as part of a sustainable awareness and capacity building process.

Box 3.8: Information and awareness needs identified for HCRW Management:

The following information and awareness needs are identified for HCRW Management in Gauteng:

- To provide sufficient resources and capacity for development of capacity building and training programmes that will address the limited awareness of the types of HCRW and potential impacts thereof;
- To ensure effective co-ordination of training and awareness programmes within both the public and private sector;
- To improve curricula of training institutions to address HCW management;
- To address the lack of awareness on the ability to purchase environmentally friendly products;
- To develop and publish HCW Management Guidelines that will be used by the health care sector;
- To improve the skills and awareness of planning and enforcement officers;
- To improve the skills and awareness of health care professionals to ensure effective segregation and containerisation of HCW;
- To address the lack of training and awareness for treatment facility operators.

3.2.8 Public Health Needs

The pressure put on the HCRW Management industry is to a large extent directly related to the potential impact of HCRW treatment on public health. Such impacts may be in the form of unobstructed access to HCRW or in the form of poor emissions from HCRW treatment processes.

Box 3.9: Public Health needs:

The following Public Health needs were identified for HCRW Management in Gauteng:

- Reduce emissions from existing poorly performing incinerators for HCRW;
- Avoid disposal of untreated HCRW in the general waste stream, thus reducing the exposure to HCRW for the litter pickers, waste recyclers and waste collectors;
- Avoid access to HCRW for patients, visitors and uninformed workers at all health care facilities;
- Ensure that adequate minimum standards and guidelines are in place to avoid spillage and leakage resulting from the use of unsafe containerisation and packaging of HCRW.

3.3 Priorities for HCW Management in Gauteng

This Policy appreciates the principles and criteria set up in the IPWM White Paper that addresses the development of waste management and environmental protection practices in a broad socio-economic context.

For the development of HCW management in Gauteng these needs have been translated into the following priorities although not necessarily according to any level of importance:

BOX 3.10: Overall Policy Priorities:

- To initially address major HCRW generators, generating 90% of the HCRW stream but accounting for only 10% of the sources, thus addressing the bulk of the problem whilst only using limited public resources. Addressing the minor generators will follow this
- To provide regionalised off-site HCRW treatment facilities that are preferred to smaller on-site treatment facilities in order to make effective use of the economies of scale provide a suitable technical and environmental performance level at an affordable cost, having less point sources of pollution and reducing the public sector burden of auditing and enforcing standards
- To establish environmentally sound HCW management systems for the solid or containerised HCRW stream
- To control, where necessary, the microbial and chemical quality of effluents like contaminated urine, faeces, liquids from laboratories and similar substances containing blood products, pathogens etc. discharged to the sewer by health care facilities
- To establish efficient and safe segregation and containerisation of HCRW by providing appropriate equipment, thus resulting in waste minimisation. Particular recycling and waste minimisation initiatives are to be encouraged, including introduction of environmental purchasing, where there is sufficient capacity to develop, introduce and monitor such initiatives
- In the absence of suitable national HCW Management standards and legislation the provincial government health care facilities, accounting for 50% of the HCRW stream, are to take a leading role in setting minimum performance standards to be rendered by the service industry
- To apply the Polluter Pays Principle, thus resulting in the generator of the HCW paying for all costs associated with sound treatment and disposal of the waste, including emissions to the environment
- For the provincial government to recover cost by charging a levy for environmental monitoring of permit holders, in particular in instances where non-compliance requires increased frequency of inspections etc. The fees levied should reflect actual costs
- To outsource HCW Management services to the private service industry or specialised utilities that can provide the necessary capital and technical know-how, in order for health care facilities to focus on primary activity
- For the permit holder to have the burden of evidence in documenting compliance with regulations and permit conditions, including commissioning and reporting of independent tests and analyses required by the public
- For joint governance by national, provincial and local governments and, in particular, between environmental and health authorities for management of HCW. Hence all tiers and departments of government shall apply good and accountable governance in the service of the public respecting co-governance and co-operation between relevant environmental authorities
- To develop and implement the first generation HCWIS. As there is currently no reliable data available and limited public capacity to operate, maintain and verify reporting of data, the first generation HCWIS shall be simple, whilst meeting the basic data requirements of the government in an affordable and cost-effective way. The basic HCWIS shall however be designed to allow for future elaboration or expansion when needed and justifiable
- To develop user and stakeholder driven solutions to the HCW management requires involvement by all relevant stakeholders in the development of the improved HCW management system. Access to information that is not proprietary or associated with commercial confidentiality is also required.

4. Health Care Waste Management Policy for Gauteng

4.1 Introduction and Policy Options

This chapter presents the Policy and minimum requirements to be adhered to in the Province of Gauteng by the health care sector and, in particular, the HCRW management industry. Most of the issues are interrelated; meaning that implementation of one requirement may depend on the effective implementation of a number of other requirements.

All the requirements are directed towards improving the environmental as well as the occupational health and safety standards, but the instruments to achieve this are of a technical, organisational, financial and legislative nature. Hence, the environmental and the occupational health and safety requirements are only formulated in general terms and refer to the specific proposals for policy instruments.

The figure overleaf briefly introduces the key principal policy options for:

1. Internal Packaging, Collection & Transport;
2. Technology Options;
3. Training & Awareness Options;
4. Co-operation & Driving Forces;
5. Site Options;
6. Finance/ Ownership Options;
7. Affordability Options;
8. Options for Control of Waste Flow;
9. Environment vs. Cost Options.

The figure below contains selected principal strategic options for HCW management as well as demonstrating six principal HCW Management scenarios that could be developed based on the selected principal strategic options. The figure is intended to assist in evaluating the proposed Minimum Requirements and statements presented in this Policy below.

Figure 4.1: ***Principal Strategic Options and Selected Possible Scenarios***

SELECTED PRINCIPAL SINGLE OPTIONS					KEY ISSUES	Selected Scenarios Based on Different Policies					
						A. Public Control and Best Technology	B. Market Force Driven Best Technology	C. On-site Acceptable Technology	D. On-site Low Cost	E. No Burn	F. Absolute Minimum Cost
2 stringed collection only (HCRW & similar to MSW)	Separate sorting/collection of heavy metals, chemicals, etc. (3+ stringed system)	Single use inner bags collected via reusable receptacles	Reusable receptacles that are cleaned/disinfected before reuse	Single use bags, boxes etc.	Internal Packaging Collection & Transport	Any safe sorting syst. & separation if unsuitable for selected treatment technology	Any safe sorting syst. & separation if unsuitable for selected treatment technology	Any safe sorting syst. & separation if unsuitable for selected treatment technology	2 stringed collection only (HCRW & similar to MSW)	Any safe sorting syst. & separation if unsuitable for selected treatment technology	2 stringed collection only (HCRW & similar to MSW)
Haz landfilling	Emerging technologies	Microwave treatment	Autoclaving	Incineration	Technology Options	All complying treatment technologies permitted	All complying treatment technologies permitted	All complying treatment technologies permitted	All complying treatment technologies permitted	Sterilisation + haz Landfill only	Landfilling only
		National/Provincial common minimum training methods and curricula	Group of health care facilities develop common training methods	Each health care facility develops own training methods and curricula	Training & Awareness Options	Any Principal Option and Regional requirements for sorting & packaging	Any Principal Option and Regional requirements for sorting & packaging	Any Principal Option	Any Principal Option	Any Principal Option	Any Principal Option
		Treatment and management driven by private sector	Treatment and management driven by public authorities	Treatment and management driven by waste generators	Co-operation & Driving Forces	Treatment and management driven by public authorities	Treatment and management driven by private sector	Treatment and management driven by waste generators	Treatment and management driven by waste generators	Treatment and management driven by public authorities	Treatment and management driven by waste generators
	Off-site regional plants/large capacity	Off-site/limited capacity	On-site with excess capacity, treating waste from other generators	On-site/limited capacity	Site Options	Large/Regional Facilities Only - Phasing out of existing on-site plants	Large/Regional Facilities Only - Phasing out of existing on-site plants	Replacement of existing on-site plants that do not comply with standards	Maintenance and minor improvements of existing on-site incinerators	Phasing out of all existing plants + new on or off site sterilisation plants	Large/Regional Facilities Only - Phasing out of existing on-site plants
		Private Sector	Public Utility/DPW&T	Health Care Facilities/DPW&T	Finance/ Ownership Options	Private Sector or Public Utility/DPW&T	Private Sector	Health Care Facilities/Outsource to Private Sector DPW&T	Health Care Facilities/Outsource to Private Sector/ DPW&T	Any Principal Option	Private Sector or Public Utility/ DPW&T
Market Forces only	Cost differentiation based on affordability	Cost attenuation schemes	Subsidised	Polluter Pays	Affordability Options	Polluter Pays + Cost Attenuation Scheme	Market Forces Only	Market Forces Only	Market Forces Only	Any Principal Option	Any Principal Option
		Market Forces only	Compulsory use of licensed plants in service area	Environmental Performance Criteria only (air, transport, residues, suitability for landfilling)	Options for control of waste flow	Compulsory use of licensed plants in service area	Environmental Performance Criteria only (air, transport, residues, suitability for landfilling)	Environmental Performance Criteria only (air, transport, residues, suitability for landfilling)	Environmental Performance Criteria only (air, transport, residues, suitability for landfilling)	Any Principal Option	Any Principal Option
		Use of Low Cost Environ- mentally Poor Technologies	Use of Older Environmentally Balances Technologies	Use of Environmentally Best Available Technology	Environment vs. Cost Options	Use of Environmentally Best Available Technology	Use of Environmentally Best Available Technology	Use of Older Environmentally Balances Technologies	Use of Low Cost Environmentally Poor Technologies	Any Principal Option	Use of Low Cost Environ- mentally Poor Technologies

Overall Policy Statements

The overall policy statements presented in Box 4.2 are aimed at addressing the individual problems and needs presented in the sections above, and taking the Vision and the Principles into account.

Box 4.2: Overall Policy Statements for the Management of Health Care Risk Waste in Gauteng

The Provincial Government of Gauteng will apply the following overall provincial policy for HCW management in Gauteng:

Environmental requirements:

- All health care facilities and waste management service providers shall apply adequate technology and procedures to ensure successively reduced environmental impact and, as a minimum, follow the current rules concerning environmental protection;

Occupational health and safety requirements:

- All health care facilities and waste management service providers shall apply adequate technology and procedures to ensure reduced impact on human health and, as a minimum, follow the current requirements concerning occupational health and safety;

Equipment and technical requirements:

- All health care facilities and waste management service providers shall apply adequate technology and procedures to ensure technically efficient and cost-effective health care waste management systems that are environmentally sustainable and safe for the public and staff;

Organisational / Institutional requirements:

- Efficient co-ordination between the responsible authorities shall ensure appropriate overall planning of the resources within the health care waste management sector. Such planning shall be done in consultation with relevant stakeholders.
- Provincial tender requirements shall require improved performance levels from service providers and facilitate a move towards fewer and larger off-site treatment facilities (regionalisation);

Legislative requirements:

- Existing legislation and guidelines for burn and non-burn treatment technologies shall be enforced and strengthened with the ultimate aim being to reach environmental and safety standards that are comparable with those applied internationally, e.g. EU and USA.
- Reporting and registration requirements shall be introduced to ensure relevant information and registration and permitting of treatment facilities, transporters of HCRW and monitoring of performance and quantities;

Financial requirements:

- Financial mechanisms shall be developed and implemented in order to improve the service level as well as the environmental and safety standards at an affordable cost while ensuring that the *polluter pays principle* is being fully applied.

Information and training requirements:

- Adequate information and training shall be provided to the staff of the health care facilities and of the waste management service providers to ensure that the level of awareness supports improved quality of waste management and reduced impact on the environment and public health.

A detailed Provincial HCW Management Strategy and Action Plan will be developed based on the Policy Statements above and the findings of an ongoing HCW Management Feasibility Study.

In the interim period, until the HCW Management Strategy and Action Plan have been developed, consulted and approved, a set of Interim Gauteng Minimum Requirements for HCW Management has been developed in the following chapter.

5. Interim Minimum Requirements for HCW Management in Gauteng

The interim minimum Gauteng requirements for HCW management shall be seen as the provincial minimum requirements that shall be used for planning, permitting and decision making purposes until the Gauteng HCW Management Strategy and Action Plans have been developed, consulted and implemented, among others, via adequate legislation and guidelines.

5.1.1 Interim Environmental Minimum Requirements

The environmental problems within health care waste management are mostly associated with the treatment and disposal of the waste and not so much with the handling of the waste inside the health care facilities. However, the purchase of environmentally "green" products, recycling, waste minimisation and the efficiency of sorting, e.g. the sorting of pharmaceuticals and heavy metal containing products, has a direct impact on the amounts and quality of waste and, hence, on the quality of residual products after treatment, as well as emission levels to the atmosphere.

5.1.1.1 Environmental requirements at health care facilities

Box 5.1: Minimum Requirements for green procurement, waste minimisation, recycling and discharges to the sewer

- Any plastic bag, container or similar item that may, or may not, be incinerated shall be made of PP, alternatively of PE, or any other plastic material that can be demonstrated to produce minimum emissions if incinerated. PVC may not be used for any such items, unless it cannot reasonably be substituted for medical or technical reasons;
- Dyes or colouring agents used for any plastic, paper, cardboard or other materials may not contain heavy metals, chlorinated or other halogenated compounds and shall be of such a nature that minimum pollution is caused when disposed of/incinerated. The burden of proof shall lie with the service provider;
- Disposable receptacles shall be designed with a view to minimising the wastage of materials without compromising on the strength of the containers, thus avoiding excessive disposal of paper, cardboard, plastic, metal etc.
- Materials like glass, paper, cardboard, plastic, metal etc. should be recycled where financially and practically possible, whilst adhering to the high standards of hygiene and risk of infection;
- The Health Care Facility must ensure that discharges to the sewer systems do not contain unacceptable risk of infection by carrying out necessary disinfection of particular types of liquid waste, e.g. from laboratories, blood banks etc.

These requirements shall be observed in the present purchasing procedures by establishing procedures for "green procurement" for provincial departments.

5.1.1.2 Environmental Minimum Requirements for Treatment

These requirements particularly address the need to reduce the emission of pollutants from incinerators as well as the impact on soil and water from the disposal of residues after any type of treatment (sterilisation, disinfection, incineration etc). The requirements are further aimed at setting requirements for verification of the efficiency of the emerging non-burn technologies, whereas impact via discharge of effluents is presently regarded to be a problem or lesser priority as regards to HCW management. Reduction of emissions from incinerators will include a number of requirements that will have technical, financial, organisational and legislative implications as well as require training and information.

Box 5.2: Environmental Minimum Requirements for Treatment (non-burn and burn technologies)

- The Provincial Government shall assess any proposed treatment technology for HCRW on its merits and environmental impact and shall encourage the use of innovative and emerging technologies that can be demonstrated to be suitable;
- The Provincial Government shall ensure that new treatment facilities meet the set environmental requirements via (i) standard- setting in the tenders for HCW disposal from the provincial hospitals and clinics (the provincial health care facilities account for approximately 50% of the HCRW being generated in Gauteng), (ii) regulating the environmental requirements for HCRW transportation, treatment and disposal in Gauteng, and (iii) introduce and enforce a licensing system for HCRW service providers (collection, transportation, treatment and disposal);
- The Provincial Government shall require that existing treatment facilities up-grade to meet the set environmental standards. Existing treatment facilities that cannot be brought to compliance with Gauteng requirements should be decommissioned;
- The Provincial Government shall ensure that HCRW treatment facilities meet the regulated Gauteng minimum requirements for environmental impact;
- Where required, the industry/service providers must allocate additional capital for investment in the required environmental performance level, or discontinue operation. The HCRW generators must equally allocate the necessary financial resources to (i) pay for the services provided by successful tenderers providing the required performance, and (ii) provide the necessary financial/human resources for monitoring and enforcing the required service levels;
- The Provincial Government shall ensure that the organisational and logistical structure of the HCRW treatment industry is planned to operate in the most efficient and environmentally sound manner via, among others, the existing permitting tools, reporting; a HCW Information System and a licensing system for HCRW service providers;
- The Provincial Government shall put legislative measures in place to ensure clear requirements for all operators of HCRW treatment plants;
- The Provincial Government shall enforce the existing provincial legislation, new legislation and policy directed towards HCRW treatment facilities;
- The Provincial Government shall ensure, via the relevant tools, that permit holders provide adequate training of staff responsible for handling the waste at HCRW treatment facilities.

5.1.1.3 Environmental Minimum Requirements for Disposal

The environmental problems associated with disposal of the residue from HCRW treatment are primarily related to the risk of groundwater pollution on landfills that are not meeting the environmental requirements, and illegal storage and dumping of untreated HCRW. The following requirements are to be adhered to:

Box 5.3: Environmental Minimum Requirements for Disposal

- *Introduce quality requirements for residues generated by HCRW treatment facilities*
  - **Incinerator bottom ash/fly ash:** set standards for: (i) maximum allowable percentage of non-combustible matter (ignition loss), and (ii) maximum contents of heavy metals with a view to forcing optimisation of the combustion efficiency and segregation of heavy metal containing components from the waste stream. In the absence of national standards the limits set out in the EU Directive 2000/76/EC of 4 December 2000 will be used for incinerator residues only;
  - **Residues from non-burn technologies:** Set standards for (i) the microbial inactivation achieved to be documented in accordance with the report "Technical Assistance Manual of the State Regulatory Oversight of Medical Waste Treatment Technologies, April 1994" of the State and Territorial Association/USEPA, and (ii) the residues from non-burn technologies must meet the same requirements with respect to the heavy metal content as the incinerator residue.
- *Introduce provisions requiring permit holders to dispose of residues at permitted landfills only.*
  - **Penalties for illegal disposal:** The Provincial Government shall introduce discouraging penalties as well as efficient monitoring via, among others, the HCWIS, to ensure lawful disposal of HCRW residues;
  - **Availability of permitted landfills:** The Provincial Government shall facilitate the availability of sufficient permitted landfill capacity.

5.1.2 Interim Occupational Health and Safety Minimum Requirements

Occupational health and safety problems are encountered all the way through the waste stream. The primary problems are those connected to the risk of direct contact of staff with infectious waste that can lead to risk of infection. However, there are also more traditional occupational health problems like heavy lifts, heat exposure and dust. It is to be noted that this Policy does not in any way supersede the requirements of the Occupational Health and Safety Act or any other Acts.

The initiatives to cope with the occupational health and safety problems are divided according to the flow of the waste.

The initiatives should be:

- To set minimum requirements for the waste handling equipment to be used at provincial hospitals via provincial procurement and tendering procedures in accordance with the provincial HCW Management Guidelines;
- Publish HCW Management Guidelines for segregation, collection, transport, treatment and disposal;
- Incorporate OHS requirements in provincial tenders;
- Incorporate OHS requirements in the permitting conditions for permit holders;
- Health investigation and inoculation programme;
- *On the longer term:* Introduce a compulsory Technical Competence Certificate for key personnel operating HCRW transportation and treatment facilities.

5.1.2.1 Interim Occupational Health and Safety Minimum Requirements at Health Care Facilities

All persons who implicitly make contact with HCRW are potentially at risk of infection or other health risks, although staff handling the HCRW, including nurses, physicians, workers and cleaners at the health care facilities, are most exposed to the aforesaid risk.

Box 5.4: Occupational Health and Safety Minimum Requirements for Health Care Facilities

- Health Care Facilities are to provide the necessary equipment to ensure that the segregation, containerisation and transportation of the waste take place safely (waste collection receptacles such as bins, bags, sharps containers etc. and trolleys)
- Health Care Facilities to provide safe storage facilities for the health care risk waste
- Health Care Facilities and Service Providers to plan to avoid heavy lifts and lifts that bring the personnel in close contact with the waste bags as well as ensure provision of adequate personal protective equipment (PPE)
- Health Care Facilities not to allow recapping of needles
- Health Care Facilities and Service Providers to arrange for inoculation and re-inoculation procedures to be in place including documentation for all staff being at risk of infections, needle stick injuries etc.
- Health Care Facilities and Service Providers to provide for adequate retroviral response to needle stick injuries etc.
- All major generators of HCRW shall develop and make available a Code of Practice for HCW Management, detailing the procedures, use of equipment, division of responsibilities, emergency response procedures, contact persons and other relevant information.

5.1.2.2 Occupational Health and Safety Minimum Requirements for Transportation, Treatment and Disposal

Safe handling of the HCRW during transportation, treatment and disposal is to a large extent dependent on appropriate segregation, containerisation and labelling. There is therefore a clear link and potential sharing of responsibilities between two different institutions in the waste flow. Some of the most prominent requirements are shown in Box 5.5 below.

Box 5.5: Occupational Health and Safety Minimum Requirements for Treatment, Transportation and Disposal

- Health Care Facilities shall ensure that HCRW is correctly and safely containerised to prevent spillage and that the bags/containers are labelled to ensure that the transporters are aware of the contents of the containers they are carrying
- Health Care Facilities shall provide the necessary equipment to ensure that the collection and transportation is occupationally safe and that heavy lifts and lifts that bring the personnel in close contact with the waste bags/cardboard boxes are avoided
- Service Providers and Health Care Facilities shall ensure that the workers are duly informed about the risk of the HCRW and that they have received training on how to handle the waste in a correct way, including emergency response plans
- Service Providers and Health Care Facilities shall ensure that inoculation and retroviral programmes are in place and documented
- Provincial Government shall ensure that the treatment facilities have up-to-date technology to reduce emissions of smoke, dust and heat in the working environment
- Service Providers shall ensure that the operators are duly informed about the risk of the health care risk waste and that they have received training on how to operate the treatment facility.
- Provincial Government shall ensure that occupational safety and health is addressed in the permitting and tendering/procurement process
- Landfilling of untreated HCRW shall be prohibited.

5.1.3 Provision of Equipment and Technical Procedures

This section includes requirements for i) segregation and sorting, ii) internal collection and storage, iii) off-site collection and transportation, and iv) treatment facilities.

5.1.3.1 Segregation and Containerisation Minimum Requirements

The basic requirements for HCW segregation and containerisation are shown in Box 5.6 below.

Box 5.6: Minimum Requirements for Segregation and Containerisation

- All HCW shall be sorted at source;
- Suitable receptacles shall be available for segregation and containerisation at source;
- All HCGW that does not require special treatment shall be disposed of via the conventional domestic waste disposal system, thus minimising the need for costly treatment and the risk of unacceptable emissions resulting from thermal/chemical/mechanical/disinfection treatment;
- No after-sorting of HCRW at any point of the waste stream shall be accepted. Where HCW is poorly sorted and there is any doubt as to the contents of the receptacles/bags, it shall all be treated and disposed of as HCRW;
- A maximum allowable mass of 15 kg is to be adhered to for all containers that are to be lifted manually;
- Manual handling and lifting as well as the number of transfers shall be minimised by use of trolleys, wheeled bins, or similar mechanisms.

Implementation of these basic principles will require:

- Provision of waste collection receptacles of appropriate design for anatomical waste, infectious waste and sharps etc. to ensure that all waste is effectively containerised when segregated;
- Provision of collection and transportation equipment, e.g., trolleys, of appropriate design for internal transportation of waste;
- Establish a uniform colour coding and labelling system to ensure safe waste containerisation once segregated;

Box 5.6 below sets the provincial colour coding system for waste containers that will be used until such time that an overall national colour coding system has been introduced. The provincial colour coding system is based on the current prevailing colour coding used by the health care facilities and service industry in Gauteng. The currently prevailing colour used for HCRW is red, as is the case in, for example, the USA, whereas the WHO recommends yellow, as currently used in Europe. A flexible approach to the use of colours is suggested to allow for cost efficient use of sharp containers available on the international and national markets.

Box 5.6 Minimum Requirements for Colour Coding and Labelling System

A uniform **colour coding system** should be based on the following principles:

- Until such time that a national colour coding system for HCW is in place the following **colour coding system** shall be used;
  - HCRW: **Red** (i) heavy duty plastic bags of min. 80 micron thickness, or (ii) receptacles with **Red** markings;
  - Sharps (HCRW): Preferably **Red** or with significant **red markings** or, alternatively, **Yellow** tamper proof, puncture proof and spill proof containers with indicator for maximum fill level, preferably with transparent indicator of fill level, that can be closed safely and not re-opened once a full container is sealed. Combinations of red/yellow and transparent containers are possible if deemed necessary for particular applications;
  - HCGW: Any colour other than red or yellow can be used. Preference should be given to **black, grey** or **transparent.**

A uniform **labelling system** should be based on the following principles:

- All HCRW containers shall be marked with the following symbol printed in **Red**:
  - The international ISO biohazard symbol (cf. WHO Guidelines and SABS codes);
  - Text clearly identifying the contents as HCRW/Infectious Waste/Medical Waste/Clinical Waste (any of the mentioned terms are acceptable, to allow for cost-efficient use of various existing national and international products);
  - The intended contents of plastic bags may be indicated by the use of colour only, thus allowing for savings by avoiding printing of plastic bags;
- All containers shall be labelled in such a way that the following information is clearly visible:
  - Waste category (Preferably the following additional information should be labelled: (i) date, (ii) name of health care facility, and (iii) department identification (if applicable)).

5.1.3.2 Internal Collection and Storage

The basic requirements for internal collection and intermediate storage are shown in Box 5.7 below.

Box 5.7: Minimum Requirements for Internal Collection and Storage

The Provincial Government of Gauteng will apply the following provincial minimum requirements for any existing and proposed future internal collection and storage of HCRW in Gauteng:

- **Collection from point of generation:**
  - At all major generators (cf. Box 2.3), HCRW shall be collected and removed from wards, departments and similar on a daily basis and brought to a safe and lockable central storage facility until off-site transport and treatment or on-site treatment takes place;
  - At all minor generators (cf. Box 2.3), HCRW shall be stored in such a way that staff, patients, workers and visitors cannot get unauthorised access to it;
  - The HCRW shall not be handled by HCRW management staff unless containerised and no segregation shall be undertaken by such staff;
  - The required PPE shall be used when handling HCRW containers.
- **Internal transport between point of generation and storage facility:**
  - Where the number of containers to be transported justifies it, HCRW shall be transported on purpose- made trolleys with sufficient storage space and designed to avoid spillage, breakage etc.
  - HCRW containers shall not be loaded higher than the design level and no unsecured containers that may drop from trolleys shall be loaded onto the trolleys;
  - Trolleys, when loaded, shall not be left unattended.
- **Storage on Site:**
  - All major generators (cf. Box 2.3) of HCRW shall establish a lockable storage facility protected against the elements, rodents and vectors that has sufficient capacity for 8 days of waste generation;
  - Waste storage times and temperatures shall be controlled to avoid odour problems and the breeding of vectors.

5.1.3.3 Off-site Collection and Transportation

The basic requirements for off-site collection and transportation are shown in Box 5.8 below. It is to be noted that the requirements do not replace the Road Traffic Act for hazardous materials or any other Acts and legal requirements.

Box 5.8: Minimum Requirements for External Collection and Off-site Transport

The Provincial Government of Gauteng will apply the following provincial minimum requirements for any existing and proposed future external collection and transport of HCRW in Gauteng:

- **Registration and liability:**
  - All transporters of HCRW are to register with DACEL;
  - Without affecting the duty-of-care principle for the generator, transporters of HCRW will be held liable for ensuring that all HCRW is treated and disposed of in accordance with the requirements of this policy.
- **Collection from onsite storage area:**
  - The HCRW shall not be handled by HCRW management staff unless containerised and no segregation shall be undertaken by such staff;
  - The required PPE shall be used when handling HCRW containers;
  - HCRW storage areas shall be closed and secured on completion of the collection round;
  - No HCRW containers shall be left unattended.
- **Loading of containers:**
  - Manual handling of containers shall be minimised;
  - Loading/transfer of excessive mass (>15 kg) shall not be carried out manually;
  - Access to HCRW vehicles shall be safe and unobstructed;
  - Containers shall be secured when loaded;
  - Where containers are to be stacked, the maximum allowable stacking height for the particular types of containers shall be adhered to.
- **Vehicle design:**
  - HCRW collection vehicles shall be equipped with spill kits;
  - HCRW collection vehicles shall be clearly marked as transporting HCRW.
- **Reporting and record-keeping:**
  - HCRW shall be weighed and recorded;
  - Data on HCRW transported shall be submitted to DACEL in the required format for capturing on the HCWIS;
  - Existing manifest requirements shall be complied with until such time that a more sophisticated HCRW tracking system is introduced

5.1.3.4 Treatment facilities

The requirements shown in Box 5.9 below shall be applied for the establishment and operation of treatment facilities.

Specifically, the following minimum requirements for flue gas emission shown in Box 5.10 below shall be applied for thermal treatment facilities. For comparison the similar emission standards applied in EU and USA are shown.

Box 5.9: Minimum Requirements for Thermal Treatment Facilities

- **Emissions to the atmosphere:**
  - In the absence of suitable national South African emission standards, and until such time that new national emission standards have been enacted, the *DEAT Emission Guidelines* shall be complied with by all existing and proposed thermal treatment facilities in Gauteng (cf. Box 4.13);
  - The permit holder shall document compliance by use of a combination of independent emission tests and on-line monitoring to be prescribed by DACEL;
  - The permit holder must report cases of non-compliance immediately to DACEL with a report containing the reason for non-compliance and the plan for avoiding future non-compliance. Operations must be stopped and back-up treatment measures introduced until such time that compliance can be demonstrated to be achievable;
  - A standard frequency of tests shall be carried out. However, in case of three successive past tests demonstrating compliance, the frequency can be reduced to a minimum frequency. On-line monitoring of certain parameters may be prescribed.

- **Disposal of residues:**
  - The *DWAF Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste* shall be complied with and residues shall be disposed of or landfilled accordingly. However, as a more operational measure, the Gauteng Provincial Government will require frequent determination of (i) ignition loss and (ii) contents of selected heavy metals. The ignition loss shall not exceed 5 % by weight (cf. Box 4.5);
  - The permit holder shall document compliance by use of a combination of independent emission testing to be prescribed by DACEL;
  - The permit holder must report cases of non-compliance immediately to DACEL with a report containing the reason for non-compliance and the plan for avoiding future non-compliance. If permitted disposal facilities cannot be used according to the DWAF Minimum Requirements, operations must be stopped and backup treatment measures introduced until such time that compliance can be achieved;
  - A standard frequency of tests shall be carried out. However, in the case of three successive past tests demonstrating compliance, the frequency can be reduced to a minimum frequency.

- **Reporting and record-keeping:**
  - DACEL will develop, enact and prescribe a record-keeping and reporting structure that shall be applied by all treatment facilities. The *DWAF Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste* shall be complied with and residues shall be disposed of or landfilled accordingly (cf. Box 4.17).

- **Siting of facilities**
  - In principle, the impact of any HCRW treatment facility on the environment and public health shall be of such nature that the facility could be placed anywhere. However, siting shall take into account any nuisances to the public, neighbouring areas etc. (cf. the EIA procedures) and preferably such facilities shall be placed on or near already compromised land, industrial areas and similar areas.

Box 5.10: Minimum Requirements for Thermal Treatment Facilities

The absence of suitable South African flue gas emission standards Gauteng will enforce the current Emission Guidelines published by DEAT.

It is expected that national government will revise the current lenient requirements of the "1965 Atmospheric Pollution Prevention Act" (Act 45 1965) as it currently does not set any specific limits in the form of maximum allowable concentrations of selected pollutants be standard volume of flue gas.

Schedule 2, Process 39 Atmospheric Pollution Prevention Act 1965 *Guidelines(DEAT)* Proposed Monitoring Frequency (Permit conditions can vary)	Standard (minimum) per year	Type	Units mg/Nm^3	PM/dust	CO	TOC
EU	Dec. 2000	S/M/L*	mg/Nm^3	180	-	-
US	Sept. 1997		mg/Nm^3	12 (4)	Continuous	-
				10	50	10
				53/26/26	36	

Similar requirements for Non-burn treatment technology are shown in Box 5.11 below.

Box 5.11: Minimum Requirements for Non-burn Treatment Facilities

- **Emissions to the atmosphere:**
  - There shall be suitable measures to avoid emission of any pathogens via exhausts or similar;
  - Filter materials and the maintenance and replacement of filters must be documented.
- **Microbial inactivation:**
  - Gauteng requires microbial inactivation based on the *Technical Assistance Manual: State Regulatory Oversight of Medical Waste Treatment Technologies, April 1994*, issued by the *State and Territorial Association* of the USA. Hence the following is required (in brief):
    - Vegetative bacteria, fungi, lipophillic/hydrophilic viruses, parasites and mycobacteria: *≥6 Log_{10} reduction;*
    - B. stearothermophilus spores or B. subtilis spores: *≥4 Log_{10} reduction;*
    - Representative biological indicators, as described in the *Technical Assistance Manual of the State Regulatory Oversight of Medical Waste Treatment Technologies*, shall be used.
- **Disposal of residues:**
  - The *DWAF Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste* shall be complied with and residues shall be disposed of or landfilled accordingly;
  - The permit holder shall document compliance and microbial inactivation by use of a combination of independent tests to be approved by DACEL;
  - The permit holder must report cases of non-compliance immediately to DACEL with a report containing the reason for non-compliance and the plan for avoiding future non-compliance. If permitted disposal facilities cannot be used according to the DWAF Minimum Requirements, operations must be stopped and backup treatment measures introduced until such time that compliance can be achieved;
  - A standard frequency of tests shall be carried out. However, in case of three successive past tests demonstrating compliance, the frequency can be reduced to a prescribed minimum frequency (cf. *State Regulatory Oversight of Medical Waste Treatment Technologies, April 1994).*
- **Reporting and record-keeping:**
  - DACEL will develop, enact and prescribe a record-keeping and reporting structure that shall be applied by all treatment facilities. The *DWAF Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste* shall be complied with and residues shall be disposed of or landfilled accordingly (cf. Box 5.13).
- **Siting of facilities**
  - In principle, the impact of any HCRW treatment facility on the environment and public health shall be of such nature that the facility could be placed anywhere. However, siting shall take into account any nuisances to the public, neighbouring areas etc. (cf. the EIA procedures) and preferably such facilities shall be placed on or near already compromised land, industrial areas and similar areas.

5.1.4 Organisational and Institutional Initiatives

To ensure an efficient organisation and suitable institutional approach the following provincial requirements are set:

Box 5.12: Organisational and Institutional Minimum Requirements

Coordination:

- A *permanent provincial committee shall be established to coordinate activities within health care waste management by the relevant provincial and local government departments* (e.g. DACEL, DoH, DPTR&W and GALA) in particular regarding incorporation of all provincial requirements in procurement and tendering procedures for the health care sector

Resources:

- DACEL, DoH and DPTR&W should be supplied with *adequate managertal and human resources* to develop and implement this Policy and to enforce the existing legislation

Distribution and logistics for treatment facilities:

- The Provincial Government shall encourage a shift towards *fewer, larger and complying treatment facilities* by means of:
  - Provisions set up in the coming provincial tenders for HCW collection and treatment
  - Enact and enforce improved Gauteng environmental requirements, thereby discouraging smaller plants that may be costly to up-grade
  - Establish provisions for charging fees to permit holders and permit applicants based on cost recovery for the provincial government's environmental monitoring and permitting system
  - Establish provisions for requiring permit holders to use and pay for independent laboratories or similar to document compliance with improved environmental standards and microbial inactivation standards and requirements to residual products (self-monitoring and burden of evidence by permit holders)
- The Provincial Government shall in the setting of tenders and in the planning process seek to prevent the forming of private sector monopoly positions for the benefit of cost-efficient HCRW treatment and disposal services to Gauteng

Proximity aspects and Availability of Sufficient Treatment Capacity in Gauteng:

- The Provincial Government shall introduce effective measures to *avoid transport of HCRW in or out of the Province motivated by differences in environmental standards*:
  - Any service provider transporting untreated HCRW to other provinces shall document that the treatment facility, as a minimum, complies with the Gauteng Minimum Requirements for HCW Management.
- Permitted HCRW treatment facilities in Gauteng shall only treat HCRW from other provinces insofar there is excess treatment capacity available compared to the HCRW treatment need in Gauteng.

5.1.5 Regulatory Minimum Requirements

The regulatory problems are connected both to the lack of compliance with the existing legislation and to the lack of adequate legislation to meet the environmental requirements.

Box 5.13: Minimum Requirements for Regulation and Guidelines

Compliance with Environmental Regulations:

- All permitted HCRW treatment facilities shall document compliance in accordance with national legislation and any additionally enacted guidelines or regulations required by the Provincial Government in an Annual Report to be submitted to DACEL. The permit holder will bear all cost of necessary tests etc.
- Existing unlicensed HCRW treatment facilities must apply for permitting as any new facility. However, the siting of existing facilities will, in general, be assumed acceptable, but a dispersion model calculation shall be made for burn-technologies
- Existing unlicensed HCRW treatment facilities that do not comply with existing environmental requirements must submit an EIA application and commit to achieving compliance over a maximum period of 18 months to be set by DACEL. If compliance cannot realistically be achieved within that period the operation must be stopped immediately
- As of 1 January 2004 all HCRW treatment facilities shall be in compliance. Any facility in non-compliance on or after 1 January 2004 shall stop its operation until such time that compliance can be documented.

New regulation

- The Provincial Government shall establish the following provisions for:
  - Lifting the current DEAT Emission guidelines to an actual minimum requirement for Gauteng (cf. Box 5.10)
  - Establishing microbial inactivation standards for non-burn technologies (cf. Box 5.11)
  - Implementation of a HCWIS where all HCRW Service Providers shall report in a prescribed format
  - Establishing a licensing system for all HCRW service providers (transporters, treatment and disposal facilities)
  - Deterring penalty system including provisions for cost recovery for inspections and handling of permit applications
  - Reporting obligations by transporters and treaters/disposers of HCRW (cf. Box 5.14)

Issue Guidelines

- Publish and disseminate HCW Management Guidelines for Gauteng to assist health care facilities and service providers to improve standards and performance of services

Box 5.14: Minimum Requirements for Reporting and Record-keeping on Performance and Waste Quantities

- **Reporting on Waste Quantities:**
  - All existing and future **Transporters of HCRW** shall submit an *Annual Report* to DACEL using a prescribed format that would include, among others, the following information:
    - Monthly and annual accumulated amounts of HCRW collected in kilograms based on actual weighing of 100% of the waste stream;
    - List of Clients Serviced and the annually accumulated amounts for each expressed in kilograms based on weighing;
    - List of permitted /unpermitted treatment and disposal facilities that have received the collected waste, including amounts expressed in kilograms delivered to each facility;
    - Amounts of waste stored for how long, why and where (if any);
    - The Annual Report shall also include any other information prescribed in the format that could include: (i) types, standard and maintenance of equipment, (ii) accidents and other unexpected operational events, (iii) training and capacity development plans/initiatives, and (iv) use of containers and equipment, etc.
    - The information shall be submitted in a prescribed format electronically (email, diskettes or CD-ROM) and in hard-copy.
  - All existing and future **Treatment and Disposal Facilities** for HCRW shall submit an *Annual Report* to DACEL using a prescribed format that would include, among others, the following information:
    - Monthly and annual accumulated amounts of HCRW collected in kilograms based on actual weighing of 100% of the waste stream;
    - List of Clients Serviced and the annually accumulated amounts for each expressed in kilograms based on weighing;
    - List of permitted /unpermitted treatment and disposal facilities that have received any residual products or transfers of waste for other treatment including amounts expressed in kilograms delivered to each facility;
    - Amounts of waste stored for how long, why and where (if any);
    - The Annual Report shall also include any other information prescribed in the format that could include: (i) Estimated environmental impact and emission standards and results of emission tests, (ii) types, standard and maintenance of equipment, (iii) accidents and other unexpected operational events, (iv) training and capacity development plans/initiatives, and (v) use of containers and equipment, etc.
    - The information shall be submitted in a prescribed format electronically (email, diskettes or CD-ROM) and in hard-copy quarterly or as prescribed.
  - All existing and future **Major Generators of HCRW** (cf. Box 2.3-4) shall keep a record of the amounts of waste disposed of and the service providers and facilities used for the waste disposal. Recordings shall be based on weighing (e.g. as stated on invoices from service providers). Major Generators (cf. Box 2.3-4) of HCRW shall keep the records for at least five full calendar years and shall submit the information to the authorities if required.

The reporting on waste quantities and the reporting on performance indicators may be separated into two separate reporting structures using different formats.

5.1.6 Requirements for Financial Minimum Requirements

Naturally, the availability of public funds is limited and there is an ever-present need for minimizing the costs of providing an acceptable and efficient public service. It is the province's intention to improve the cost-effectiveness and the service level for HCRW disposal in parallel, thus ensuring that the health care facilities receive the required service level at an acceptable price that corresponds to the service rendered.

In general, it is the policy of the Province that the service of collecting and disposing HCRW from provincial health care facilities is best outsourced to specialised service providers having the necessary experience and skills to render an effective service.

For this purpose the actions shown in Box 5.15 below are required.

Box 5.15: Minimum Requirements for Financial Initiatives

- Allocation of necessary funds for inadequately serviced health care facilities, thus allowing implementation of acceptable HCR management systems that comply with the Gauteng Minimum Requirements for HCRW Management;
- Committing health care facilities, via financial monitoring systems, to introduce effective source segregation that minimises the costs of disposing of HCRW by avoiding disposal of non-infectious waste (HCGW) via the systems provided for HCRW;
- Developing and investigating the various financial and budgetary initiatives that can make the health care waste management at the provincial health care facilities more efficient and environmentally sound.

5.1.7 Awareness, Information and Training Minimum Requirements

There is obviously an urgent need for more information and training to ensure improved health care risk waste management. It concerns both information on the risks connected to that particular kind of waste as well as practical training in how to handle the waste.

Required actions within this field are shown in Box 5.16 below.

Box 5.16: Minimum Requirements for Information and Training

- Provision of Provincial HCW Management Guidelines that increase the awareness of health care facilities and service providers as well as provides relevant information to public enforcement officers;
- Development of training plans for Health Care Professionals in the management of HCW;
- Making available training packages and information materials to ensure that all staff involved in health care waste management have access to appropriate training material and information;
- Ensure the level of awareness and skills of existing and emerging companies providing HCRW collection, treatment and disposal services, as well as service providers;
- Provision of training for operators of on-site HCRW treatment facilities operated by the province to improve safety and environmental performance;
- HCRW Management to be introduced in the curriculum of health care professionals at provincial health care educational institutions.

6. Future Initiatives and Strategy Development for HCW

This Policy is seen as the first of a series of co-ordinated efforts by the Provincial Government and its Departments to improve the management of HCRW in Gauteng.

The following key initiatives, which will be developed in full consultation with the relevant stakeholders, are part of the coming provincial efforts to achieve environmentally sustainable HCRW management that is occupationally safe and financially sound:

- Approval of the Gauteng HCW Management Policy by the Provincial Cabinet;
- Development of the Gauteng HCW Management Strategy and Action Plans, based on the Policy, possibly including a Policy Review;
- Development and publishing of the Gauteng HCW Management Guidelines;
- Development and introduction of a compulsory HCW Information System;
- Introduction of minimum technical requirements and performance requirements in the coming tenders for provincial HCRW collection and disposal services that comply with the Policy, Strategy and Action Plan being prepared.

The detailed timing and planning of the implementation of this HCW Management Policy for Gauteng via the Strategy and Action Plans is planned to take place during the coming 12 months in full consultation with all relevant stakeholders. It is assumed that the full implementation of the Strategy will be phased over a period of some years to be determined, among others, in consultation with stakeholders and available resources.

Annexure 1: List of Abbreviations

Cd	Cadmium
CO	Carbon mono oxide
DACEL	Department of Agriculture, Conservation, Environment and Land Affairs
DANCED	Danish Co-operation for Environment and Development
DEAT	Department of Environmental Affairs and Tourism
DoH	Department of Health
DPTR&W	Department of Public Transport, Roads and Works
DTPW	Department of Transport and Public Works
DWAF	Department of Water Affairs and Forestry
EIA	Environmental Impact Assessment
ETD	Electro-thermal deactivation
EU	European Union
GALA	Gauteng Association of Local Authorities
GDACEL	Gauteng Department of Agriculture, Conservation, Environment and Land Affairs
GDoH	Gauteng Department of Health
GDPTR&W	Gauteng Department of Public Transport, Roads and Works
HASA	Hospital Association of South Africa
HCF	Health care facility
HCGW	Health care general waste
HCl	Hydrochloric acid
HCRW	Health care risk waste
HCW	Health care waste
HCWIS	Health care waste information system
HCWM	Health care waste management
HF	Hydro fluoride
Hg	Mercury
HIV	Human Immune Deficiency Syndrome
ICASA	Infection control association of Southern Africa
IP&WM	Integrated Pollution & Waste Management
MSW	Municipal solid waste
NDoH	National Department of Health
NGO	Non-Governmental Organisation
NH_3	Ammonia
NO_x	Nitric oxides
NWMS	National Waste Management Strategy
OHS	Occupational Health and Safety
Pb	Lead
PE	Polyethylene
PM	Particulate matter
PP	Polypropylene
PPE	Personal protective equipment
PVC	Polyvinyl chloride
RSA	Republic of South Africa
SA	South Africa / South African
SANGOCO	South African Non-Governmental Organisation Council
SMLC	Southern Metropolitan Local Council
SO_2	Sulphur dioxide
TOC	Total Organic Carbon
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
US	United States
USA	United States of America
WHO	World Health Organisation
ZAR	South African Rand

NOTICE 3002 OF 2003

GAUTENG DEPARTMENT OF AGRICULTURE, CONSERVATION, ENVIRONMENT AND LAND AFFAIRS

PUBLICATION OF THE GAUTENG WASTE INFORMATION REGULATIONS

DRAFT REGULATIONS

Notice is hereby given that the member of the Executive Council forAgriculture, Conservation, Environment and Land Affairs, Ms Mary Metcalfe intends to prescribe Regulations as published in this Provincial Gazette.

Any person or organization wishing to comment on this proposed notice may lodge written comments or representations on or before 6 October 2003 by postage, facsimile or handing them in at the following address:

Attention: **Ms. Dee Fischer**

(Deputy Director: Integrated Waste Management and Pollution Abatement)

Postal Address: Department of Agriculture, Conservation, Environment and Land Affairs
P.O. Box 8769
Johannesburg
2000

Physical Address: Department of Agriculture, Conservation, Environment and Land Affairs
Diamond Corner Building
68 Eloff & Market Street
Johannesburg
2000

Telephone: (011) 355 1956
Fascimile: (011) 333 0667
E-Mail Address: DeeF@gpg.gov.za

GAUTENG WASTE INFORMATION REGULATIONS

TABLE OF CONTENTS

1. Application

(1) These Regulations apply to all persons who generate, collect, receive, store, transport, treat, dispose of, or handle waste in any form in the Province of Gauteng.

2. Definitions

(i) **'the Act'** means the Environment Conservation Act 73 of 1989;

(ii) **'communal landfill'** meads a disposal site which receives only general waste; which receives less than 25 (twenty five) tons of general waste per day; and which does not have any fatal flaw as defined in the Minimum Requirements for Waste Disposal by Landfill;

(iii) **'competent authority'** means the relevant Provincial Government department responsible for the Environment of the Provincial Government of Gauteng;

(iv) **'disposal site'** means any site used for the accumulation of waste with the purpose of disposing or treatment of such waste;

(v) **'environment'** means the environment as defined in Section 1 of the National Environmental Management Act 107 of 1998, as amended;

(vi) **'general waste'** is waste that because of its composition and characteristics does not pose a significant threat to public health or the environment if properly managed, including but not limited to domestic waste, commercial waste and builders rubble and non- hazardous industrial wastes;

(vii) **'general waste landfill'** means a landfill designed to accept only general waste;

(viii) **'hazardous waste'** means an inorganic or organic element or compound that, because of its toxicological, physical, chemical or persistency properties, may exercise detrimental, acute or chronic impacts on human health and the environment;

(ix) **'hazardous waste landfill'** means a landfill, designed specifically for the disposal or co-disposal of hazardous waste;

(x) **'HCRW'** means health care risk waste as defined in the HCRW Regulations;

(xi) **'HCRW Regulations'** means the Regulations promulgated under *Provincial Government Notice* No. ___ Provincial Government *Gazette* No. ___ dated _____ 2003 as amended;

(xii) **'HOD'** means the Head of the relevant Provincial Government Department responsible for the environment of the Provincial Government of Gauteng;

(xiii) **'landfill site'** means any site, above or below ground, whether permitted or not and including any industrial site, upon which or within which waste is deposited for more than 90 (ninety) days;

(xiv) **'landfill site operator'** means in the case of a landfill site which has been permitted, the permit holder or the responsible person appointed by that permit holder; or in the case of a landfill site which has not been permitted, the person who operates the landfill site;

(xv) **'MEC'** means the Member of the Executive Council responsible for the environment in the Provincial Government of Gauteng;

(xvi) **'Minimum Requirements for Disposal by Landfill'** means the Minimum Requirements for Waste Disposal by Landfill document which forms part of the Waste Management Series (second edition), produced by the Department of Water Affairs and Forestry in 1998, as amended from time to time;

(xvii) **'permit'** means a permit issued to any person by the Minister of Water Affairs and Forestry in terms of section 20(1) of the Act to establish, provide or operate a disposal site. **'permitted'** has the corresponding meaning;

(xviii) **'person'** includes a natural person, a juristic person, an unincorporated body, an association, or an organ of state;

(xix) **'recycle'** means the series of activities, including collection, separation, and processing, by which products or other raw materials are recovered from the solid waste stream for use in the form of raw materials in the manufacture of new products, other than fuel for producing heat or power by combustion;

(xx) **'registration number'** means the unique number allocated by the competent authority to a person in terms of Regulation 6(2) of these Regulations;

(xxi) **'reporting cycle'** means the fixed reporting period, within which a person is required to report to the competent authority as set out in Schedule 5 to these Regulations ;

(xxii) **'these Regulations'** includes all Schedules to these Regulations;

(xxiii) **'transfer station'** means any facility which receives waste for the purpose of temporary storage for no longer than 90 (ninety) days prior to that waste being transferred to a waste treatment facility or a waste disposal facility;

(xxiv) **'waste'** means any matter, whether gaseous, liquid or solid or any combination thereof, originating from any residential, commercial or industrial area, which is:

(a) discarded by any person; or

(b) accumulated and stored by any person with the purpose of eventually discarding it with or without prior treatment connected with the discarding thereof; or

(c) stored by any person with the purpose of recycling, re-using or extracting a usable product from such matter, excluding:

(i) water used for industrial purposes or any effluent produced by or resulting from such use which is discharged in compliance with the provisions of the National Water Act, 1998 (Act No. 36 of 1998) or on the authority of an exemption granted under that Act;

(ii) any matter discharged into a septic tank or French drain sewerage system in compliance with the National Water Act;

(iii) building rubble used for filling or levelling purposes;

(iv) any radio-active substance discarded in compliance with the provisions of the Nuclear Energy Act, 1999 (Act No. 46 of 1999);

(v) any minerals, tailings waste-rock or from activities at a mine as defined in section 1 of the Minerals Act, 1991 (Act No. 50 of 1991); or residue stockpile as defined in section 1 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002); and

(vi) ash produced by or resulting from activities at an undertaking for the generation of electricity under the provisions of the Electricity Act, 1987 (Act No. 41 of 1987);

(xxv) **'waste generator'** means any person, whose acts or processes produce waste;

(xxvi) **'waste information system'** means the information system established in terms of these Regulations;

(xxvii) **'waste stream'** means a continuous or, if not continuous, regular flow of waste from an industry, activity, process or group;

(xxviii) **'waste treatment facility'** means any facility which uses any method, technique, or process designed to change the character or composition of any waste so as to eliminate or reduce its potential for causing pollution, and risk to health, and to eliminate or reduce its impact on the environment;

(xxix) **'waste transporter'** means any person who transports waste between a waste generator, a waste treatment facility, a transfer station or a waste disposal facility, but does not include a person transporting waste from one point within a premises to another point within that same premises, or a

person transporting less than 5 kilograms of waste per day calculated as a monthly average.

3. Establishment of waste information system

(1) The competent authority must, as soon as reasonably practicable, establish a waste information system for the Gauteng Province.

(2) The waste information system shall comprise of at least a register of the information submitted in terms of these Regulations, in a format which is accessible to the public, and which, amongst other things, facilitates an on-line search for information pertaining to waste in the Gauteng province.

4. Objectives of waste information system

(1) The objectives of the waste information system are –

(a) to compile and make available to the public and other organs of state, data and information regarding waste in Gauteng in order to further the protection of the environment and the continuous improvement of integrated waste management throughout the Gauteng Province;

(b) to make information available to organs of state and the public regarding waste for :

(i) education, research and development;

(ii) spatial planning and environment impact assessments;

(iii) public safety and disaster management;

(iv) the development of waste streaming and assessment of the quantities of various waste streams for the monitoring of government strategies with regard to waste management; and

(v) State of Environment Reporting;

(c) to create a uniform reporting method which incorporates secure internet reporting formats, and monitoring intervals, as set out in Schedule 4.

5. Identification

(1) Any person identified in Schedule 1 must comply with the registration and reporting requirements set out in these Regulations.

(2) The MEC may from time to time identify additional persons under Schedule 1 by notice in the *Provincial Gazette*.

6. Registration

(1) Within the time period specified in Schedule 1 or in any notice published in terms of Regulation 5(2) every person identified in Schedule 1 or in any such notice must register with the competent authority by submitting a duly completed registration form, in the from provided in Schedule 2.

(2) Within 30 (thirty) days of submitting a registration form to the competent authority in terms of sub-regulation (1), the competent authority shall notify the applicant of any defects with the registration form or shall issue the applicant with a registration certificate indicating that person's registration number.

(3) Any person registered in terms of sub-regulation (1) must notify the competent authority in writing within 30 days of any material change to the information contained in the registration form.

(4) Registration shall be valid for 2 (two) years. An application for renewal of the registration must be submitted to the competent authority at least 30 (thirty) days prior to the expiration date of the registration. The application for renewal must be submitted in the form provided for in Schedule 2 to these Regulations.

7. **Reporting**

(1) Any person who is registered in terms of Regulation 6 must , where applicable, submit the information specified in Schedule 4 to the competent authority in the format and at the intervals specified in Schedules 3 and 4.

(2) The MEC may from time to time specify additional information to be reported on or alter the frequency of reporting in terms of Schedules 3 and 4, by notice in the *Provincial Gazette.*

(3) Any person required to submit a report in terms of these Regulations, must submit the first report on the completion of the first reporting cycle after being issued with a registration certificate in terms of Regulation 6(2).

(4) Any person submitting information in terms of these Regulations must verify the accuracy of the information in the report which they submit and must confirm this in writing .

8. **Verification procedure**

(1) The competent authority may from time to time, cause audits to be performed of any person required to report in terms of these Regulations, to evaluate compliance with the provisions of these Regulations and to determine the accuracy and veracity of any information submitted by such person to the competent authority.

(2) The HOD may in general or for a specific purpose appoint a suitably qualified employee as an inspector; or appoint a person, institution or organization as an auditor for the purposes of these Regulations.

(3) An inspector or auditor shall be furnished with a certificate stating that he or she has been appointed in general or for a specific purpose as an inspector or auditor, as the case may be, for the purposes of these Regulations.

(4) An inspector or auditor may, subject to the provisions of his or her appointment, for the purposes of these Regulations:

(a) at any time during working hours and with reasonable prior notice enter any premises in or upon which:

(i) any process or operation as contemplated in these Regulations is being carried out or performed; or

(ii) the records with regard to the process or operation are kept;

(b) examine and take samples of any substance or any component or material in or upon the premises concerned suspected to contain any waste;

(c) at any time demand from any person that he there and then or at a time and place fixed by the said inspector or auditor produce to him or her any book, notice, record, list or other document which is in the possession or custody or under the control of that person or any other person on his behalf;

(d) examine a book, notice, record, list or other document referred to in paragraph (c) and make copies thereof or extracts therefrom or request that they be made, if it relates to information required to be reported on in terms of these Regulations and require from a person referred to in paragraph (c) an explanation of any record or entry therein, and seize such a book, notice, record, list or other document if in his opinion it may afford evidence of any offence in terms of these Regulations; and

(e) with regard to any matter which he or she is investigating, question any person whom he or she finds in or upon the premises referred to in paragraph (a) or whom he or she on reasonable grounds suspects to be or to have been employed in or upon such premises.

9. **Access to information**

(1) Information contained in any waste information system established in terms of these Regulations must be made available to the public by the competent authority, subject to any limitations imposed by law, and to the payment of a reasonable charge determined by the competent authority.

(2) Within 1 (one) year of the date of publication of these Regulations and thereafter on an annual basis, the competent authority shall publish, in the *Provincial Gazette* and on the competent authority's official web site, a list of all persons registered in terms of these Regulations; the capacity in which they are registered; and such additional information as the competent authority determines.

10. **Penalties**

(1) Any person who fails to register with or report to the competent authority in terms of these Regulations or who submits a false report or contravenes any other provision of these Regulations shall be guilty of an offence and on conviction shall be liable to a fine not exceeding R25 000 (twenty five thousand Rand) or to imprisonment for a period of 6 months or to both such fine and imprisonment.

11. **Title and commencement**

(1) These Regulations shall be known as the Waste Information Regulations, and shall come into force on a date fixed by the MEC by notice in the *Provincial Gazette*.

SCHEDULE 1
PERSONS IDENTIFIED IN TERMS OF REGULATION 5

1. The following persons are required to comply with the provisions of these Regulations, within the time periods specified:

(1) **HCRW generators, HCRW transporters, HCRW transfer stations, HCRW treatment facilities, and HCRW disposal facilities:**

(a) Within 90 (ninety) days of promulgation of these Regulations every person who generates more than 10 (ten) kilograms per day of HCRW calculated as a monthly average must comply with the provisions of these Regulations.

(b) Within 90 (ninety) days of promulgation of these Regulations every person who transports more than 5 (five) kilograms per day of HCRW calculated as a monthly average must comply with the provisions of these Regulations.

(c) Within 90 (ninety) days of promulgation of these Regulations, every person who operates a HCRW transfer station must comply with the provisions of these Regulations.

(d) Within 90 (ninety) days of promulgation of these Regulations, every person who operates a HCRW treatment facility must comply with the provisions of these Regulations.

(e) Within 90 (ninety) days of promulgation of these Regulations, every person who operates a HCRW disposal facility must comply with the provisions of these Regulations.

(2) **Landfill operators:**

(a) Within 90 (ninety) days of promulgation of these Regulations, every person who operates a GLB+, GLB -, GMB+ or GMB- landfill site, as contemplated by the Minimum Requirements for Disposal by Landfill, must comply with the provisions of these Regulations;

(b) Within 180 (one hundred and eighty) days of promulgation of these Regulations, every person who operates an H:H or an H:h landfill site, as contemplated by the Minimum Requirements for Disposal by Landfill must comply with the provisions of these Regulations;

(c) Within 180 (one hundred and eighty) days of promulgation of these Regulations, every person who operates a communal landfill site, must comply with the provisions of these Regulations.

(3) **Other waste transport operators:**

(a) Within 90 (ninety) days of promulgation of these Regulations every person who transports more than 5 (five) kilograms per day of hazardous waste must comply with the provisions of these Regulations.

SCHEDULE 2
REGISTRATION FORM IN TERMS OF REGULATION 6

	Gauteng DACEL waste information system registration form for HCRW generators			
1	**Name:**			
2	☐ New Registration	☐ Renewal of Registration	☐ De-registration	
	☐ Tertiary Hospital	☐ Regional Hospital	☐ District Hospital	☐ Clinic
	☐ Community Health Centre	☐ Private Hospital	☐ Private Clinic	☐ Other
3	**Postal address:**			
4	**Physical address:**			
5	**E-mail address:**			
6	**Contact person and alternate contact person and designation of such contact persons:**			
7	**Telephone: ( )**		**Fax: ( )**	
8	**Latitude:**		**Longitude:**	
9	**Date:**		**Signature:**	
10	**For official use:**		**Registration no:**	

	Gauteng DACEL waste information system registration form for HCRW transporters	
1	**Name:**	
2	**Postal address:**	
3	**Physical address:**	
4	**E-mail address:**	
5	**Contact person and alternate contact person and designation of such contact persons:**	
6	**Telephone: ( )**	**Fax: ( )**
7	**Date:**	**Signature:**
8	**For official use:**	**Registration no:**

	Gauteng DACEL waste information system registration form for HCRW transfer stations
1	**Name:**
2	**Postal address:**
3	**Physical address:**
4	**E-mail address:**

5	**Contact person and alternate contact person and designation of such contact persons:**	
6	**Telephone: ( )**	**Fax: ( )**
7	**Date:**	**Signature:**
8	**For official use:**	**Registration no:**

	Gauteng DACEL waste information system registration form for HCRW treatment facilities	
1	**Name:**	
3	**Postal address:**	
4	**Physical address:**	
5	**E-mail address:**	
6	**Contact person and alternate contact person and designation of such contact persons:**	
7	**Telephone: ( )**	**Fax: ( )**
8	**Permit number (if applicable):**	**Capacity (kg/hr):**
9	**Latitude:**	**Longitude:**
10	**Date:**	**Signature:**
11	**For official use:**	**Registration no:**

	Gauteng DACEL waste information system registration form for HCRW disposal facilities	
1	**Name:**	
3	**Postal address:**	
4	**Physical address:**	
5	**E-mail address:**	
6	**Contact person and alternate contact person and designation of such contact persons:**	
7	**Telephone: ( )**	**Fax: ( )**
8	**Permit number (if applicable) :**	
9	**Latitude:**	**Longitude:**
10	**Date:**	**Signature:**
11	**For official use:**	**Registration no:**

	Gauteng DACEL waste information system registration form for landfills	
1	Type of landfill: Communal, GLB+, GLB-, GMB+, GMB-, H:h, H:H, Other: _____	
2	Access to weighbridge: On-site, Public weighbridge less than 1 kilometre away, no weighbridge,	
3	Ownership and use: Public, Private for public use, Industrial site for private use Permitted, Other: _____	
4	Name:	
5	Postal address:	
6	Physical address:	
7	E-mail address:	
8	Contact person and alternate contact person and designation of such contact persons:	
9	Telephone: ( )	Fax: ( )
10	Permit number (if applicable):	Area (square meters) :
11	Latitude:	Longitude:
12	Date:	Signature:
13	For official use:	Registration no:

	Gauteng DACEL waste information system registration form for hazardous waste transporters	
1	Name:	
2	Postal address:	
3	Physical address:	
4	E-mail address:	
5	Contact person and alternate contact person and designation of such contact persons:	
6	Telephone: ( )	Fax: ( )
7	Date:	Signature:
8	For official use:	Registration no:

SCHEDULE 3
REPORTING REQUIREMENTS IN TERMS OF REGULATION 8

Person	Registration required	Reporting required
HCRW generators, HCRW transfer stations, HCRW treatment facilities and HCRW disposal facilities:		
HCRW generator	Yes	Not required
HCRW transporter	Yes	Quarterly reporting in the prescribed form set out in Schedule 4 on the total weight per month of HCRW removed from Gauteng for treatment / disposal in another province. Quarterly reporting in the prescribed form set out in Schedule 4 on the total weight per month of HCRW transported to treatment / disposal facilities within the Gauteng province.
HCRW transfer station	Yes	Quarterly reporting in the prescribed form set out in Schedule 4 on the total weight per month of HCRW received per month for storage; and total weight of HCRW stored
HCRW treatment facility	Yes	Quarterly reporting in the prescribed form set out in Schedule 4 on the total weight per month of HCRW received for treatment whether generated in Gauteng or in another province.
HCRW disposal facility	Yes	Quarterly reporting in the prescribed form set out in Schedule 4 on the total weight per month of HCRW received for ultimate disposal, whether generated in Gauteng or in another province.
Landfill operators:		
H:H and H:h landfills	Yes	Quarterly reporting in the prescribed form set out in Schedule 4 on the total weight of waste per month received for disposal whether generated in Gauteng or in another province. Quarterly reporting in the prescribed form set out in Schedule 4 on the total weight per month of

Person	Registration required	Reporting required
		waste removed from the landfill for other disposal, recycling or treatment.
GLB+; GLB -; GMB+; and GMB - landfill	Yes	Quarterly reporting in the prescribed form set out in Schedule 4 on the total weight of waste received for disposal whether generated in Gauteng or in another province. Quarterly reporting in the prescribed form set out in Schedule 4 on the total weight per month of waste removed from the landfill for other disposal, recycling, composting or treatment.
Communal landfill	Yes	Quarterly reporting in the prescribed form set out in Schedule 4 on the total weight per month of waste received for disposal whether generated in Gauteng or in another province. Quarterly reporting in the prescribed form set out in Schedule 4 on the total weight per month of waste removed from the landfill for other disposal, recycling, composting or treatment.
Other waste transport operators:		
Hazardous waste transporters	Yes	Quarterly reporting in the prescribed form set out in Schedule 4 on the total weight per month of hazardous waste removed from Gauteng for treatment / disposal in another province. Quarterly reporting in the prescribed form set out in Schedule 4 on the total weight per month of hazardous waste transported to treatment / disposal facilities within the Gauteng province.

SCHEDULE 4
REPORTING REQUIREMENTS IN TERMS OF REGULATION 8

1. All reports submitted by HCRW transporters, HCRW transfer stations, HCRW treatment facilities, and HCRW disposal facilities in terms of Schedule 3 must be in the form and contain the information set out below.

(1) Reporting frequency, deadline and other requirements:

(a) a report must be prepared every quarter containing the information set out in subsection (2) below, as such, a report must be prepared for the quarter ending March, June, September and December respectively of every year;
(b) a report must be submitted to the competent authority no more than two weeks after the end of each quarter.

(2) Information reporting:

(a) The report must contain at least the following information :
(i) The date (month and year) on which the report is submitted and the period to which it applies;
(ii) The total amount (expressed in kilograms) of waste handled, processed, disposed of, collected or transported (as applicable) for the quarter and monthly totals for each of these for each month within the quarter;
(iii) The waste type(s) handled, processed, disposed of, collected or transported (as applicable) within the quarter and monthly totals of the amount of each type of waste handled, processed, disposed of, collected or transported; and
(iv) The Generator / transporter / transfer station / treatment facility / disposal facility registration number issued in terms of these Regulations.

(3) Waste classification terminology to be used:

(a) The waste information system focuses on HCRW as a whole. No further subdivision of HCRW into sharps, anatomical waste, pharmaceutical waste etc., is required for the waste information system.

(4) Code lists for description of waste:

(a) Where HCRW is required to be weighed in terms of these Regulations the amounts must be reported in kilograms (kg).
(b) Data must be submitted in a compatible format to the system used by the competent authority. The competent authority may publish circulars from time to time regarding the format required of any report to be submitted in terms of this Schedule.

2. **Landfill operators**

(1) Reporting frequency and deadline:

(a) a report must be prepared every quarter containing the information set out in subsection (2) below, as such, a report must be prepared for the quarter ending March, June, September and December respectively of every year;
(b) a report must be submitted to the competent authority no more than two weeks after the end of each quarter.

(2) Information reporting:

(a) The report must contain at least the following information :
(i) The date (month and year) on which the report is submitted and the period to which it applies;
(ii) The total amount (expressed in kilograms) of waste handled, processed, disposed of, collected or transported (as applicable) for the quarter and monthly totals for each of these for each month within the quarter;
(iii) The waste type(s) handled, processed, disposed of, collected or transported (as applicable) within the quarter and monthly totals of the amount of each type of waste handled, processed, disposed of, collected or transported; and
(iv) The Generator / transporter / transfer station / treatment facility / disposal facility registration number issued in terms of these Regulations.

(3) Waste classification terminology to be used:

(a) For waste disposed to landfills the following waste classification types shall be used:
(i) General waste;
(ii) Hazardous waste;
(iii) Solids;
(iv) Liquids;
(v) Sludges; and
(vi) De-listed waste.

(4) Weighbridges:

(a) All hazardous waste landfill sites must report to the competent authority in terms of these Regulations using a weighbridge to generate the required data.
(b) Existing general and communal landfill sites may for a period of 3 (three) years after the promulgation of these Regulations, report to the competent authority in terms of these Regulations using an estimated mass based on densities as specified in Table 1 below. After the expiry of this period, all general and communal landfill sites must make use of a weighbridge to generate the required data.
(c) Densities to be used in calculating the mass based on volume are as follows:

Table 1

Waste Type	**Typical contents/Containerisation**	**Typical Density kilogram/m^3**
Domestic waste Non-compacted	Mixed domestic waste	200
Domestic waste Compacted	Mixed domestic waste in compactor vehicles	400
Mixed Domestic Waste	Contents of closed wheelie bins (e.g. 190-660 litres)	108
	Contents of bags (e.g. 160-240 l.)	95
	Contents of skips (e.g. 6-10 m^3)	70
Organic waste (garden waste and food waste)	In closed plastic containers (190 l.)	250
	In ventilated containers/bags	205
	Contents of compactor vehicles	450
	Organic waste from kitchens for animal fodder	840
Mixed bio-degradable domestic waste	Contents of closed wheelie bins 190-660 litre	60
	Contents of compactor vehicles	400

	Bulky waste in skips	90
	Corrugated cardboard	88
Paper and cardboard	Newspapers and magazines	200
	Office paper (compacted)	475
Other waste	Glass from glass containers	325
	Electronics waste	235
	Batteries	1375
Inert waste	Sand, concrete, bricks and fibre glass	1500
Mixed non-compacted industrial waste	Paper & plastic	150
	Cardboard, gypsum boards, sawdust, textiles, leather	400
	Timber, demolition waste	600
	Casting sand, slag, ashes	1500
Commercial waste - non-compacted	Mixed waste from shops, officers, hospitals, restaurants, parks and garden waste	200
Other waste	Non-specified	1000

3. **Other waste transport operators:**

3.1 **Hazardous waste transport operators**

(1) Reporting frequency and deadline:

(a) a report must be prepared every quarter containing the information set out in subsection (2) below, as such, a report must be prepared for the quarter ending March, June, September and December respectively of every year;

(b) a report must be submitted to the competent authority no more than two weeks after the end of each quarter.

(2) Information reporting:

(a) The report must contain at least the following information:

(i) The date (month and year) on which the report is submitted and the period to which it applies;

(ii) The total amount (expressed in kilograms) of waste handled, processed, disposed of, collected or transported (as applicable) for the quarter and monthly totals for each of these for each month within the quarter;

(iii) The waste type(s) handled, processed, disposed of, collected or transported (as applicable) within the quarter and monthly totals of the amount of each type of waste handled, processed, disposed of, collected or transported; and

(iv) The generator / transporter / transfer station / treatment facility / disposal facility registration number issued in terms of these Regulations.

NOTICE 3003 OF 2003

GAUTENG DEPARTMENT OF AGRICULTURE, CONSERVATION, ENVIRONMENT AND LAND AFFAIRS

PUBLICATION OF THE GAUTENG HEALTH CARE WASTE MANAGEMENT REGULATIONS

DRAFT REGULATIONS

Notice is hereby given that the member of the Executive Council for Agriculture, Conservation, Environment and Land Affairs Ms Mary Metcalfe intends to prescribe Regulations as published in this Extra-Ordinary Provincial Gazette.

Any person or organization wishing to comment on this proposed notice may lodge written comments or representations on or before the 6 October 2003 by postage, facsimile or handing them in at the following address:

Attention: **Ms. Dee Fischer**
(Deputy Director: Integrated Waste Management and Pollution Abatement)

Postal Address: Department of Agriculture, Conservation, Environment and Land Affairs
P.O. Box 8769
Johannesburg
2000

Physical Address: Department of Agriculture, Conservation, Environment and Land Affairs
Diamond Corner Building
68 Eloff & Market Street
Johannesburg
2000

Telephone: (011) 355 1956
Fascimile: (011) 333 0667
E-Mail Address: DeeF@gpg.gov.za

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CHAPTER 1
APPLICATION AND DEFINITIONS

1. Application

(1) These Regulations apply to all persons who generate, collect, receive, store, transport, treat, dispose of, or handle health care risk waste in any form in the Province of Gauteng.

2. Definitions

(i) **'the Act'** means the Environment Conservation Act 73 of 1989;

(ii) **'animal'** means only those animals kept at laboratories for the purposes of biological or scientific research and testing;

(iii) **'authorisation'** means the written authorisation issued by the competent authority in terms of Regulation 13 of these Regulations;

(iv) **'CEO'** means the duly authorised person at the health care risk waste generator, transport operator, transfer station, treatment facility or disposal facility, with the power to manage and control the work authorized by that person and to exercise supervision over the other employees in the employ of the facility;

(v) **'competent authority'** means the relevant Provincial Government department responsible for the environment for the Province of Gauteng;

(vi) **'consignment'** means each individual load of health care risk waste, comprising of one or more containers containing health care risk waste, transported by a health care risk waste transporter;

(vii) **'container'** means a bag, or a puncture resistant or leak proof container in which health care risk waste is placed;

(viii) **'controlled combustion treatment'** means any method, technique or process to render health care risk waste to flue gasses and residues, by means of oxidation at high temperatures. This includes oxidation of waste as well as other thermal treatment processes such as pyrolysis gasification or plasma processes insofar as the substances resulting from the treatment are subsequently incinerated;

(ix) **'domestic health care risk waste generator'** means a household or other facility which generates reasonably minimal quantities of health care risk waste, such as plasters, bandages, nappies or sanitary pads, during the course of daily life; but does not include households or facilities which generate health care risk waste such as sharps waste, or households where there is one or more chronically ill persons requiring the use of equipment such as a dialysis machine;

(x) **'enforcement officer'** means any duly authorised representative, director or employee, including environmental health specialists and local health officers, of the competent authority;

(xi) **'genotoxic waste'** includes certain cytostatic drugs, vomit, urine, or faeces from patients treated with cytostatic drugs, genotoxic substances or chemicals which have mutagenic, tetratogenic or carcinogenic properties;

(xii) **'hazardous waste'** means waste that may, by circumstances of use, quantity, concentration or inherent physical, chemical or infectious characteristics, cause ill health or increase mortality in humans, fauna and flora, or adversely affect the environment when improperly treated, stored, transported or disposed of;

(xiii) **'HOD'** means the Head of Department of the competent authority responsible for the environment;

(xiv) **'health care general waste'** means the non-hazardous component of health care waste and can include liquids but excludes any health care waste generated from isolation wards;

(xv) **'health care risk waste'** means waste capable of producing an infectious disease. Health care risk waste includes any of the following:

(a) Laboratory waste, including, but not limited to, all of the following:
  (i) Human or animal specimen cultures from health care and pathological laboratories;
  (ii) Cultures and stocks of infectious agents from research and industrial laboratories;
  (iii) Wastes from the production of bacteria, viruses, or the use of spores, discarded, live and attenuated vaccines, and culture dishes and devices used to transfer, inoculate, and mix cultures; or
  (iv) Waste containing any microbiological specimens sent to a laboratory for analysis;

(b) Human surgery specimens or tissue removed at surgery or autopsy;

(c) Animal parts, tissues or fluids suspected or known to be infected with any zoonotic disease;

(d) Waste, which at the point of transport from the generator's site, or at any point thereafter, contains recognizable fluid blood, fluid blood products and containers or equipment containing blood that is fluid or blood from animals known to be infected with any zoonotic disease;

(e) Waste containing discarded materials contaminated with excretion, exudates, or secretions from humans or animals who or which are required to be isolated by the infection control staff, the attending physician or surgeon, the attending veterinarian, or the local health officer, in order to protect others from highly communicable diseases or from isolated animals known to be infected with any zoonotic disease;

(f) All waste generated in isolation wards;

(g) Infectious liquids;

(h) Sharps waste;

(i) Chemical waste which consists of discarded solid, liquid, and gaseous chemicals, including pharmaceutical waste and other hazardous waste from diagnostic and experimental work and from cleaning, housekeeping, and disinfecting procedures;

(j) Waste containing any radio-active material, or waste produced from patient treatment containing radio active material;

(k) Any waste, specimen, tissue, fluid, liquid, or sharp which resembles health care risk waste as contemplated in Regulation 2 (a) - (j);

(xvi) **'health care waste'** is health care general waste and health care risk waste;

(xvii) **'health care waste generator'** means any person, whose acts or processes produce health care waste and includes, but is not limited to:

(a) Home based care givers and organisations;

(b) Medical and Dental Practitioners, clinics, hospitals, surgery centres, laboratories, research laboratories, and General Practitioners;

(c) Veterinary Practitioners, clinics, and hospitals;

(d) Traditional Healers; and

(e) Tattoo artists; body pierces, undertakers, and embalmers.

(xviii) **'health care waste officer'** means the nominated professional within a health care facility who is responsible for the day-to-day monitoring, management and problem-solving in relation to the management of health care waste, including liaison with health care waste service providers;

(xix) **health care risk waste transfer station'** means any person who receives but does not treat health care risk waste. Health care risk waste transporters who store health care risk waste are also health risk care waste transfer stations;

(xx) **'health care risk waste transporter'** means any person who transports health care risk waste, but does not include any person who transports health care risk waste for the purposes of testing or research, or who transports health care risk waste from one point within a facility to another point within that facility. Health care risk waste generators who transport their own health care risk waste are for the purposes of these Regulations also health care risk waste transporters;

(xxi) **'health care risk waste treatment facility'** means any premises where health care risk waste is treated;

(xxii) **'health care risk waste disposal facility'** means any site or premises including a landfill site used for the ultimate disposal of health care risk waste;

(xxiii) **'home based care'** means the provision of health services by formal and informal caregivers in the home in order to promote, restore and maintain a person's maximum level of comfort, function and health, including care for the duration that that person suffers from an illness or disease;

(xxiv) **'infectious agent'** means any type of micro organism including, spores, bacteria, fungi, parasite, or virus which normally causes, or significantly contributes to the cause of, increased morbidity or mortality of human beings;

(xxv) **'infectious waste'** means health care risk waste which is suspected to contain pathogens and which normally causes, or significantly contributes to the cause of increased morbidity or mortality of human beings, and includes but is not limited to sharps waste and anatomical waste; but excludes baby-nappies and sanitary pads;

(xxvi) **'internal transport'** means the movement of health care risk waste from one point within any premises or facility to another point within that facility;

(xxvii) **'leak proof container'** means a container which is constructed of impermeable material and has a strength sufficient to preclude ripping, tearing, or bursting under normal conditions of usage and handling of the waste-filled container;

(xxviii) **'Local Government'** means the municipal sphere of Government as defined in Section 151 of the Constitution of South Africa Act 108 of 1996;

(xxix) **'major generator'** means a health care risk waste generator that generates more than 10(ten) kilograms per day of health care risk waste calculated as a monthly average;

(xxx) **'Minister'** means the Minister of Environmental Affairs and Tourism;

(xxxi) **"minor generator"** means a health care risk waste generator that generates up to 10(ten) kilograms per day of health care risk waste calculated as a monthly average, but does not include a domestic health care risk waste generator;

(xxxii) **'MEC'** means the Member of the Executive Council responsible for the Environment of the Provincial Government;

(xxxiii) **'non-combustion treatment'** means any method, technique or process for microbial inactivation or for otherwise altering the biological, chemical or physical characteristic of health care risk waste so as to render the health care risk waste unrecognisable and in order to reduce the hazards it presents, and

facilitate disposal by any means of technology which does not constitute controlled combustion treatment, including but not limited to autoclave treatment;

(xxxiv) **'parametric monitoring'** is the monitoring of compliance of a health care risk waste treatment facility with the requirements of these Regulations using operating parameters such as time, temperature, pressure, or size as an indicator of treatment efficiency;

(xxxv) **'pathological waste'** Pathological waste includes tissues, organs, body parts, human foetuses and deceased animals infected with zoonotic diseases, blood, and body fluids, but excludes teeth, hair and nails;

(xxxvi) **'pharmaceutical waste'** means all pharmaceutical products and medicinal chemicals that are no longer usable in patient treatment and which have been returned to patient care areas, and that have become outdated or contaminated or are no longer required, and items contaminated with cytotoxic pharmaceuticals;

(xxxvii) **'performance testing'** is the testing conducted at a non-combustion health care risk waste treatment facility prior to the facility being issued with an authorisation in terms of these Regulations, which testing is carried out using typical and representative health care risk waste or a challenged load;

(xxxviii) **'person'** includes a natural person, a juristic person, an unincorporated body, an association, an organ of state and the MEC;

(xxxix) **'Provincial Government'** means the provincial sphere of government as defined in Section 103 of the Constitution of South Africa, Act 108 of 1996;

(xl) **'puncture resistant container'** means a rigid container which, when sealed cannot be re-opened without difficulty and which is not easily penetrated under normal use;

(xli) **'ROD'** means the written authorisation granted by the competent authority in accordance with Section 22 of the Act;

(xlii) **'reduced monitoring'** is the reduced monitoring regime which may be carried out by a health care risk waste treatment facility after a period of documented compliance with all performance requirements in terms of these Regulations;

(xliii) **'registration number'** means the number allocated by the competent authority to a health care waste generator, transporter, transfer station, or treatment facility in terms of Regulations 14, 18, 22 and 25 respectively of these Regulations;

(xliv) **'regular monitoring'** is the standard monitoring regime as determined in the authorisation and/or ROD for a treatment facility;

(xlv) **'these Regulations'** means these Health Care Risk Waste Regulations promulgated in terms of Section 24 of the Act, and includes all Schedules to the Regulations;

(xlvi) **'sharps container'** means a puncture resistant container which when sealed cannot be opened without great difficulty, and which is spill proof under normal handling conditions;

(xlvii) **'sharps waste'** includes any device having acute rigid corners, edges, or protuberances capable of cutting or piercing, including, but not limited to, all of the following:

(a) Hypodermic needles, syringes, blades, and needles with or without attached tubing; and

(b) Broken glass items, such as Pasteur pipettes and blood vials contaminated with health care risk waste.

(xlviii) **'storage'** means the holding of health care wastes in a manner that does not constitute treatment or disposal of health care risk waste;

(xlix) **'temporary authorisation'** means the temporary authorisation issued by the competent authority in terms of Regulation 12 of these Regulations to a health care risk waste treatment facility;

(l) **'tracking document'** means the health care waste-tracking document specified in Regulation 21 of these Regulations;

(li) **transport'** means the movement of health care risk waste from the point of generation to any intermediate point and finally to the point of treatment or disposal. Transport does not include the movement of health care risk waste from a health care risk waste generator to another health care risk waste generator for the purposes of testing and research, or internal transport;

(lii) **'transport operator'** means a person or enterprise engaged in the transportation of health care risk waste;

(liii) **'treatment'** means any method, technique, or process designed to change the biological character or composition of any health care waste so as to eliminate its potential for causing disease, pollution impact on the environment and risk to health, and **'treat'** has a corresponding meaning;

(liv) **'waste information system'** means the waste information system established under the Waste Information Regulations promulgated in terms of Section 24 of the Act, under *Provincial Government Notice* No. Provincial Government Gazette No. dated 2003;

(lv) **'zoonotic disease'** is a disease which can be spread from animals to humans.

CHAPTER 2
GENERAL REQUIREMENTS APPLICABLE TO HEALTH CARE WASTE

3. General prohibition and duty of care

(1) No person may containerise, collect, transport, sort, recover, treat, store, dispose of or otherwise manage health care risk waste other than in accordance with these Regulations.

(2) No person may containerise, collect, transport, sort, recover, treat, store, dispose of or otherwise manage health care risk waste in a manner that results in or creates a risk of harm to human health or the environment.

(3) Every generator of health care risk waste must take all reasonable measures to prevent any other person from contravening sub-regulations (1) and (2) in relation to that health care risk waste. Such reasonable measures include but are not limited to ensuring that all persons involved with the collection, transport, treatment and disposal of health care risk waste generated by that facility, are aware of and are in compliance with these Regulations.

(4) A major health care risk waste generator must conduct an ongoing training and education program at which each employee of the generator attends on an annual basis, so as to ensure that the principles of waste minimisation and improved environmental awareness are understood and implemented.

(5) No person may manually lift a container of health care risk waste which weighs in excess of 15 (fifteen) kilograms.

4. Segregation

(1) All health care risk waste generators must, at the point of generation and at all times thereafter, segregate health care risk waste from health care general waste. No person shall dispose of health care risk waste together with health care general waste or in any manner other than in the manner prescribed under these Regulations.

5. **Waste minimisation**

(1) A health care risk waste generator must manage the impacts of health care risk waste in its operations by minimising the generation of health care risk waste at source. The HOD may set targets for such minimisation, in general or for a specific institution.

6. **Packaging**

(1) All health care risk waste generators must place solid or semi-solid health care risk waste, such as animal body parts, human body parts, and laboratory wastes in one or more leak proof colour coded containers which clearly indicate the contents of the container.

(2) All health care risk waste packaging must be in accordance with the Minimum Requirements for packaging of health care risk waste, as set out in Schedule 1 to these Regulations.

(3) All health care risk waste generators must mark health care risk waste containers in accordance with SABS Code of Practice 0248: Handling and Disposal of Waste Material within Health Care Facilities, or the international ISO Biohazard symbol, or other recognised symbol, and clearly indicate the contents on the container.

(4) All containers containing health care risk waste generated at a major generator must clearly indicate the name or registration number of that generator. All containers containing health care risk waste generated at a minor generator must clearly indicate that the contents were generated at a minor generator.

(5) All health care risk waste generators must secure leak proof containers and puncture resistant containers when full to prevent leakage or expulsion of contents during handling, storage or transport.

(6) All persons must place health care risk waste in one or more leak proof containers for the purpose of internal transport. All persons must place leak proof containers containing health care risk waste in one or more rigid puncture resistant containers prior to storage or transport from the facility. Rigid puncture resistant containers shall be leak proof, have tight fitting covers, and be kept clean and in good repair.

(7) All persons must place liquid health care risk waste in capped or tightly secured leak proof and spill proof containers.

(8) All health care risk waste generators must, at the point of generation and at all times thereafter, place and keep sharps waste in a sharps container. When full, sharps containers must be tightly sealed to prevent the release of any sharps waste from the container.

(9) All health care risk waste generators, transporters and treatment facilities must minimise the manual handling and lifting of health care risk waste containers by employees by providing alternative means of carrying out these functions.

7. **Internal transport**

(1) No health care risk waste may be transported internally at a major generator except in accordance with the Minimum Requirements set out in Schedule 9 to these Regulations.

(2) Health care risk waste generators must ensure that:

(a) the internal transport of health care risk waste occurs in such a manner so as not to cause a risk of harm to any person;

(b) the manual lifting and carrying of health care risk waste for the purpose of internal transport is avoided, or where it cannot be avoided all together, minimized; and

(2) Every major generator must provide the necessary equipment and implement a manoeuvrable, wheeled system for the internal transport of health care risk waste.

8. Storage

(1) Any pathological waste not treated within 24 (twenty four) hours of generation thereof must be stored at a temperature below –2 (two)°C.

(2) No person shall store sharps waste for more than 6 (six) months.

(3) If a person is unable to control the odour from stored health care risk waste and the odour poses a nuisance, that person must effect more frequent removal.

(4) All health care risk waste generators must ensure that the time period between health care risk waste being collected by a transporter from the generator's premises and that waste being treated, does not exceed 72 (seventy two) hours, excluding any time that the health care risk waste is stored at a temperature below –2 (two)°C: Provided that health care risk waste from minor generators may be stored in a refrigerated area at a transfer station for any reasonable period.

(5) Sub- regulation (4) above does not apply to pharmaceutical waste, which may be stored and treated in accordance with the treatment facilities ROD or conditions attached to an authorisation issued in terms of these Regulations

(6) Any and all areas used for the storage of health care risk waste containers shall be secured so as to deny access to these areas to unauthorized persons. Storage areas must be clearly marked with warning signs on, or adjacent to, the exterior of entry doors, gates, or lids. Storage areas may be secured by use of locks on entry doors, gates, or receptacle lids. Storage areas must be maintained so as to prevent the entry of animals and natural elements and to prevent them from becoming breeding sites or food sources for insect vectors or rodents. For the purpose of this sub-regulation (6) 'animals' includes those animals not kept at laboratories for the purposes of biological or scientific research and testing.

(7) Storage of health care risk waste must be carried out in accordance with the Minimum Requirements set out in Schedule 9 to these Regulations.

9. Treatment

(1) The competent authority may approve any health care risk waste treatment method that renders the health care risk waste unrecognisable and which results in the destruction of pathogenic micro-organisms without posing a risk to human health or the environment, and which meets with all of the requirements for the treatment of health care risk waste prescribed in these Regulations. Any such approval must be reflected in the ROD issued by the competent authority, or in the conditions attached to an authorisation granted to the facility in terms of these Regulations.

(2) Any form of microbial inactivation or other sterilization must take place at a health care risk waste treatment facility which is permitted in terms of the Act, and authorised and registered in terms these Regulations; and must be in accordance with the treatment facility's ROD, or with conditions attached to an authorisation granted to the facility in terms of these Regulations. All health care risk waste treatment facilities must comply with all of the testing requirements and standards set out in Schedules 3 and 4 to these Regulations.

(3) The competent authority may set standards for controlled combustion treatment ash residue for, amongst other requirements, maximum allowable percentage of combustible matter; and maximum contents of heavy metals with a view to forcing optimisation of the combustion efficiency and segregation of heavy metal containing components from the waste stream.

(4) The competent authority may set standards for residues from non-combustion treatment for the microbial inactivation achieved. The residues from non-combustion technologies must meet the same requirements with respect to the heavy metal content as the controlled combustion treatment.

(5) Any controlled combustion treatment at a health care risk waste treatment facility referred to in sub-regulation (2), must be in accordance with the treatment facilities ROD or with

conditions attached to an authorisation granted to the facility in terms of these Regulations; and with the standards set by the competent authority in Schedule 3 to these Regulations. Controlled combustion treatment must be conducted in an enclosed combustion chamber, such as a furnace. No open burning is permitted.

10. **Disposal**

(1) Health care risk waste may only be disposed of once it has been treated by a method approved by the competent authority and in accordance with the requirements of Regulation 9 above.. In exceptional circumstances, and upon application by a generator of health care risk waste or any person authorised and registered in terms of these Regulations, the MEC may grant an exemption in writing to such person from the operation of this sub-regulation (1), for a specified amount of health care risk waste and for a limited period only.

(2) All persons must dispose of treated health care risk waste in terms of the Minimum Requirements set out in Schedule 9, and in a manner, which does not cause harm to the public health or the environment. Health care risk waste, which has been effectively treated, may be mixed with general waste, unless the health care waste is otherwise hazardous because of its toxicity.

(3) All health care risk waste, subject to the exception provided for in sub- regulation (1) above, must be disposed of in the following manner::

(a) For treated health care risk waste that is solid or semi-solid after treatment - disposal at a waste disposal site lawfully permitted in terms of the Act to receive such waste, and where duly authorised staff are available to complete any manifest or tracking document which may be required in terms of these Regulations or the waste information system.

(b) For treated health care risk waste that remains liquid after treatment - discharge to a public sewage system in a manner that complies with all applicable wastewater discharge requirements of the relevant Local Government or the Department of Water Affairs and Forestry.

11. **Health and safety**

(1) All health care risk waste generators must ensure that once health care risk waste is placed in a container, that health care risk waste is not removed from that container for the purposes of decanting to another container, or for any other purpose, until such waste is received by the treatment facility.

(2) In order to avoid any injuries to or infection of people, health care risk waste generators must:

(a) take all necessary measures to ensure that re-usable containers are effectively disinfected before re- use, according to the standards specified in Schedule 2 to these Regulations

(b) provide adequate secure storage areas for health care risk waste;

(c) make provision for minimal manual handling of health care risk waste; and

(c) provide appropriate personal protective equipment to employees handling health care risk waste.

(3) All health care risk waste generators must in addition comply with the provisions of the Occupational Health and Safety Act 85 of 1993 and the Regulations promulgated under that Act.

12. Temporary authorisation

(1) Within 60 (sixty) days from the date on which these Regulations come into force, any health care risk waste treatment facility, which has not been issued with an ROD, must obtain a temporary authorisation. Such temporary authorisation shall be obtained by submitting an application to the competent authority, on forms as set out in Schedule 5 to these Regulations.

(2) On application in terms of sub-regulation (1), the competent authority will issue the treatment facility with a certificate of temporary authorisation, which will be valid for 120 (one hundred and twenty) days from the date on which it was issued.

(3) Within 120 (one hundred and twenty) days of being issued with such a certificate of temporary authorisation, a treatment facility must submit a report to the competent authority, which report shall include at least the results of the tests and other information as set out in Schedule 7 to these Regulations.

(4) The Report must be signed by the CEO of the treatment facility.

(5) In the event that the results of the tests required in Schedule 7 to these Regulations indicate that the applicant does not comply with the Minimum Environmental Performance Requirements for controlled combustion and non-combustion treatment facilities as set out in Schedules 3 and 4 to these Regulations, the applicant's report must include a plan detailing the steps which the applicant will take, and the time frames in which these steps are to be taken, in order to achieve compliance with the abovementioned Schedules.

(6) Within 90 (ninety) days of the date on which the applicant submits a report in terms of sub-regulation (3), the competent authority must decide whether to grant or deny an authorisation in terms of Regulation 13.

13. Authorisations

(1) Within 90 (ninety) days from the date on which these Regulations come into force, or in the case of a treatment facility referred to in Regulation 12, within 90 (ninety) days from the date of submission of the report required in terms of Regulation 12(3), every health care risk waste transport operator, transfer facility, treatment facility or disposal facility must obtain an authorisation from the competent authority. Such authorisation shall be obtained by submitting an application to the competent authority, on forms as set out in Schedule 5 to these Regulations.

(2) Prior to issuing or renewing an authorisation, the competent authority must review, as the case may be, either the report submitted in terms of Regulation 12(3); the compliance history of the applicant under any ROD issued to the applicant; the report submitted by a treatment facility in terms of Schedule 4; or the compliance history of the applicant under any local or provincial laws governing health care risk waste or pollution.

(3) The competent authority must deny an authorisation, or specify additional authorisation conditions, if:

(a) the competent authority identifies that the plan for compliance contained in any report submitted in terms of Regulation 12(3) does not in the opinion of the competent authority, provide adequate means of compliance within a reasonable time frame; or

(b) within the 2 (two) year period preceding the date of application, the applicant has breached any condition contained in a ROD issued to the applicant; or

(c) within the 2 (two) year period preceding the date of application, the applicant has breached any laws or Regulations governing health care risk waste or pollution at a facility owned or operated by the applicant and the breaches or offences demonstrate a recurring pattern of non-compliance or pose, or have posed, a significant risk to public health and safety or to the environment; or

(d) the results of the tests conducted by a treatment facility in terms of Schedule 4 to these Regulations as required in terms of Regulation 9(2), indicate that the required microbial inactivation standards have not been achieved.

(4) In making a decision whether to grant or deny an authorisation, the competent authority must consider, among other factors:

(a) Whether granting the authorisation would result in a risk of harm to public health or the environment; and

(b) The present and future ability of the applicant to safely operate the facility in compliance with the provisions of these Regulations.

(5) The competent authority may impose reasonable authorisation conditions necessary to facilitate the applicant's compliance with the provisions of these Regulations including but not limited to the performance and other tests as set out in Schedules 3 and 4 to these Regulations.

(6) The competent authority must provide the applicant with a written notice of the decision to grant or deny an authorisation or to impose authorisation conditions. Such notice must include a concise statement expressing the competent authority's reasons for granting or denying the authorisation or imposing authorisation conditions.

(7) An authorisation granted under these Regulations shall be valid for 2 (two) years. An application for renewal of the authorisation shall be submitted to the competent authority not less than 90 (ninety) days prior to the expiration date. If the holder of an authorisation fails to make a timely application for renewal, the authorisation shall expire on the expiration date indicated on the authorisation. An authorisation will terminate prior to its expiration date if either of the following occurs:

(a) The holder of the authority sells or otherwise transfers the facility.

(b) The holder of the authority surrenders the authorisation to the competent authority because the holder of the authorization ceases operation.

(8) The competent authority may impose a reasonable fee for the administration of an application for authorisation.

(9) The following persons are exempt from requiring an authorisation as provided for in this Regulation 13:

(a) Any health care risk waste generator receiving from external sources, less than 15 (fifteen)% of the gross waste generated at the receiving facility is exempt from requiring authorisation as a health care risk waste transfer station.

(b) Any person transporting a total of less than 5 (five) kilograms per day of health care risk waste calculated as a monthly average is exempt from requiring authorisation as a health care risk waste transporter.

CHAPTER 3
REQUIREMENTS APPLICABLE TO HEALTH CARE RISK WASTE GENERATORS

14. Registration

(1) Within 90 (ninety) days after the promulgation of these Regulations every major generator must register with the competent authority. Registration must be accomplished by submitting to the competent authority an application, on forms as set out in Schedule 5 to these Regulations.

(2) Every minor generator must register with the Local Government on a date to be fixed by notice in the Provincial *Gazette*: Provided that such notice may designate the time period within which a category or categories of minor waste generators must register with a particular Local Government.

(3) On registration with the competent authority, every major generator will be issued with a registration certificate indicating the facility's registration number.

(4) Registration certificates shall be valid for 2 (two) years. Major generators must apply for renewal of the registration certificate not less than 30 (thirty) days prior to the expiry date of any current registration certificate. Such application must be accomplished by submitting to the competent authority forms as set out in Schedule 5 to these Regulations.

(5) Health care risk waste generators must submit an updated application form within 30 (thirty) days of any of and material change to the information specified in Schedule 5.

(6) The competent authority may impose a reasonable fee for the administration of an application for the issue or renewal of a registration certificate.

15. General requirements

(1) 90 (ninety) days after the promulgation of these Regulations, no major generator shall operate without a valid registration.

(2) Health care risk waste generators must segregate, pack, transport internally and store health care risk waste in strict conformance with Regulations 4, 6, 7 and 8 respectively of these Regulations and with the Minimum Requirements set out in Schedule 9 to these Regulations.

(3) Health care risk waste generators must treat and dispose of health care risk waste in strict compliance with Regulations 9 and 10 respectively of these Regulations and with the Minimum Requirements set out in Schedule 9 to these Regulations; and ensure that any health care risk waste transporter transports health care risk waste generated at the facility to a health care risk waste treatment facility which is permitted in terms of the Act, and authorised and registered in terms of these Regulations.

(4) Health care risk waste generators must not release health care risk waste to a health care risk waste transporter until they have first:

(a) made reasonably certain that the health care risk waste transporter is registered with the competent authority and is in possession of a valid authorisation issued by the competent authority, which information shall be available on the competent authority's official web site; and

(b) obtained a tracking document for each consignment of health care risk waste.

16. Health care waste management plans and audit reports

(1) Upon the first application for renewal of a registration certificate in terms of Regulation 14(4) of these Regulations, each major generator must prepare a Health Care Waste Management Plan, which evaluates objective means to reduce the volume of health care risk waste and the management of all health care waste that is produced by the generator, and submit such plans to the competent authority. The generator must consider the quantity of waste, the hazardous properties of the waste, the safety of its patients and employees, economic costs and savings, and other appropriate factors in developing a plan. At a minimum, each plan must include the requirements set out in Schedule 7 to these Regulations.

(2) Upon each subsequent application for renewal of a registration certificate in terms of Regulation 14(4), each major generator must submit a written audit report to the competent authority. The audit report may be compiled by either an internal or an external auditor, and must include at a minimum the requirements set out in Schedule 7 to these Regulations.

(3) The management plan and audit report must be signed and approved by a duly mandated official of the competent authority and by the CEO of the relevant generator.

(4) The competent authority must review every submitted audit report within a period of 90(ninety) days of the date of signature by the competent authority and the CEO of the relevant generator, whichever is the later.

17. **Home based care and minor generators**

(1) Local Government must provide a service for the safe collection and treatment of health care risk waste.

(2) All Local Governments within Gauteng shall before 1 March 2005 prepare Local Government Health Care Risk Waste Management Plans to achieve and implement such services, and for the management of health care risk waste generated within each Local Government's area of jurisdiction, in accordance with Schedule 6 to these Regulations.

(3) The competent authority must support Local Government in complying with sub-regulation (1), including but not limited to assisting in the development of the plans. The MEC may provide a Guideline for the development of Local Government Health Care Risk Waste Management Plans to assist Local Governments in meeting their obligations.

CHAPTER 4
REQUIREMENTS APPLICABLE TO HEALTH CARE RISK WASTE TRANSPORTERS

18. **Registration**

(1) Within 90 (ninety) days after the promulgation of these Regulations, every health care risk waste transporter must register with the competent authority on forms as set out in Schedule 5 to these Regulations.

(2) Any health care risk waste transporter transporting a total of less than 5 (five) kilograms per day of health care risk waste calculated as a monthly average is exempt from requiring registration as a health care risk waste transporter as provided for in sub-regulation (1).

(3) On registration, the health care risk waste transporter will be issued with a registration certificate indicating the transporter's registration number.

(4) Within 1 (one) year from the date of publication of these Regulations and thereafter once annually, the competent authority shall publish a list of all registered transporters in the Provincial *Gazette*, and on the competent authority's official web site.

(5) Registration shall be valid for 2 (two) years.

(6) Health care risk waste transporters shall apply for renewal of the registration certificate 30 (thirty) days before the expiration date of any current registration certificate. Such application must be accomplished by submitting to the competent authority forms as set out in Schedule 5 to these Regulations.

(7) Within 30 (thirty) days of any material change to the information specified in the form set out in Schedule 5, health care risk waste transporters must submit an updated application form to the competent authority.

(8) 90 (ninety) days after the promulgation of these Regulations, no health care risk waste transporter shall operate without a valid registration in terms of these Regulations.

(9) The competent authority may impose a reasonable fee for the administration of an application for the issue or renewal of a registration certificate.

19. **General transportation requirements**

(1) Health care risk waste transporters must provide and require all persons manually handling containers of untreated health care risk waste to wear clean, protective gloves and coveralls, changeable lab coats, or other protective clothing. The competent authority may require other protective devices appropriate to the type of untreated health care risk waste being handled.

(2) Health care risk waste transporters must transport untreated health care risk waste in leak proof and puncture resistant containers in separate vehicle compartments.

(3) Health care risk waste transporters must not transport untreated health care risk waste in the same vehicle with other waste unless the untreated health care risk waste is contained separately and kept separate from other waste by barriers.

(4) Health care risk waste transporters must transport untreated health care risk waste in strict compliance with the Minimum Requirements as set out in Schedule 9 to these Regulations.

(5) Health care risk waste may only be transported to:

(a) a health care risk waste transfer station permitted in terms of the Act and which is authorised and registered in accordance with these Regulations, for the purpose of consolidating untreated health care risk waste prior to its ultimate transport to a lawfully permitted health care risk waste treatment facility; and

(b) a health care risk waste treatment facility permitted in terms of the Act and which is authorised and registered in accordance with these Regulations.

Provided that any generator intending to transport health care risk waste outside of the Gauteng Province, must obtain the prior written approval of the competent authority. Such approval may only be granted if the generator can show that the health care risk waste will be transported to a waste treatment facility or transfer station which is permitted in terms of the Act and complies with the Minimum Requirements as set out in Schedule 9 to these Regulations.

20. **Reporting and audit reports**

(1) Every health care risk waste transporter must report to the waste information system.

(2) Upon each application for renewal of a registration certificate in terms of Regulation 18(6), every health care risk waste transporter must submit a written audit report to the competent authority. The audit report may be compiled by either an internal or an external auditor, and must include at a minimum the requirements set out in Schedule 7 to these Regulations.

(3) The audit report must be signed and approved by a duly mandated official of the competent authority and by the CEO of the relevant transporter.

(4) The competent authority must review every submitted audit report within a period of 90 (ninety) days of the date of signature by the competent authority and the CEO of the relevant transporter, whichever is the later.

(5) All records must be kept by a health care risk waste transporter for a minimum of 3 (three) years.

21. **Tracking documents**

(1) A health care risk waste transporter must maintain completed tracking documents for all health care risk waste it transports. At the time the health care risk waste transporter receives health care risk waste from any person, the transporter shall provide that person with a copy of the tracking document for that person's health care risk waste records. At the time the health care risk waste transporter releases the health care risk waste to a health care risk waste transfer station or treatment facility, the transporter shall provide that person with a copy of the tracking document for that person's health care risk waste records; and return a copy of the tracking document duly signed by the health care risk waste transfer station or treatment facility to the person from whom the health care risk waste was received.

(2) The transporter must maintain a copy of such tracking documents for a minimum of 2 (two) years. The transporter must submit to the competent authority, upon request, copies of any tracking documents the transporter is required to maintain.

(3) The tracking document shall include, but shall not be limited to the information contained in the form as set out in Schedule 8 to these Regulations.

(4) Any health care risk waste transporter transporting health care risk waste in a vehicle must have a tracking document in his or her possession while transporting the waste. The

tracking document shall be shown upon demand to any employee of the competent authority or any law enforcement officer. If the waste is transported by rail, vessel, or air, the railway operator, vessel operator, or airline must enter on the shipping papers any information concerning the waste, which the competent authority may require.

(5) With respect to waste generated from a major generator, a health care risk waste transporter must, at all times during transit, be able to identify the facility from which a particular container was collected. With respect to waste generated from a minor generator, at all times during transit, a health care risk waste transporter must be able to identify that a particular container was generated at a minor generator.

CHAPTER 5
REQUIREMENTS APPLICABLE TO HEALTH CARE RISK WASTE TRANSFER STATIONS

22. Registration

(1) Within 90 (ninety) days after promulgation of these Regulations, every health care risk waste transfer station must register with the competent authority on forms as set out in Schedule 5 to these Regulations.

(2) Any health care risk waste generator receiving less than 15 (fifteen)% of the gross health care risk waste generated at the receiving facility is exempt from requiring registration as a health care risk waste transfer station as required by sub-regulation (1) above.

(3) On registration, the health care risk waste transfer station will be issued with a registration certificate indicating the facility's registration number.

(4) Within 1 (one) year of the promulgation of these Regulations, the competent authority shall publish a list of all registered health care risk waste transfer stations in the Provincial *Gazette* and on the competent authority's official website.

(5) Registration shall be valid for 2 (two) years.

(6) Health care risk waste transfer stations must apply for renewal of the registration certificate 30 (thirty) days before the expiration date of any current registration certificate. Such application must be accomplished by submitting to the competent authority a form as set out in Schedule 5 to these Regulations.

(7) Within 30 (thirty) days of any material change to the information specified in the form set out in Schedule 5, a health care risk waste transfer station must submit an updated application form to the competent authority.

(8) 90 (ninety) days after the promulgation of these Regulations, no health care risk waste transfer station shall operate without a valid registration.

(9) The competent authority may impose a reasonable registration fee for the administration of an application for the issue or renewal of a registration certificate.

23. Storage

(1) A health care risk waste transfer station shall ensure that all untreated health care risk waste is stored in strict conformance with any ROD issued to the risk waste transfer station; and with the requirements of Regulation 8 of these Regulations.

24. Reporting, record keeping and audit reports

(1) Health care risk waste transfer stations must report to the waste information system.

(2) Health care risk waste transfer stations must maintain, for a minimum of 2 (two) years, and must submit to the competent authority, upon request, copies of the tracking documents for all health care risk waste it receives for storage.

(3) Upon each application for renewal of a registration certificate in terms of Regulation 22(6), every health care waste transporter must submit a written audit report to the competent authority. The audit report may be compiled by either an internal or an external auditor, and must include at a minimum the requirements set out in Schedule 7 to these Regulations.

(4) The audit report must be signed and approved by a duly mandated official of the competent authority and by the CEO of the relevant transfer station.

(5) The competent authority must review every submitted audit report within a period of 90(ninety) days of the date of signature by the competent authority and the CEO of the relevant transfer station, whichever is the later.

CHAPTER 6
REQUIREMENTS APPLICABLE TO PERSONS OPERATING HEALTH CARE RISK WASTE TREATMENT FACILITIES

25. Registration

(1) Within 90 (ninety) days after the promulgation of these Regulations every health care risk waste treatment facility or sterilization plant must register with the competent authority. Registration shall be accomplished by submitting to the competent authority an application, on forms as set out in Schedule 5.

(2) On registration, the health care risk waste treatment facility will be issued with a registration certificate indicating the facility's registration number.

(3) Within 1 (one) year of the date of promulgation of these Regulations and thereafter once annually, the competent authority shall publish a list of all registered health care risk waste treatment facilities in the Provincial *Gazette* and on the competent authority's official website.

(4) The registration certificate shall be valid for 2 (two) years.

(5) Health care risk waste treatment facilities must apply for renewal of the registration certificate 30 (thirty) days prior to the expiration date of any current registration certificate. Such application must be accomplished by submitting to the competent authority forms as set out in Schedule 5 to these Regulations.

(6) Within 30 (thirty) days of any material change to the information specified in the form set out in Schedule 5, a health care risk waste treatment facility must submit an updated application form to the competent authority.

(7) The competent authority may impose a reasonable fee for the administration of an application for the issue or renewal of a registration certificate.

26. General requirements

(1) 90 (ninety) days after the promulgation of these Regulations, no health care risk waste treatment facility shall operate without a valid registration.

(2) Health care risk waste treatment facilities must treat health care risk waste in strict conformance with any ROD issued to the treatment facility, or with the conditions attached to an authorisation issued to the facility in terms of these Regulations; and with Regulation 9 of these Regulations.

(3) All health care risk waste treatment facilities must perform all tests and comply with all standards as set out in Schedules 3 and 4 to these Regulations.

27. Reporting, audit reports and records

(1) Health care risk waste treatment facilities must report to the waste information system.

(2) Upon each application for renewal of a registration certificate in terms of Regulation 25(5), every health care waste treatment facility must submit a written audit report to the competent authority. The audit report may be compiled by either an internal or an external auditor, and must include at a minimum the requirements set out in Schedule 7 to these Regulations.

(3) The audit report must be signed and approved by a duly mandated official of the competent authority and by the CEO of the relevant treatment facility.

(4) The competent authority must review every submitted audit report within a period of 90 (ninety) days of the date of signature by the competent authority and the CEO of the relevant treatment facility, whichever is the later.

(5) Records of the environmental performance test results required by Schedules 3 and 4 to these Regulations must be maintained by the treatment facility for a period of not less than 3 (three) years.

(6) The competent authority may request any health care risk waste treatment facility to carry out independent tests to verify compliance with the requirements for emissions, effluents and residues as set out in Schedule 3 to these Regulations.

CHAPTER 7
ENFORCEMENT

28. Appointment of health care risk waste inspector

(1) The HOD may, in writing, appoint any suitably qualified person as a health care risk waste inspector to perform the functions contemplated in these Regulations.

(2) A health care risk waste inspector must be provided with a certificate of appointment signed by the HOD.

29. Powers and duties of health care risk waste inspector

(1) A health care risk waste inspector may, at any reasonable time and without prior notice, enter or cross a property with the necessary persons, vehicles, equipment and material in order to carry out a routine audit or inspection of any health care risk waste transporter, transfer facility, treatment facility or disposal facility.

(2) A health care risk waste inspector may, at any reasonable time and without prior notice, on the authority of a warrant, enter a property with the necessary persons, vehicles, equipment and material, and perform any action necessary to -

(a) investigate whether these Regulations, or any condition attached to any authority, or any rule or standard adopted in accordance with these Regulations, or any notice or directive issued under these Regulations is being contravened; or

(b) investigate whether any information supplied in connection with these Regulations is accurate.

(3) A warrant referred to in sub-regulation (2) may only be issued by a judge or a magistrate who has jurisdiction in the area where the property in question is situated, and must only be issued if it appears from information obtained on oath or affirmation that –

(a) there are reasonable grounds for believing that these Regulations, any condition attached to any health care risk waste permit or any notice or directive under these Regulations, is being contravened;

(b) there are reasonable grounds for believing that any information supplied in connection with a health care risk waste permit is inaccurate; or

(c) it is necessary to carry out an activity mentioned in sub-regulation (2) and access to that property has been denied.

(4) If a warrant is reasonably likely to be issued if applied for but the delay involved in obtaining a warrant is likely to defeat the object of an inspection in terms of sub-regulation (2), a health care risk waste inspector may enter a property without a warrant.

(5) A health care risk waste inspector entering a property in terms of this sub-regulation must, at the request of any person on that property, identify himself or herself and present a certificate of appointment contemplated in Regulation 28(2).

30. **Duty to assist health care risk waste inspector**

(1) When a health care risk waste inspector enters any property or site referred to in Regulation 29, the operator, owner or manager and each employee performing any work there must assist the health care risk waste inspector, furnish answers to questions and provide any facility that the inspector reasonably requires.

(2) Persons questioned by a health care risk waste inspector under sub-regulation (1) must answer each question to the best of their ability, but no person is required to answer any question if the answer may reasonably be self-incriminating.

31. **Duty to produce documents**

(1) Any person who holds or should hold an authorisation or any other document, including any electronic document, issued or required in accordance with these Regulations, must produce it at the request of the health care risk waste inspector and must-

(a) allow the inspector, for the purpose of the inspection, to remove any articles or objects pointed out by the inspector;

(b) allow the inspection of documents specified by the inspector including the making of copies thereof; and

(c) furnish the inspector, at the inspector's reasonable request, with any information under that person's control.

32. **Powers of health care risk waste inspector to deal with unsafe conditions**

(1) If a health care risk waste inspector reasonably believes that a condition or activity is a threat or may present a reasonable risk to human health or the environment, the inspector may issue a written directive to any person responsible for that condition or activity that –

(a) the activity be restricted or suspended, and the inspector may place conditions on that activity; or

(b) action be undertaken within a reasonable time by the person concerned to remove the threat.

(2) Any person issued with a directive under sub-regulation (1) must take the steps set out in the directive, within the specified period, to rectify the activity or condition referred to in the directive.

CHAPTER 9
OFFENCES AND PENALTIES

33. **Offences and Penalties**

(1) Any person who contravenes or fails to comply with any provision of these Regulations or any condition, notice, order, instruction, directive, prohibition, authorisation, permission, rule, standard, exemption, certificate or document determined, given, issued, promulgated or granted in terms of these Regulations is guilty of an offence.

(2) Any person convicted of an offence in terms of sub-regulation (1) is liable on conviction to a maximum fine of R100 000 (one hundred thousand) or to imprisonment for a period not exceeding 1(one) year, or to both such fine and imprisonment.

34. **Enquiry in respect of compensation for harm, loss or damage suffered**

(1) Where any person is convicted of an offence under these Regulations and -
(a) another person has suffered harm or loss as a result of the act or omission constituting the offence; or
(b) damage has been caused to property or to the environment, the Court may, in the same proceedings -
(i) at the written request of the person who suffered the harm or loss; or
(ii) at the written request of the MEC; and
(iii) in the presence of the convicted person,
enquire without pleadings into the harm, loss or damage and determine the extent thereof.

35. **Award of damages**

(1) After making a determination in terms of Regulation 34(1), the Court may -
(a) award damages for the loss or harm suffered by the person referred to in Regulation 34(1) against the accused;
(b) order the accused to pay for the cost of any remedial measures implemented or to be implemented; or
(c) order that the remedial measures be implemented by the accused.

36. **Director's liability**

(1) Any person who is or was a director of a juristic person at the time of the commission by that juristic person of an offence under these Regulations shall himself or herself be guilty of the said offence and be liable on conviction to the penalty specified if the offence in question resulted from the failure of the director to take all reasonable steps that were necessary under the circumstances to prevent the commission of the offence: Provided that proof of the said offence by the juristic person shall constitute *prima facie* evidence that the director is guilty under this Regulation.

37. **Offences in relation to employer and employee relationships**

(1) Whenever an act or omission by an employee or agent –
(a) constitutes an offence in terms of these Regulations, and takes place with the express or implied permission of the employer or principal, as the case may be, the employer or principal is, in addition to the employee or agent, as the case may be, liable to conviction for that offence; or
(b) would constitute an offence by the employer or principal, as the case may be, in terms of these Regulations that employee or agent will, in addition to that employer or principal, be liable to conviction for that offence, provided that proof of the said offence by the employer, principal or agent, as the case may be, shall constitute *prima facie* evidence that the said person is guilty under this sub-regulation.

38. **Interdict or other order by High Court**

(1) A High Court may, on application by the MEC, grant an interdict or any other appropriate order against any person who has contravened any provision of these Regulations, including

an order to discontinue any activity constituting the contravention and to remedy the adverse effects of the contravention.

39. **Directive to cease activities**

(1) If any person contravenes a condition attached to an authorisation granted in terms of these Regulations, or if in the opinion of the HOD, any person conducts any activity in relation to health care risk waste management or fails to conduct any activity as a result of which human health or the environment is or may be seriously damaged, endangered or detrimentally affected, the HOD may in writing direct such person –
   (a) to cease such activity; or
   (b) to take such steps as the HOD may deem fit to prevent any further harm or damage.

(2) The HOD may also direct the person referred to in sub-regulation (1) to conduct any activity or function at the expense of such person to rehabilitate any damage caused to human health or the environment as a result of the activity or failure referred to in sub-regulation (1), to the satisfaction of the HOD.

(3) If the person referred to in sub-regulation (1) fails to comply with any directive issued under sub-regulation (1) the HOD may take any necessary steps as if he or she were that person and may authorise any other person, on his or her behalf, to take all steps required for fulfilling the purpose as set out in such directive.

(4) Any expenditure incurred by the HOD in the conducting of any function by virtue of the provisions of sub-regulation (3) may be recovered from the person concerned.

40. **Manner of appeal**

(1) An appeal to the Minister or MEC under Section 35(3) of the Act, must be made in writing within 30 (thirty) days from the date on which the notice in terms of sub-regulation 13(6) is received by the applicant indicating that authorisation is denied.

(2) An appeal must set out all the facts as well as the grounds of appeal, and must be accompanied by all relevant documents or copies thereof which are certified as true by a commissioner of oaths.

41. **Commencement**

(1) These Regulations will come into operation on a date fixed by the MEC in the Provincial *Gazette.*

(2) Different dates may be so fixed in respect of different provisions of these Regulations.

SCHEDULE 1

1. **Minimum requirements for packaging for health care risk waste in terms of Regulation 6(2)**

(1) Liners with a capacity of 60 (sixty) litres or more must be at least 80 (eighty) microns in thickness.

(2) Liners with a capacity of less than 60 (sixty) litres must be at least 60 (sixty) microns in thickness.

(3) Liners used as barriers in puncture resistant containers that are at no time removed from such puncture resistant containers, other than for the final treatment of the contents, must be at least 40 (forty) microns in thickness.

(4) All liners and disposable containers must be manufactured from polypropylene or polyethylene polymers; or polymers that cause, at a maximum, equivalent environmental impacts to those caused by polypropylene or polyethylene polymers when disposed by incineration, or treated by means of any available alternative technology.

(5) Final outer packaging used for external transport of health care risk waste from a health care risk waste generator must be puncture resistant and must be able to retain liquids.

(6) Lids used for disposable sharps containers must be secured in such a way that they cannot be reopened once closed.

(7) Lids used for pathological or anatomical waste containers must provide an airtight seal to prevent the emission of odours.

(8) For the purpose of ensuring sufficient tensile strength, the maximum allowable percentage of recycled materials in all liners is 10 (ten)%; Provided that for outer packaging the maximum allowable percentage of recycled materials is 15 (fifteen) %.

SCHEDULE 2

1. Standards for disinfection of reusable health care risk waste containers in terms of Regulation 11(2)

(1) Written operating procedures must be established by any person responsible for disinfecting reusable health care risk waste containers, which procedures shall include approved testing methodologies for relevant biological and other indicators relating to the adequate disinfection of reusable health care risk waste containers for each unit; as well as all pertinent operating parameters.

(2) Adequate disinfection of reusable health care risk waste containers must be monitored by any person responsible for disinfecting such containers, based on swab tests or similar sampling procedures for relevant biological indicators, which tests or sampling must be conducted by a competent person. Such samples must be processed by an accredited laboratory for the following biological indicators:
   (a) Bacterial cultures; and
   (b) Fungal cultures.

(3) The minimum frequency of testing to be conducted in terms of Paragraph 1(2) of this Schedule 2, must be in accordance with the following:
   (a) Initial testing prior to commencement of operations: Daily sample swab tests of disinfected reusable health care risk waste containers for 5 (five) working days;
   (b) Testing during usual operation: Weekly sample swab tests of disinfected reusable health care risk waste containers before dispatch to health care facilities; and monthly sample swab tests of reusable health care risk waste containers after delivery to a health care facility;
   (c) After 4 (four) consecutive months of achieving reasonably adequate levels of disinfection, the test frequency as required by (a) and (b) above, may be reduced to 50 (fifty) %; Provided that should any one sample fail to achieve a reasonably adequate level of disinfection, the frequency levels required by (a) and (b) above must be adhered to.

(4) Any person responsible for disinfecting reusable health care risk waste containers must ensure that a report is compiled quarterly by a competent person regarding the level of disinfection achieved by the facility, based on a reasonable number of representative samples, and on the results of the tests conducted in terms of Paragraph 1(2) of this Schedule 2, which report shall include details of all procedures used.

(5) The reports required in terms of Paragraph 1(4) above must be maintained for a period of 3 (three) years.

(6) The number of swab samples taken for the purpose of monitoring in terms of this Schedule 2 shall be reasonable in relation to the number of reusable health care risk waste containers disinfected per day at the disinfecting facility and shall be determined by a competent person.

(7) The specific area of the reusable health care risk waste container to be used for sampling, as well as the location for intercepting reusable health care risk waste containers for sampling once delivered to a health care facility, shall be determined by a competent person

SCHEDULE 3

1. Minimum environmental performance requirements for controlled combustion treatment facilities in terms of Regulation 9(2)

Note: Although the Department of Environmental Affairs and Tourism's Emission Guideline Standards as expressed in Table 1 below are to be achieved by 1 January 2004 by all controlled combustion treatment facilities, it is intended that the competent authority will over time increase the environmental performance requirements for controlled combustion treatment facilities to the current European Union (EU) Standard. The current EU standards are presented in Table 2 below.

(1) Emissions to the atmosphere:

Table 1

DEAT Emission Guideline Standards (to be met by 1 January 2004)		
Type	Maximum allowable emission to the air from controlled combustion treatment facilities (Daily average values)	Monitoring frequency samples per year Standard (reduced after period of documented compliance)
Units	mg/Nm^3	
PM/dust	180	Continuous
CO	-	Continuous
Dioxin/furan (nanogram) TEQ	0.2	1
HCl	30	Continuous
HF	-	-
SO_2	25	Continuous
NO_x	-	-
NH_3	-	-
Pb, (same for Cr, Be, Ar, As, Sb, Ba, Ag, Co, Cu, Mn, Sn, V, Ni)	0.5	4 (1)
Cd (same for Tl)	0.05	4 (1)
Hg	0.05	4 (1)
Reference Conditions and definitions	11% O_2, 273 Kelvin, 101.3 kPa. All parameters to be defined and measured as in the Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on Incineration of Waste	

Table 2

Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on Incineration of Waste		
Type	Maximum allowable emission to the air from controlled combustion treatment facilities (Daily average values)	Monitoring frequency Samples per year Standard (reduced after period of documented compliance)
Units	mg/Nm^3	
PM/dust	10	Continuous
CO	50	Continuous
O_2	-	Continuous
Water Vapour	-	Continuous
TOC	10	-
Dioxin/furan (nanogram) TEQ	0.1	Every three months for the first year; Two measurements per year thereafter; Can be reduced to once every year provided emissions are below 50% of the emission limit value.
HCl	10	Continuous. (Periodic measurement may be approved by the competent authority provided the operator can prove emissions cannot exceed the prescribed emission limit).
HF	1	Continuous. (May be omitted if treatment ensures that HCl meets the emission limit value. Periodic measurement may be approved by the competent authority provided the operator can prove emissions cannot exceed the prescribed emission limit).
SO_2	50	Continuous. (Periodic measurement may be approved by the competent authority provided the operator can prove emissions cannot exceed the prescribed emission limit).
NO_x	200	-
NH_3	10	-
Pb, (same for Cr, Be, Ar, As, Sb, Ba, Ag, Co, Cu, Mn, Sn, V, Ni)	0.05	Every three months for the first year; Two measurements per year thereafter
Cd (same for Tl)	0.05	Every three months for the first year; Two measurements per year thereafter
Hg	0.05	Every three months for the first year; Two measurements per year thereafter

Reference Conditions and definitions	11% O_2, 273 Kelvin, 101.3 kPa. All parameters to be defined and measured as in the Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on Incineration of Waste

(2) Discharges to sewer systems

(a) Any discharge of effluent must be approved by the relevant Local Government authority.

(b) No effluent from the treatment process may be discharged unless it complies with the standards set by the Department of Water Affairs and Forestry.

(3) Quality of residues from controlled combustion treatment plants

(a) Residues shall be rendered reasonably unrecognisable as consisting health care risk waste.

(b) All hypodermic needles, blades, glass containers, tubes, syringes and any other single object in the waste shall be broken and rendered unusable.

(c) The loss of ignition for the residues after treatment shall be a maximum of 5 (five) % by weight.

SCHEDULE 4

1. Minimum environmental performance requirements for non-combustion (alternative) treatment facilities in terms of Regulation 9(2)

(1) Emissions to the atmosphere:

(a) All non-combustion treatment facilities must take adequate measures to avoid emissions of any pathogens or odours via exhausts, vents or similar outlets.

(b) Information relating to the use of all filter materials and the maintenance and replacement of such filters at the treatment facility must be recorded in writing by the treatment facility.

(2) Microbial inactivation standards which must be achieved at all times by all non-combustion treatment facilities are as follows:

(a) Vegetative bacteria, fungi, lipophillic/hydrophilic viruses, parasites and mycobacteria: ≥ 6 *Log$_{10}$ reduction;*

(b) *G. stearothermophilus* spores or *B. subtilis* spores: ≥ 4 *Log$_{10}$ reduction;*

(3) Representative biological indicators:

(a) Representative biological indicators shall be used to indicate microbial inactivation standards. One or more of the following organisms must be used for test purposes:

Vegetative Bacteria:

Staphylococcus aureus (ATCC 6538)
Pseudomonas aeruginosa (ATCC 15442)

Fungi:

Candida albicans (ATCC 18804)
Penicillum chrysogenum (ATCC 24791)
Aspergillus niger

Viruses:

MS-2 *Bacteriophage* (ATCC 15597 – B1)

Mycobacteria:

Mycobacterium terrae
Mycobacterium phlei
Mycobacterium bovis (BCG) (ATCC 35743)

Spores:

Geobacillus stearothermophilus (ATCC 7953) [1]
Bacillus subtilis (ATCC 19659)

(b) The competent authority may from time to time amend the list of approved representative biological indicators as determined in Paragraph 1(3)(a) above, by notice in the Provincial *Gazette*.

(c) Details of any organisms, including but not limited to species and cultures, which are not listed in Paragraph 1, which are to be used for testing in terms of this Schedule 4, must be submitted by the facility in writing to the competent authority for approval at least 1 (one) month prior to testing. Such approval must be granted or denied by the competent authority within 1 (one) month of receiving a submission from an applicant.

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[1] Strain derived from ATCC #7953 has been reclassified and is now called *Geobacillus stearothermophilus* (formerly *Bacillus stearothermophilus*). The reclassification is a name change only. The strain and its use remain the same.

2. **Performance testing requirements**

(1) For the purposes of this Schedule 4, the responsible person shall be an independent analyst from an accredited testing laboratory or a health practitioner licensed in terms of the Occupational Health and Safety Act, 1993,as amended.

(2) Prior to an authorisation being issued to a non-combustion health care risk waste treatment facility in terms of Regulation 13 of these Regulations, the following performance tests must be complied with:

(a) The responsible person must conduct a performance test at the facility in order to demonstrate, using representative health care risk waste, that is, selected general waste that has the approximate composition of health care risk waste, together with indicator organisms; that the facility is able to achieve the microbial inactivation standards specified in Paragraph 1(2) above.

(b) The parameters for parametric monitoring for effective performance, including but not limited to temperature, maximum throughput, and time; must be determined by the responsible person. The facility must thereafter operate within these parameters, unless it is demonstrated during the performance test that these parameters need to be adjusted.

(c) Once it has been demonstrated that the facility is able to meet the microbial inactivation standards as set out in Paragraph 1(2) of this Schedule 4, using representative waste, health care risk waste must be used to conduct a further performance test in order to demonstrate that the facility is able to meet the microbial inactivation standards specified in Paragraph 1(2) of this Schedule 4.

(d) The performance test must thereafter be carried out daily for 4 (four) consecutive days using representative health care risk waste, as determined by the responsible person. For the duration of this performance test a reference sample must be included with each run, that is, a sample that has undergone the same preparation, transportation and storage as the entire batch, but not treatment, in order to determine the microbial inactivation standards achieved during treatment.

(a) The performance test must demonstrate that the facility can satisfy the microbial inactivation standards as set out in Paragraph 1(2) of this Schedule 4 on a challenge load, that is, a load that is considered to offer a considerable challenge to the facility. The operator, in collaboration with the responsible person, shall determine what constitutes a challenge load, and prior approval must be obtained from the competent authority in writing at least 1 (one) month prior to the challenge load being tested.

(3) During the performance testing phase for batch processes, each load shall be tested against the bacterial spores *B. subtilis* or *G. stearothermophilus;* and for continuous processes, the process shall be tested every 2 (two) hours against the bacterial spores *B. subtilis* or *G. stearothermophilus*, in terms of the microbial inactivation standards specified in Paragraph 1(2) of this Schedule 4.

(4) The results of testing during this performance testing phase must be submitted as a report to the competent authority. The report should at a minimum:

(a) Provide details of the batch and tube numbers for each vial used;

(b) Record the date and time of each test run;

(c) Provide the results of the tests on each microbial species;

(d) Provide details of the sampling, storage and testing procedures used; and

(e) Provide an evaluation of the results obtained, together with a comparison of results obtained in any previous report.

3. Regular testing programme

(1) Upon the issue of an authorisation to the treatment facility in terms of Regulation 13 of these Regulations, the following minimum regular testing requirements must be complied with by the facility for a minimum of 12 (twelve) months after the date of issue of such authorisation:

(a) The system must be tested daily against bacterial spores *B. subtilis* or *G. stearothermophilus*, in terms of the microbial inactivation standards specified in Paragraph 1(2) of this Schedule 4.

(b) The system must be tested at least once a month, by a responsible person as listed in paragraph 1(3)(a), against mycobacteria, including *M.Bovis* BCG, *M.phlie* or other equivalent mycobacteria; and for *B. subtilis* or G. *stearothermophilus*, in terms of the microbial inactivation standards specified in Paragraph 1(2) of this Schedule 4, using vials prepared by an accredited laboratory.

(c) Should the results of any test conducted as part of the regular testing programme specified in this Paragraph 3, indicate that the facility is unable to achieve the microbial inactivation standards specified in Paragraph 1(2) of this Schedule 4, the facility must immediately conduct a second test. Should the results of the second test also indicate that the facility is unable to achieve the microbial inactivation standards specified in Paragraph 1(2) of this Schedule 4, the facility must immediately suspend operations and notify the competent authority in writing. Upon such notification, the competent authority may require the facility to commence with a further testing programme, in accordance with the performance testing requirements, as provided for in Paragraph 2 of this Schedule 4, and using actual health care risk waste.

(2) The results of the regular testing programme must be submitted to the competent authority as a report every 3 months for the period for which the programme is undertaken.

4. Reduced routine testing programme

(1) Once a facility has demonstrated that it is able to meet the criteria required by the regular testing programme provided for in Paragraph 3 above, the competent authority may permit in writing, a reduced frequency of testing. The motivation for such a reduction must be prepared or certified by the responsible person and submitted to the competent authority.

(2) If such permission is granted by the competent authority, the facility must nevertheless continue to demonstrate that it is able to meet the standards of microbial inactivation specified in Paragraph 1(2) of this Schedule 4. Should the facility at any stage not comply with such standards of microbial inactivation, the facility must immediately notify the competent authority in writing. Upon such notification, the competent authority may require the facility to commence a further testing programme in accordance with the performance testing requirements, as specified in Paragraph 2 of this Schedule 4, using actual health care risk waste.

(3) The results of the reduced routine testing programme must be submitted to the competent authority as a report every 6 (six) months.

SCHEDULE 5

1. **Forms for temporary authorisation in terms of Regulation 12(1); authorisation in terms of Regulation 13(1); and registration in terms of Regulations 14(1), 18(1), 22(1) and 25(1) respectively**

Temporary authorisation form for:
Health care risk waste (HCRW) treatment facilities.

Section A: Details			
Name of Entity:			
Commercial registration number:			
Name of Director:		**Name of alternative contact person:**	
Physical Address:		**Postal Address:**	
Telephone No.		**Facsimile (Fax) No.**	
Section B: Treatment details			
Describe the treatment principle (material flow, use of containers, degree of mechanisation, use of manual handling, treatment technology, types of emissions and effluents and pollution abatement measures			
Does the treatment facility comply with the performance requirements of these Regulations? (Attach documentation)			

I, _____(name), with my signature declare that all information submitted above is correct and accurate and that I am authorized to submit the above information in my capacity as _____ for the said Entity.
Date: _____ Place: _____ Signature:

For Official Use only:

Type of Entity	Authorisation No.	Authorisation commencement date	Authorisation expiry date	Application for renewal of authorisation to be submitted on or before
Treatment Facility ☐				

Responsible Official:		**Date:**		**Signature:**	
Other notes:					

Registration form for:
Health care risk waste (HCRW) generators, transporters, transfer stations and treatment facilities.

Section A: All parties registering

Type of Activity (Tick as appropriate)	HCRW Generator		HCRW Transporter		HCRW transfer station		HCRW treatment facility	

Name of Entity:			
Commercial registration number:			
Name of Director:		**Name of alternative contact person:**	
Physical Address:		**Postal Address:**	

Name of Local Governme nt		**Facsimile (Fax) No.**	
Telephone No.		**Email address**	

Section B: Health care risk waste generators only		
☐ **Minor Generator** (Less than 10 kg per day) ☐ **Major Generator** (10 kg or more per day) (Tick as appropriate)	Estimated HCRW generation per day (monthly average)	
	Type of on-site HCRW treatment facility (if applicable: Complete Section E)	
	Name of transporter collecting HCRW (if applicable)	
	Name of transfer station used (if applicable)	
	Name of external HCRW treatment facility used (if applicable)	
	Registration no. of transporter collecting HCRW (if applicable)	
	Registration no. of HCRW transfer station used (if applicable)	
	Registration number of HCRW treatment facility used.	
Section C: Health care risk waste transporters only		
Transporter	Type and number of vehicles operated for this service	
	Name of HCRW treatment facility/ies used within Gauteng	
	Registration no. of HCRW treatment facility/ies used within Gauteng	
	Name and province of HCRW treatment facility/ies used outside of Gauteng	
Section D: Health care risk waste transfer stations only		
Transfer Station	Type of transfer	

	Authorised or permitted in terms of the Environment Conservation Act by the competent authority	
	Date authorised	
	Permit / ROD / Registration number	
	HCRW transfer capacity (tonnes/months)	
Section E: Health care risk waste treatment facilities only (Onsite and offsite)		
Treatment Facility	Type of HCRW treatment technology	
	Authorised or permitted in terms of the Environment Conservation Act, 1989 by competent authority	
	Date authorised	
	Permit / ROD / Registration number	
	HCRW treatment capacity (tonnes/months)	

I, _____(name), with my signature declare that all information submitted above is correct and accurate and that I am authorized to submit the above information in my capacity as _____ for the said Entity.

Date: _____ Place: _____ Signature:

For Official Use only:

Type of Entity	Allocated Registration No.	Registration Application: Date Received	Temporary Waste Information System (WIS) password	Permanent Waste Information System (WIS) password
Minor Generator ☐				
Major Generator ☐				
Transporter ☐				
Transfer Station ☐				
Treatment Facility ☐				

Responsible Official:		**Date:**		**Signature:**	
Other notes:					

Authorisation form for:
Health care risk waste (HCRW) transporters, transfer stations and treatment facilities.

Section A: All parties registering								
Type of Activity (Tick as appropriate)	HCRW Generator		HCRW Transporter		HCRW transfer station		HCRW treatment facility	
Name of Entity:								
Commercial registration number:								
Name of Director:				**Name of alternative contact person:**				
Physical Address:				**Postal Address:**				
Telephone No.				**Facsimile (Fax) No.**				

Section B: HCRW Transporters only

HCRW Collection Vehicle Fleet Details

Vehicle No	Make.	Model	Year	Registration number	Nominal capacity (tonnes)	Lifting tailgate?	Seamless impermeable body?	Spill kit provided?	Driver and Crew	Other details?
1										
2										
3										
4										
5										
6										
7										
8										
9										
1										

1										
1										
1										
1										
1										
1										
1										
1										
1										
2										

Provide details on the contents of the spill kit:	
Provide details on driver and crew training:	

Section C: HCRW Transfer Stations only	
Describe the transfer principle (material flow, use of containers, degree of mechanisation, use of manual handling, transfer technology, types of emissions and effluents and pollution abatement measures	
Does the transfer facility comply with the performance requirements of these Regulations? (Attach documentation)	

Section D: HCRW Treatment Facilities only	
Describe the treatment principle (material flow, use of containers, degree of mechanisation, use of manual handling, treatment technology, types of emissions and effluents and pollution abatement measures	
Does the treatment facility comply with the performance requirements of these Regulations? (Attach documentation)	

I, _____(name), with my signature declare that all information submitted above is correct and accurate and that I am authorized to submit the above information in my capacity as _____ for the said Entity.

Date: _____ Place: _____ Signature: _____

For Official Use only:

Type of Entity	**Authorisation No.**	**Authorisation commencement date**	**Authorisation expiry date**	**Application for renewal of authorisation to be submitted on or before**
Transporter ☐				
Transfer Station ☐				
Treatment Facility ☐				

Responsible Official:		**Date:**		**Signature:**	
Other notes:					

SCHEDULE 6

1. Local Government Plan in terms of Regulation 17(2)

(1) Local Government Plans shall, at a minimum, include the following information:

(a) Objectives of the Health Care Risk Waste Management Plan.

(b) A status quo report including:

(i) An assessment of type and number of health care risk waste generators within the jurisdiction of the Local Government including, but not limited to:

- General Practitioners,
- Traditional Healers,
- tattoo artists and body pierces,
- research and educational institutions,
- laboratories,
- pharmaceutical industries,
- medical clinics,
- hospitals,
- veterinary clinics, and
- undertakers;

(ii) an assessment of the total monthly quantities of health care risk waste generated within the jurisdiction of the Local Government;

(iii) a mapping of all current health care risk waste treatment and disposal facilities located in the Local Government's area of jurisdiction; and

(iv) the current status of By - laws and Regulations regarding health care risk waste in the Local Government's area of jurisdiction.

(c) An investigation of the needs and options for health care risk waste management within the Local Government's area of jurisdiction, including:

(i) an assessment of the need for and shortcomings of current health care risk waste service delivery and options for providing or improving on such service;

(ii) an assessment of current collection systems in terms of logistics, affordability, required level and control over service delivery;

(iii) an assessment of "drop-off" systems in terms of logistics, affordability, required level and control over service delivery; and

(iv) an overall assessment detailing the time frame, financing and cost recovery and other operational requirements of the required service delivery system.

(d) Details relating to target setting; the role of health care risk waste generators, Local Government and the private sector respectively; the development or amendment of By - laws or other legislative tools; details of an Action Plan; and a Consultation Plan for the initial implementation of the Health Care Risk Waste Management Plan.

SCHEDULE 7

1. **Content of report to be submitted in terms of Regulation 12(3)**

(1) The report must at a minimum include the following:

(a) The name and location of the facility;

(b) The name of the Local Authority in whose area of jurisdiction the facility is located;

(c) Contact person at the facility, including contact details such as telephone number, fax number and email address;

(d) The registration number allocated to the facility in terms of Regulation 25(2), if applicable;

(e) A technical description of the treatment facility including relevant details of the treatment technology used; mass balances; nominal and typical throughputs; type of emissions and environmental impacts to aspects such as the atmosphere, soil, open waters, effluents, quality and disposal of residues; noise; odor; any effects on traffic; impacts on habitats, wildlife and plants, and impacts on community;

(f) Copies of performance test reports in relation to the treatment facility's compliance with the requirements of these Regulations;

(g) Quantities of health care risk waste treated on a monthly basis over the past 12 months, including graphs of the monthly tonnage of health care risk waste for that period;

(h) Reporting of pertinent operational issues including incident reporting.

2. **Content of Health Care Waste Management Plan for major generators in terms of Regulation 16(1)**

(1) The Health Care Waste Management Plan must at a minimum include the following:

(a) The types of health care services provided by the facility;

(b) The number of beds available at the facility;

(c) The number of out - patients treated at the facility;

(d) Monthly generation rate of health care risk waste and health care general waste at the facility, recorded in the form of tables and graphs;

(e) The name and registration number of the transporter/s utilised by the facility;

(f) The name and registration number of the treatment facility/ies utilised by the health care risk waste generator;

(g) The name and contact details of the CEO of the facility;

(h) The name and contact details of the Health Care Waste Officer of the facility;

(i) The scope and objectives of the Health Care Waste Management Plan, including evaluation of technologies, procedures, and personnel;

(j) The health care waste management system employed including systems used by any third parties operating from the health care facility;

(k) Plan drawing of the facility indicating the routes for internal transport of health care risk waste and the location of the central waste store room(s);

(l) Measures to implement health care waste reduction options into management practices and procedures, including analysis of health care waste streams and individual processes, and opportunities to reduce or eliminate health care waste generation. Such assessments must evaluate data on the types, amount, and hazardous constituents of health care waste generated, the source and reason for the

generation, and potential health care waste reduction and recycling techniques applicable to those health care wastes;

(m) Employee awareness and training programs that involve employees in health care waste reduction planning and implementation to the maximum extent feasible.

3. Content of Health Care Waste Management Audit Reports in terms of Regulations 16(2), 20(2), 24(3), 27(2) respectively

(1) The Health Care Waste Management Audit Reports must at a minimum include the following:

(a) The name and location of the operator or facility submitting the report;

(b) Name of Local Authority in whose area of jurisdiction the operator or facility is located;

(c) Contact person for the operator or facility including contact details such as telephone number, fax number and email address of the operator or facility;

(d) The registration number allocated to the operator or facility submitting the report in terms of Regulations 14(3), 18(3), 22(3), 25(2);

(e) An estimate of the quantity of health care waste generated or managed and an estimate of the quantity of health care waste treated, both on site and off site, during the current reporting year including graphs of the monthly tonnage of health care risk waste for that year;

(f) Reporting of pertinent operational issues including:

(i) Incident's which have occurred involving health care risk waste;

(ii) Material changes to the waste management system;

(iii) Replacement of infrastructure related to health care risk waste management;

(iv) Changes to services and/or capacity which may impact on the tonnage of waste generated, transported, stored or treated;

(v) Use and status of waste tracking documents;

(vi) Change of CEO or Health Care risk Waste Officer, if applicable;

(vii) Training undertaken specific to health care risk waste; and

(viii) Changes to external service providers.

(g) A description of factors which have, during the current reporting year, affected health care waste generation and on site or off site health care risk waste treatment.

(h) A statement concerning the availability of the Health Care Waste Management Plan, its latest date of revision and when the next revision is planned for;

(i) *For Generators only:* An assessment of the effect, during the current year, of each health care waste reduction measure implemented upon the generation and the on-site and off-site management of health care waste.

SCHEDULE 8

1. **Tracking document for health care risk waste transporters in terms of Regulation 21(3)**

HEALTH CARE RISK WASTE TRACKING AND COLLECTION DOCUMENT

Date:	/ /
Requisition No:	

Generator Name Address and Registration	**Contact Details**
	Tel:
	Fax:
Registration Number:	Email:

Waste Details	**Disposable Containers (Qty)**	**Total Mass (kg)**	**Reusable Containers (Qty)**	**Total Mass (kg)**
Infectious				
Sharps				
Pathological				
Pharmaceutical				

Item	**Service / Description**		**Qty**	**Item**	**Service / Description**		**Qty**
1.1	lt	Reusable box		4.1	lt	Disposable Sharps	
1.2	lt	Reusable box		4.2	lt	Disposable Sharps	
1.3	lt	Reusable box		4.3	lt	Disposable Sharps	
2.1	lt	Reusable wheelie		5.1	lt	Disposable Specican	
2.2	lt	Reusable wheelie		5.2	lt	Disposable Specican	
2.3	lt	Reusable wheelie		5.3	lt	Disposable Specican	
3.1	lt	Reusable Sharps		6.1	lt	Disposable Box	
3.2	lt	Reusable Sharps		6.2	lt	Disposable Box	
3.3	lt	Reusable Sharps		6.3	lt	Disposable Box	

Note: Disposable containers placed inside reusable containers are not to be recorded separately.

Special Instructions

Transporter Name:	*Transporter Registration No:*

GENERATORS CERTIFICATION:	TRANSPORTERS ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS
I HEREBY DECLARE THAT THE CONTENTS ARE PROPERLY DESCRIBED, PACKAGED, MARKED AND LABELLED PRIOR TO TRANSPORTATION ACCORDING TO ALL RELEVANT LEGISLATION	I HEREBY DECLARE THAT THE CONTENTS AS DESCRIBED, IS PACKAGED, MARKED AND LABELLED ACCORDING TO ALL RELEVANT LEGISLATION AND IS COLLECTED FOR TRANSPORTATION
Name:	Name:
Signature:	Signature:
Date: / /	Date: / /

TREATMENT VERIFICATION			
Treatment Facility Name:		*Facility Registration No.*	
Confirmation of Waste Received		**Confirmation of Waste Treated**	
Name:		Name:	
Signature:		Signature:	
Date: / /		Date: / /	

SCHEDULE 9

1. Minimum requirements for the internal transport and storage of health care risk waste in terms of Regulations 7(3) and 8(7) respectively

(1) Minimum requirements for internal transport and storage

(a) Collection from point of generation:

(i) Health care risk waste at all major generators shall be collected and removed from wards, departments and similar on a daily basis and brought to a safe

(ii) No health care risk waste may be handled by health care risk waste management staff unless containerised;

(iii) The required personal protective equipment shall be used when handling health care risk waste containers.

(b) Internal transport between point of generation and storage facility:

(i) Where it is reasonably practicable, given the number of containers to be transported, health care risk waste shall be transported on purpose - made trolleys with sufficient storage space and designed to avoid spillage, breakage and other damage;

(ii) Health care risk waste containers shall not be loaded onto transportation trolleys higher than the design level, and unsecured containers that may drop from trolleys may not be loaded onto the trolleys;

(iii) Unless the contents of the trolley are reasonably inaccessible, the trolleys must be locked and may not constitute a risk of contact with infectious agents to others. The trolleys shall not be left unattended when full.

(c) Storage on Site:

(i) All storage facilities at major generators must have sufficient capacity to store up to 8 (eight) days of waste generated at the facility.

2. Minimum requirements for external collection and off-site transport in terms of Regulation 19(4)

(1) Duty of care:

Without affecting the application of the duty-of-care principle to the generator, transporters of health care risk waste have a duty of care to ensure that all such waste is treated and disposed of in accordance with the requirements of these Regulations.

(2) Collection from on-site storage area:

(i) health care risk waste shall not be handled by health care risk waste management staff unless containerised;

(ii) health care risk waste storage areas shall be closed and secured on completion of the collection round; and

(iii) no health care risk waste container shall be left unattended.

(c) Loading of health care risk waste containers:

(i) manual handling of health care risk waste containers shall be minimised;

(ii) access to health care risk waste vehicles shall be safe and unobstructed;

(iii) containers shall be secured when loaded; and

(iv) where containers are to be stacked, the maximum allowable stacking height for the particular types of containers shall be adhered to.

(d) Vehicle design:

(i) health care risk waste collection vehicles shall be equipped with spill kits; and

(ii) health care risk waste collection vehicles shall be clearly marked as transporting health care risk waste.

3. Minimum requirements for health care risk waste disposal in terms of Regulation 10(2)

(1) Disposal of residues:

(a) The Department of Water Affairs and Forestry's *Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste* shall be complied with and residues shall be disposed of or landfilled accordingly;

(b) All health care risk waste treatment facilities shall upon request from the competent authority document compliance with these Regulations by use of a combination of independent tests to be approved by the competent authority;

(c) The health care risk waste treatment facility must immediately and in writing notify the competent authority of any non-compliance, indicating the reason for such non-compliance and the plan for avoiding future non-compliance. If permitted disposal facilities cannot be utilised according to the Department of Water Affairs and Forestry's Minimum Requirements, operations must cease and backup treatment measures introduced until such time that compliance can be achieved;

(d) A standard frequency of tests shall be carried out; Provided that in case of three successive past tests demonstrating compliance, the frequency may be reduced to a prescribed minimum frequency.

NOTICE 3004 OF 2003

GAUTENG DEPARTMENT OF AGRICULTURE, CONSERVATION, ENVIRONMENT AND LAND AFFAIRS

NOTICE IN TERMS OF SECTIONS 43(2); 44(2) AND 56(2) OF THE NATURE CONSERVATION ORDINANCES 12 OF 1983

I, Mary Metcalfe, Member of the Executive Council, acting under Section 43(2), 44(2) and 56(2), respectively, of the Nature Conservation Ordinance (Ordinance 12 of 1983), do hereby amend the Schedules to the Nature Conservation Ordinance as set out in the Schedule hereto, with effect from the date of publication of this notice in the Provincial Gazette.

Given under my hand at Johannesburg this 28th day of August 2003.

MS. MARY METCALFE
MEC: DEPARTMENT OF AGRICULTURE, CONSERVATION, ENVIRONMENT AND LAND AFFAIRS

SCHEDULE

1. Addition to Schedule 5 of the Nature Conservation Ordinance in terms of section 43(2).

"43(2) (c): All wild animals not classified as game"

2. Addition of highly invasive species to Schedule 6 of the Nature Conservation Ordinance in terms of section 44(2).

"All exotic species of the classes of amphibians, reptiles excluding exotic snakes and mamals excluding the following species house mouse, house rat, Norwegian rat and golden hamster.

3. Deletion of species listed as problematic animals in Schedule 8 of the Nature Conservation Ordinance in terms of section 56(2)

The following species listed in Schedule 8 of the Nature Conservation Ordinance is hereby deleted.

Common Name	Scientific Name
Chacma baboon	Papio ursinus
Vervet monkey	Cercophithecus pygerythrus
Black-backed jackal	Canis mesomelas
Caracal (red lynx)	Felis caracal
Bush pig	Potamochoerus purcus

IMPORTANT NOTICE

The
Gauteng Provincial Gazette Function
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as from 2nd January 2002

NEW PARTICULARS ARE AS FOLLOWS:

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Pretoria

Postal address:
Private Bag X85
Pretoria
0001

New contact persons: Awie van Zyl Tel.: (012) 334-4523
Mrs H. Wolmarans Tel.: (012) 334-4591

Fax number: (012) 323-8805

E-mail address: awvanzyl@print.pwv.gov.za

Contact persons for subscribers:
Mrs S. M. Milanzi Tel.: (012) 334-4734
Mrs J. Wehmeyer Tel.: (012) 334-4753
Fax.: (012) 323-9574

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In future, adverts have to be paid in advance before being published in the Gazette.

HENNIE MALAN
Director: Financial Management
Office of the Premier (Gauteng)

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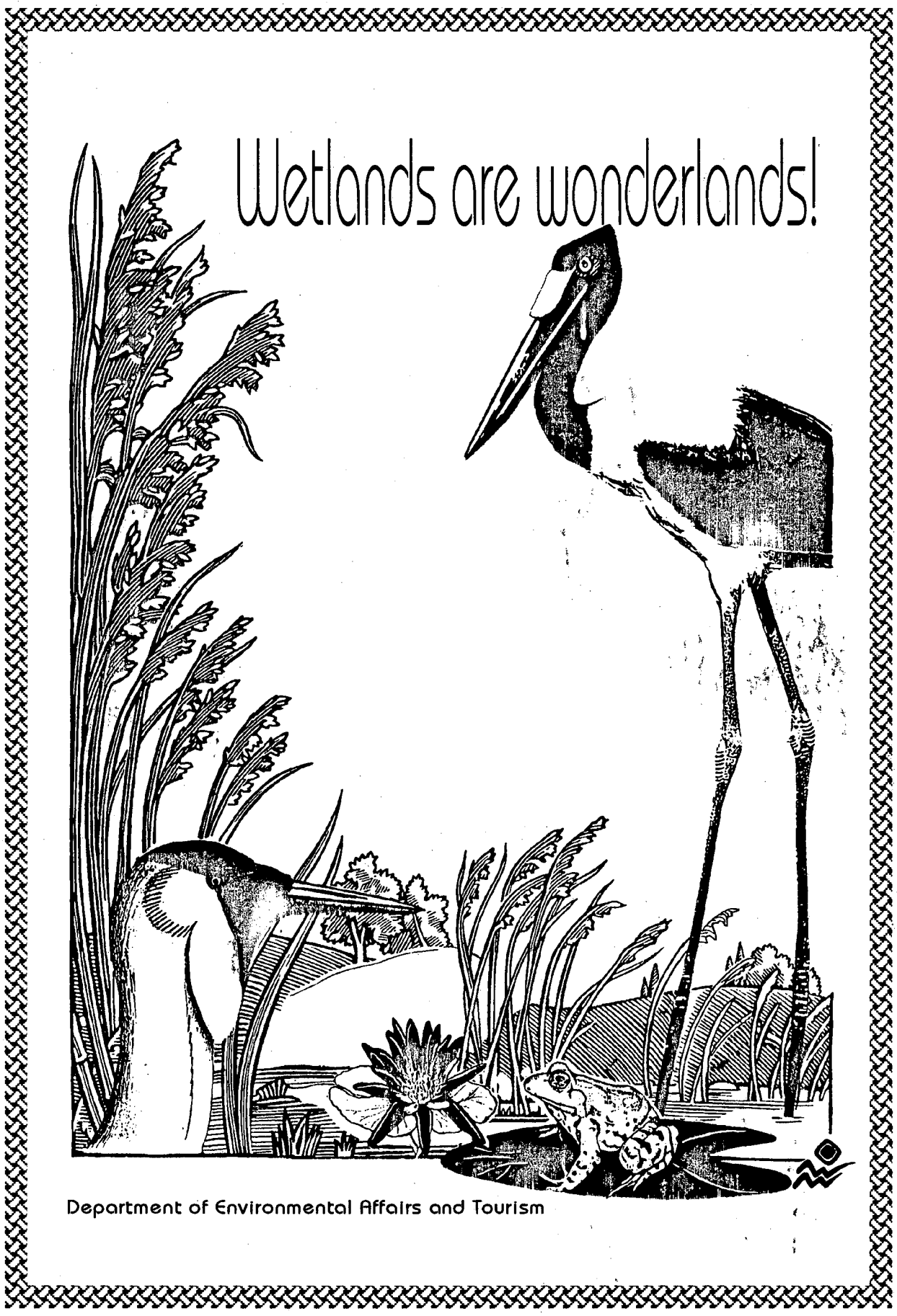
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