AGRICULTURE, CONSERVATION ENVIRONMENT & LAND AFFAIRS

Workshop on Health Care Risk Waste from Smaller Generators and Provincial Requirements for Waste Information Reporting by those Treating or Landfilling Hazardous Waste or Treating Health Care Risk Waste

12 February 2004, World of Beers, Newtown

Workshop Proceedings

HOSTED BY
THE GAUTENG DEPARTMENT OF AGRICULTURE, CONSERVATION, ENVIRONMENT AND LAND AFFAIRS.

SPONSORED BY
THE DANISH INTERNATIONAL DEVELOPMENT ASSISTANCE (DANIDA)

CONTENTS

DEPARTMENT OF AGRICULTURE, CONSERVATION, ENVIRONMENT AND LAND AFFAIRS AND THE DEPARTMENT OF HEALTH

Workshop on Health Care Risk Waste from Smaller Generators and Provincial Requirements for Waste Information Reporting by those Treating or Landfilling Hazardous Waste or Treating Health Care Risk Waste

Executive Summary

Having begun in 2000, the Health Care Risk Waste (HCRW) Project is now in its final stages. The focus of the workshop was on small generators. The draft document "Small Generator Health Care Risk Waste Collection Systems for Gauteng" was tabled at the workshop for discussion. The Waste Information System (WIS) Regulations will be active from 1 April 2004 and it will then be illegal to dispose of HCRW in the general waste stream. The WIS Regulations were discussed in the afternoon session of the workshop.

Main discussion points of the workshop:

- All commercial small generators of HCRW should register with the local authority.
- Registration should be voluntary for home based care generators with compliance encouraged via awareness campaigns and incentives like buy-back/exchange schemes for sharps containers.
- Diabetics should register and receive training of safe disposal of their sharps, possibly from their GP.
- Local government should implement was waste management system for small generators.
- Legislation should make compliance easier. By-laws can cover any gaps in the legislation.
- A body of stakeholders is needed to liaise with DACEL on legislation needed and monitoring.
- Different collection/drop-off options should be available to generators according to their needs. A postal system should be looked into as one option.
- It was suggested that charged levied to larger organizations could help subsidize the costs of collection for smaller generators and also generators in less affluent areas.
- Care should be taken not to overload Environmental Health Practitioners from a monitoring perspective.
- Awareness of segregation of HCRW from HC general waste should be promoted at all levels, as well as a clear understanding of what comprises HCRW.
- The new system should be designed around existing structures as much as possible – GPs, home based care, clinics to avoid duplication of structures.

The Waste Information System

An on-line, Internet based, Waste Information System is being set up, known as the Gauteng Waste Information System. This includes waste streams other than HCRW. Promulgation of the Waste Information System Regulations (Notice 3002 of 2003) will enforce registration and reporting to the system.

The way forward would include a workshop with local government and industry to see how the issues around small generators can be taken forward.

1. Opening and Introduction

Dhiraj Rama, Director of the Department of Agriculture, Conservation, Environment and Land welcomed everyone present and thanked them for attending. In reflecting on what the project had achieved to date, Dr Rama noted that, having begun in 2000, the Health Care Risk Waste (HCRW) Project was now in its final stages. The focus of the workshop would be on small generators. Over the course of the project there had been a marked improvement in the collection of HCRW, and it was expected that the situation would improve further. The service provider tender has been advertised and is in the process of being finalized for the clinics and hospitals managed by the Department of Health, so an improvement in provincial facilities can be expected. The Waste Information System (WIS) Regulations will be active from 1 April 2004 and will give a better idea of generators, collection and treatment and lead to improved standards all around. Further support via funding has been made available to facilitate implementation. The project has enjoyed support throughout the province and received the Premiers Award. Dr Rama extended thanks to the staff, project management and government departments, and also to those who have been involved in the process through the workshops. The project initially focused on large generators, but today's focus is on small generators - home based caregivers, households where self administration of drugs occurs, general practitioners - anyone producing less than 10 kg per day. The process of ongoing dialogue and participation would continue at this workshop and also afterwards through comments made by stakeholders.

Dr Rama gave a short presentation to provide an introduction to the workshop:

- From 1 April it will be illegal to dispose of HCRW in the general waste stream.
- This applies to large and small generators.
- There is presently no formal system for dropping off and collection of HCRW from small generators, although various systems and initiatives are in place.
- The HCRW Regulations identify the provision of services for minor generators as the responsibility of Local Government.
- Gauteng DACEL (GDACEL) and the Department of Health (DoH) are committed to assisting Local Government in this regard.
- A workshop was held on 7 November 2003 to discuss the needs of small generators and to generate ideas on the way forward.
- The need for further workshops with Local Government and stakeholders from the Health Care industry to discuss the way forward including potential restraints and opportunities was identified.
- The need for further funding was also identified and DACEL has subsequently made additional funding available to take this work forward.
- A draft document, "Small Generator Health Care Risk Waste Collection Systems for Gauteng", has been produced which outlines the issues identified and proposed a variety of possible solutions to be considered and debated.
- The morning session would focus on the draft document, while the focus of the afternoon session would be to provide clarity on the Regulations.

2. Questions of Clarity

No questions were raised.

3. Presentation of the Discussion Document

Torben Kristiansen presented the discussion document.

Background of the Project

- The project commenced in May 2001 and produced major outputs as follows:
  - Policy & Regulations
  - Guidelines & Feasibility Study
  - Pilot Projects & Waste Characterization & Composition Study
  - HCRW Tender Documents and tender process for 160 clinics & 30 hospitals
  - International HCW Management Conference in August 2003
  - Capacity Building Programme & HCW Officer training course (5 days)

Next phase:

- HCRW Tender Roll-out Support
- Implementation of HCW management plans for Small Scale Generators
- Waste Segregation Video / Awareness Programme Implementation
- Infrastructure upgrades

Recommendations from Workshop on 7 November 2003

- A Working Group for improved HCRW management should be set up to draw up guidelines for small generators, with representatives from the industry, provincial and local government.
- A standard set of by-laws for the whole of Gauteng, not necessarily limited to HCW, would be more cost effective.
- A national umbrella regulation was suggested to cover cross-border impacts of HCRW.
- The pricing of sharps containers etc. should not be beyond the means of disadvantaged communities.
- Registration of generators with Health Professional Councils and local authorities.
- The local authority should be responsible for determining collection points for small generators, fines for non-compliance, and the development of support structures to aid the reporting of non-compliance, such as NGOs and CBOs.

Roles and Responsibilities

Provincial government (DACEL) is required to:
- Support local government in complying with the preparation of the Local Government Health Care Risk Waste Management Plans, which may include:
- The production of a guideline document to guide local government in the development of the plans;
- The provision of technical assistance by reviewing and commenting on the Plans when in draft form.

Local government is required to:
- Ensure that a service is provided for the safe collection and treatment of HCRW;
- Before [11 October 2005?], prepare Local Government Health Care Risk Waste Management Plans to achieve and implement the HCRW management services by describing:
  - Objectives of the plan;
  - A status quo report;
  - An investigation into the needs and options for HCRW management within the local municipality
  - Details regarding target setting.
- By implication, have a system for registering small generators.

Small generators are required to:
- Minimize the generation of waste at source;
- Effectively segregate HCRW from Health Care General Waste (HCGW) at source;
- Package HCRW in accordance with the Regulations (e.g. sharps must be in a sharps container);
- Store HCRW in accordance with the Regulations;
- Treat and dispose of HCW in accordance with the Regulations;

- Register with the local government on a date to be announced in the Provincial Gazette, once the local government has developed its plans for addressing small scale generators;
- Ensure that a registered HCRW transporter transports their waste to a permitted HCRW treatment facility, if not treated on-site in a compliant treatment plan.

Possible HCRW collection/drop-off systems for discussion

Table 1: Possible HCRW collection/drop-off systems

System	Advantages	Disadvantages	System addresses	Costs	Skills required	Killer Assumptions
1. Bring system to Local Government site	• Relatively cheap as the generator does the collection and containerisation	• Generators without transport can't make use of this system	• All generators	• Low	• Skilled staff at bring centre	• Generators have own transport • Price paid is acceptable
2. Bring system to local clinic	• Relatively cheap as the generator does the collection and containerisation	• All generators, except disabled, have access to clinics	• All generators	• Low	• Skilled staff at bring center exist	• Clinic can manage the waste
3. Bring system to pharmacy – pharmaceutical waste and sharps only	• This would be a natural drop off site for pharmaceutical waste as this is where the products are collection in the first place	• Pharmacies will have much increased waste stress. Other infectious waste may find its way to pharmacies	• Generators of sharps and pharmaceutical waste only	• Low, especially if legislated	• Skilled staff exist	• Pharmacies accept the task and costs of managing the system and employ suitable companies for final disposal
4. Bring system directly to contracted treatment plan	• Relatively cheap as the generator does the collection and containerisation	• Generators without transport can't make use of this system	• All generators with own transport	• Very low	• Additional skilled staff needed	• Generators have own transport • Price is acceptable
5.On-call collection (LDV)	• All collection and transportation by skilled staff	• A fleet of motor vehicles must be available and may not be fully utilized at all times	• All generators	• More costly	• Skilled drivers required	• Generators have access to telephone • Generators can store waste safely • Price is acceptable
6.On-calle collection (motorcycle)	• All collection and transportation by skilled staff	• A fleet of motorcycles must be available and may not be fully utilized at all times	• Generators producing small volumes only	• Relatively low	• Skilled drivers required	• Generators have access to telephone • Generators can store waste backup system for volumes too large for a motorcycle • Price is acceptable
7. Fixed collection rounds	• Fixed and predictable service intervals for all registered generators • All collection and transportation	• A fleet of motor vehicles must be available and may not be fully utilized at all times	• All generators	• Expensive	• Skilled drivers required	• Generators have access to telephone • Generators can store waste safely • Price is acceptable

System	Advantages	Disadvantages	System addresses	Costs	Skills required	Killer Assumptions
	by skilled staff					
8. Collection with domestic waste	• No need for new vehicles • Extensive reach of service at community level	• Adaptation required for trucks • Large staff numbers need training • Generators need to wait for the trucks	• All generators	• Initial outlay high	• Large numbers of unskilled collectors will need training	• Generators will wait for and hail the waste truck • Large numbers of unskilled workers can be trained • Billing and record keeping can be done efficiently • Price is acceptable
9. Send packaged HCRW by special mail packages	• Use of existing collection system • Pre-paid and addressed containers can be bought at pharmacies etc.	• Incorrect containers may put postal workers at risk	• All small generators	• Containers costly	• If posted directly, sufficient skills at the treatment plant should exist	• SA postal service accepts this as a business area • Only suitable and safe containers are used • Price and access to post office are acceptable
10. Home care professional removes HCRW from homes	• Those receiving care in their homes have a cost efficient service	• Home care professional must carry waste in their vehicles	• Generators with home professional care only	• Low-staff is already skilled	• Necessary skills exist	• Home care professionals accept the task • Private caregivers are legislated to perform this function
11.Manufacturers commit to provide safe disposal for all items supplied	• All drugs and sharps would come with a "take back" and "disposal after use" guarantee	• Increased manufacturer responsibility would increase the cost of drugs and supplies	• Generators of sharps, pharmaceuticals, home dialysis	• Indirect cost of services and items	• New skills needed in retail and distribution network	• Manufacturers agree to the responsibility • Small manufacturers will comply to the concept

Table 2: Possible funding options

Funding	Advantages	Disadvantages	Administrative Burden	Generators included in the service	Killer Assumptions
1. Provincial funding	• One overall funding mechanism securing cost attenuation between rural and urban settings etc	• Funding and service provision are at different government levels leading to less incentive for cost cutting	• Large • Need for province and local authorities to establish an administrative procedure	• Could be all	• That Province can carry this and that local authorities can jointly agree to one approach across the province, including services to be rendered
2. Local Authority funding	• Service delivery and funding at same level providing incentive for cost effectiveness	• Differences in skills and affordability between local authority may result in some areas not being able to implement and manage effectively	• Fairly large • Need for local authorities to establish their own administrative procedures	• Could be all	• That local authorities can carry this
3. Fixed monthly fee for different generators	• Once registered and payments are made there is not incentive for not making use of the services • Relatively easy to administer	• Fixed fees may be unfair to some generators • No incentive for correct segregation of waste • Additional services need to be established for those not addressed by this service	• Relatively low • Need for local authorities to establish their own administrative procedures	• Only commercial health care givers and long term chronically ill are known by the local authority	• That all generators can be identified and registered • That the fees can be collected efficiently
4. Rate per call/ collection	• This will provide incentives to minimize number of transports and containers being used as well as good segregation of waste • Relatively easy to administer	• May lead to illegal disposal as there is an incentive to reduce the number of calls/collections • No incentive for correct segregation • Additional services needed for those not addressed by this service	• Relatively low • Relatively easy e.g. via pre-paid voucher or containers	• Only commercial health care givers known by the local authority can realistically be included	• That all generators can be identified and registered • That the fees can be collected efficiently
5. Rate per container collected or delivered	• There is incentive to fill containers to save money and the costs are linked to actual generation • Incentive for correct segregation	• May lead to increased transport costs as there is little incentive to have containers piling up before a collection is arranged • Additional services needed for those not addressed by this service	• Relatively low • Relatively easy e.g. via pre-paid voucher or containers	• Only commercial health care givers known by the local authority can realistically be included	• That all generators can be identified and registered • That the fees can be collected efficiently
6. Billing with rates and taxes	• Once registered and paying there is no incentive for not making use of the service	• No incentives for correct segregation of waste • Will only be possible to identify	• Relatively easy as an existing system is being used for billing	• Only commercial health care givers known by the local authority can realistically be included	• That all commercial generators can be identified

Funding	Advantages	Disadvantages	Administrative Burden	Generators included in the service	Killer Assumptions
		commercial generators that are already registered • Additional services needed for those not addressed by this service			
7. Billed by private contractor	• No administrative burden by government	• No control over billing • Private contractor has no power to secure payments • Few, if any, contractors will be willing to take the risk • Difficult for private contractors to identify generators that could be serviced • Additional services needed for those not addressed by this service	• Low (government) • High (industry) • No burden for government but large burden for private companies • In real terms government would have to assist contractors to identify and address generators and this would be a burden	• Only commercial health care givers can realistically be included	• That private contractors can handle and accept the risks of late payments and avoidance of the service offered • That generators will subscribe to the service • That the fines can be collected efficiently
8. Manufacturers funding of disposal as part of the supplies sold	• Internalizing of complete cost of disposal in the equipment being used and placing responsibility on the manufacturer may lead to less waste producing equipment	• This can only address some types of HCRW • Will result in increased cost of medical supplies and drugs • Because of the diversity of importers and manufacturers of products literally hundreds of entities would have to establish their own take-back or disposal systems – would not be cost-effective	• Low (government) • High (industry) • Very expensive for industry to handle this as they each would have to establish a system for their own little segment of the market	• Only sharps and drugs are realistic • Bandages etc – not realistic to supply with a disposal system included	• That manufacturers can carry this cost • That national legislation to enforce this can be put in place or that a national voluntary agreement can be made and complied with • That all manufacturers, including smaller importers of generic and low-cost products will follow the same rules and agree to comply with the same voluntary agreement as the larger manufacturers

Preliminary Recommendation

Registration

- Not necessary for private homes, but compulsory for all commercial small scale operators

Systems to be provided

- Bring systems for larger and commercial HCRW generators
- On-call collection for registered households unable to bring their waste
- Voluntary drop-off of drugs at local participating pharmacies

Financing

- Free for private homes
- Progressively full payment for commercial generators
- Innovative billing systems (e.g. compulsory via rates/taxes)

4. Questions of Clarity

- Brian Thomson – the waste management system has an urban application, but what about peri-urban and country areas and costs in these areas? Kobus Otto replied that the concern was hazardous waste getting into domestic waste stream. In rural areas and on farms – it was not optimum - but they have no choice but to burn, and would include the odd syringe. Torben – agreed. A challenge when distances are large and transport may not be available. A solution might be that rural councils work more closely with urban councils.
- Kevin Bowman of ClinX Waste Management – Posting of HCRW – a detailed study of posting sharps system has been carried out, as well as discussions with senior postal services in Gauteng. The postal service is in favour of the system, provided the correct process is followed. The system could work for rural areas. Mr Kristiansen replied that it is good that discussions have taken place and it would be good if the system could work.
- Have groups such as vets and private practitioners been consulted? Mr Kristiansen replied that these groups have been invited to workshops and more formal discussions may be needed in the future. Laboratories often provide containers for doctors, and where a working system is in place there would be no need to change it.
- A limit of 10kg per day may make costing difficult – a larger weight would be more cost effective. Mr Kristiansen agreed – the limit may well be increased. Of importance is that there is a system in place that generators know about. Dr Rama agreed on the importance of consulting widely and attempting to identify stakeholders. He appealed to all present to supply details to DACEL of anyone who has been left out.
- Tony Pieterse – Ekhuruleni Metro - Noted that over the years in the General waste stream at Ekhuruleni sharps have disappeared to a large extent. Small quantities may go unnoticed. Mr Kristiansen replied that risks need to be balanced against costs and there may be a need for a risk assessment.
- Bruce Stevenson – Veterinary Council – Noted that strict guidelines exist in the veterinary profession as to what happens to waste, and this included keeping it out of municipal waste streams. Mr Kristiansen commented that the project team have visited vets in Gauteng and agreed that they know not to put waste in with domestic waste. However, some are involved in burning and burying and there is scope for improvement in this area.
- Mr Raubenheimer – Pharmaceutical Society – Queried whether there had been any consultation with communities as to a threshold from public side? Mr Kristiansen replied that DACEL would like to consult with Pharmaceutical Society representative. They haven't yet consulted with communities and the idea is to address the issue via local councils, but this is open to discussion. Dr Rama replied that NGOs and Labour are represented on the steering committee, but agreed that more work is needed. Sensitivity is needed in establishing the system – needs to be acceptable to communities to get their buy-in.
- The representative from Mogali City – Commented that waste coming from medical facilities end up on the landfill. The staff are unsure what is medical waste and what is not. Mr Kristiansen replied that this is a recurring problem – many kinds of waste from hospitals are not a problem, but those doing the inspections need to be trained in what is real medical waste and what is only a perceived risk and not a real one. Also better guidance should be given to landfills on what is acceptable and what not.
- A request – Make the distinction between HCRW and HCGW clear.

5. Group discussion

Table 3: Group discussions

QUESTION AND GROUP	SUGGESTIONS DURING THE WORKSHOP	DACEL'S COMMENTS
A: Financing opportunities/affordability?		
1. To what extent should use of the systems developed be compulsory or voluntary?		
GROUP 1	1. It is not feasible to legislate below GP level	• It is proposed that possible legislation should include all, but that actual enforcement should be focused on commercially operating health service providers only, thus not criminalizing the general and rather address these via awareness campaigns and in close cooperation with the health care providers, e.g. ensuring proper information and availability of systems via municipal and provincial as well as private clinics/hospitals etc.
	2. Registration should be compulsory for all commercial enterprises	• Agree in principle, but this should be determined in detail in close cooperation with local authorities and other stakeholders
	3. Registration should be voluntary for home-based care with compliance encouraged via awareness campaigns	• Agree in principle, but this should be determined in detail in close cooperation with local authorities and other stakeholders
GROUP 2	4. The system should be compulsory and should take the following into consideration • Awareness of segregation of HCW and HCRW • Penalties clearly defined • Not intended to penalise Home Based care • Risk probability investigated • Compulsory liability by pharmacies – cradle to grave • Bring-back systems to be looked at	• Agree in principle, but this should be determined in detail in close cooperation with local authorities and other stakeholders.
GROUP 3	5. The systems should be compulsory, at least for commercial facilities	• Agree in principle, but this should be determined in detail in close cooperation with local authorities and other stakeholders
2. To what extend should use of developed service systems be free/subsidized/paid in full?		
GROUP 1	6. Query whether subsidies should go to Medical Aids?	• This would probably require a national initiative and close discussion with stakeholders that could not be introduced by the province alone at this stage. It is proposed that this option be explored by the Health Care Waste Component of the DEAT Project on implementation of the National Waste Management Strategy. On the short term it is proposed to develop systems that are based on options available to local authorities today.
	7. Do not add costs to doctors and medicine bills	• Agreed that affordability of medical services is important and that affordable systems should be developed. It is proposed that financial feasibility studies should indicate the cost implications of various scenarios.
GROUP 2	8. Commercial generators to subsidize the chronically ill home based patients – there should be a sliding scale	• Agreed in principle as a suitable option for ensuring affordability and accessibility of services.
GROUP 3	9. Create incentive schemes through the Medical Aid Societies for private generators	• Supported as an option to be investigated further.

QUESTION AND GROUP	SUGGESTIONS DURING THE WORKSHOP	DACEL'S COMMENTS
	10. Exchange system to keep costs low – the greater the cost the greater the risk of illegal disposal. Re-usable container with a once-off rental fee?	• Supported as an option to be investigated further.
	11. Provide a range of service options at different costs	• Agree in principle, but this should be determined in detail in close cooperation with local authorities and other stakeholders.
	12. Government should subsidize – the risk is to the general public	• Proposed that possible subsidizing should be for non-commercial generators only on the long-term, but possible also smaller commercial generators in the shart-term, but this should be determined in detail in close cooperation with local authorities and other stakeholders.
3. Should there be different prices for private households/GPs/NGOs home based and community based health care?		
GROUP 1	13. Doctors should not be subjected to added costs	• Not necessarily agreed. Commercial operators should have a obligation to dispose of their wastes correctly and in accordance with regulations
	14. Doctors should encourage patients to return HCRW to the surgery and a levy could be included in the rates and taxes or an income tax levy	• Agree in principle, but this should be determined in detail in close cooperation with local authorities and other stakeholders.
	15. Payment should come from the place of generation, not transporters or collectors	•
GROUP 2	16. Prices should be on a sliding scale according to the size of the generator	• Agree in principle, but this should be determined in detail in close cooperation with local authorities and other stakeholders.
GROUP 3	17. Price according to weight / risk	• It is proposed that systems should have a minimum of administration and hence the number of categories of payments may have to be limited.
	18. Price according to LA area	• Agree in principle, but this should be determined in detail in close cooperation with local authorities and other stakeholders.
	19. Spread costs over the whole year to take into account seasonal fluctuations in volume	• Agree in principle, but seasonal fluctuations are not expected to be great.
4. Are all or any of the proposed technical service options affordable?		
GROUP 1	20. A feasibility study is needed regarding costs and payment	• Agreed.
GROUP 2	21. There should be different services provided for different generators	• Agree in principle, but this should be determined in detail in close cooperation with local authorities and other stakeholders.
GROUP 3	22. Clinics provide free services, so should the HCRW containers not also be provided free of charge?	• It is proposed that dropping of HCRW should be free, but if containers are provided for use of-site it may be necessary to introduce nominal payments or returnable deposits to minimise wastage and loss.
	23. Use the top structures to subsidize the bottom – larger organizations subsidize the poorer communities	• Agree in principle, but this should be determined in detail in close cooperation with local authorities and other stakeholders.
	24. Adequate information, training and awareness will encourage compliance	• This is certainly agreed to be a critically important component of any service system, in particular systems addressing home based care.

QUESTION AND GROUP	SUGGESTIONS DURING THE WORKSHOP	DACEL'S COMMENTS
B: Duties and Responsibilities		
1. How can any small scale HCRW generator service system be enforced?		
GROUP 1	25. Local Government must implement the system	• Agreed.
	26. Affiliation with a professional Health Care body as a prerequisite for registration	• This could be one of the options and it is suggested that consultation with relevant professional bodies should further establish the feasibility of this as well as their possible role in communicating and implementing new service systems.
	27. If a pre-paid system exists, people will use it. Make illegal disposal "expensive" so that there will be no financial benefit if you dispose of HCRW illegally	• Noted.
	28. Local authorities should have a list of compliant service providers to give to HCRW generators	• Noted. The coming HCRW Regulations for Gauteng will produce lists of authorised service providers (Treatment Plants and Transporters).
	29. Distribute suitable containers at a nominal price, and replace a full one with an empty one	• Noted as a management option
	30. Currently all GP's must have a certificate saying which company handles their medical waste	• This could be incorporated into the licensing of GPs via the relevant bodies.
GROUP 2	31. Compulsory registration of commercial generators	• Agreed.
	32. Registration of individuals should be voluntary	• Agreed
	33. Local authority register waste collected at central points	• Agreed
	34. Legislation should make compliance and implementation easier	• Agreed and possible development of by-laws could focus on this.
GROUP 3	35. Legislation, by-laws, standards, guidelines, monitoring body (LG), penalties, incentives – financial/subsidy	• Noted.
	36. Education – through the Nursing Association, NGOs, empower people by promoting the safety aspect	• Noted.
2. Are thee realistic opportunities for voluntary roles for industry and organizations such as pharmacies, distributors, manufacturers, importers of drugs, medical and dental council, NGO's ?		
GROUP 1	37. Spot checks need to be done	• At this stage it is not envisaged that the Province will carry out such spot checks, unless there is a serious complaint or similar. Depending on Local Authority resources such spot checks could be carried out, but it is suggested that only commercial health care providers be targeted.
	38. Traditional healers need to be included as small generators	• Agreed.
	39. Professional Councils, Representative Bodies must be included in the process	• Agreed to be important actors and verification and licensing procedures could be introduced via such bodies.
GROUP 2	40. Have meetings with industry to assess opportunities	• Agreed and will be part of the coming consultation process.
GROUP 3	41. Enforcement is needed to get a changed mindset – voluntary compliance has not worked in the past	• It does not seem justifiable to use significant public resource for large scale enforcement of such rules and systems considering the other tasks that needs the attention of the government. Hence, is it

QUESTION AND GROUP	SUGGESTIONS DURING THE WORKSHOP	DACEL'S COMMENTS
		suggested that deterring penalties be developed supported by dedicated awareness campaigns and smart billing practises that ensure incentive to make use of systems provided should form the back bone of any system for small scale generators of HCRW.
	42. Monitoring is important	• Agreed, but should be developed to minimise the administrative burden, e.g. by relying on smart billing and self-reporting.
	43. Introduce self assessment starting with the bigger organizations like hospice.	• Agreed and this could form part of an initial awareness campaign.
	44. Requirements for smaller generators should be less stringent	• It is proposed that commercial generators should met formal requirements and that non-commercial generators should be targeted via awareness campaigns and affordable and smart systems.
C. Which tools and support mechanisms are required?		
1. Would it be possible to introduce a voluntary/compulsory service for small-scale HCRW generators with the current legal/regulatory framework?		
GROUP 1	45. Local authorities need to be more involved in the new legislation and need to create local by-laws to enhance provincial laws	• Agree in principle, but this should be determined in detail in close cooperation with local authorities and other stakeholders.
	46. Since local authorities check landfill sites anyway, they will be able to enforce the legislation	• In practical terms this may be difficult as in most instances quantities are small and mixed with larger volumes of general waste. However, it is agreed that when inspections show presence of health care risk waste action should be taken.
GROUP 2	47. Yes – there are currently different laws governing different professional bodies	• Noted.
	48. Legal framework can be complemented by the introduction of by-laws or by adding to the current HCW Regulations	• Agree in principle, but this should be determined in detail in close cooperation with local authorities and other stakeholders.
GROUP 3	49. It would not be possible with current national legislation – a national structure would be needed	• Agreed that some of the more elaborate options would require national initiatives that are not envisaged on the short to medim term. Hence, it is proposed that focus should be on systems and services that can be introduced with today's framework and by local authorities with the support of the province.
	50. By-laws often address gaps in national legislation	• Function of by-laws is to provide detail to national requirements e.g. as expressed in policies or framework legislation. As such local governments have the responsibility of developing/ensuring availability of services/systems for waste (al waste) generated in their area of jurisdiction.
2. If necessary: Which regulatory/legal tools need to be implemented?		
GROUP 1	51. Uniform colour coding and labelling country wide in terms of SANS; also thickness of the bags/containers	• Agreed. This is being addressed in the SABS Code for Health Care Waste Management (SANS 10248) that is expected to be published mid 2004 and that would replace the current SABS 0248.
	52. Emphasis on segregation	• Agreed.
	53. HCRW training to be included in all health care workers' curricula	• Supported, but this is also seem as an important component of Introductions to new staff at health care facilities as well as those dispensing drugs, sharps etc.

QUESTION AND GROUP	SUGGESTIONS DURING THE WORKSHOP	DACEL'S COMMENTS
GROUP 2	54. Either the development of by-laws to supplement the legislation or by extending the current HCW Regulations	• It is suggested that by-laws should be developed and be supported by the provincial HCW Management Regulations as this is seen as a local authority function.
GROUP 3	55. Need a body/forum comprised of stakeholders to liaise with DACEL to discuss legislation and monitoring. Local government is central to the process	• Agreed and a process of developing this further with local authorities will be initiated by the province. This and past workshops is seen as the beginning of that process.
	56. Develop guidelines and introduce punitive measures	• Agreed and province has a role to play in providing guidance in this regard. Introduction of punitive measures is supported but should be administratively affordable to enforce.
3. If necessary: Which kind of human and financial capacity would be required by the implementers of the small-scale HCRW plan?		
GROUP 1	57. Awareness training on local authority level	• Noted.
	58. Special containers and vehicles needed	• Noted.
	59. Community awareness project	• Noted. DACEL is looking into possible development of pilot projects that would include community awareness and pilot systems.
GROUP 2	60. Should be subsidized by Government on a sliding scale with a period of phasing in	• Noted.
GROUP 3	61. Local Government needs to budget for waste management as a separate entity	• Agreed.
	62. EHPs should be involved in monitoring	• Agreed in principle, but it is understood that current capacity of EHPs needs to be assessed and systems should be developed to ensure minimum need for enforcement while securing efficient punitive measures and knowledge by those enforcing/monmitoing. Hence, EHPs and others may need training/sensitising in this regard.
	63. Piggy-back on systems already in place – GPs, Home based care, clinics	• Agreed that any existing systems that work well should be supported and possibly be formalised and documented and maybe expanded to others if cost-efficient.
	64. LG will need access to HCRW disposal sites e.g. incinerators	• Existing incinerators/treatment plants will need to be authorised by DACEL and new treatment plants will need a Record of Decision by DACEL. Owners of e.g. on-site treatment plants will need to comply with the new regulations.
D. Suitability of proposed technical service systems?		
1. Please assess the proposed service systems critically and discuss which (if any) would be suitable for Gauteng?		
GROUP 1	65. To answer effectively one needs to ask who will do the funding	• Noted.
	66. A combination of methods would be effective depending on the area (except options 4 and 8)	• Noted.
	67. How do the Regulations impact on other provinces?	• There have been discussions with DEAT, and the information will be made available at a national level and the system will be implemented in the other provinces, probably within the next 2 –3 years

QUESTION AND GROUP	SUGGESTIONS DURING THE WORKSHOP	DACEL'S COMMENTS
	68. The Pharmaceutical Society has a yearly brown-bag campaign for the return of expired drugs – but these campaigns only work well if they are on a national level	• Agreed and noted.
	69. Government site – concern about type of container and manner of transport, since it will be transported in a private vehicle. It must be a site where HCRW is already being handled and people are trained.	• Agreed.
	70. Pharmacy – pharmaceutical waste and sharps only. Must be put in place for expired drugs. Consideration must be given to the storage and frequency of collection	• Agreed.
	71. Treatment plant – there are 4-5 treatment plants in Gauteng – wouldn't be feasible	• Agreed that this would be insufficient as a stand-alone solution, but could work in conjunction with other community near solutions.
	72. On-call collection – must be cost per service system. The funding system would be important because if government pay, there is the possibility of abuse	• Agreed.
	73. On-call collection by motorcycle – increased risk of spillage. Containers must be accident resistant	• Agreed.
	74. Fixed collection – Will have to be connected to volume and storage capacity. All HC practitioners have fixed delivery dates – can't these vehicles be used for collection as well? If pathological waste is included, collection must be done as soon as possible	• This would need further investigation and addressing of liability and cross-contamination issues.
	75. HC professionals remove waste – Service must be provided where nurses can deliver HCRW if they do not work for a hospital or clinic	• Noted.
	76. Manufacturers provide service – Will be difficult to implement – can be done like the ROSE Foundation – built in levy for safe disposal of oil	• Noted.
GROUP 2	77. System to be specific for each type of generator and be implemented financially on a sliding scale	• Noted.
	78. Study the Road Traffic Act carefully to assess the impact on transporters of HCW/HCRW	• Noted.
	79. More feasibility studies needed to assess the advantages and disadvantages of different systems	• Agreed.
GROUP 3	80. Any system needs to take into account a storage facility (refrigeration) and storage time	• Agreed. However, requirements will be set in the new HCW Management Regulations.
	81. Government site – would only work in urban areas. Depends on discipline of the generator. Would be a burden for home based care. Won't work for the Occupational Health industry	• Agreed that different options need to be developed for particular conditions and this is where local government expertise and knowledge of local conditions is critically important.
	82. Local clinic – more accessible for rural areas	• Noted.
	83. Pharmacy – sharps only, not other HCRW.	• Agreed with the inclusion of expired/obsolete drugs.
	84. Treatment plant – monitoring would be a problem; accessibility of sites – they are not centrally located	• This is a DACEL function and is addressed in the Records of Decision and the new HCW Management Regulations for

QUESTION AND GROUP	SUGGESTIONS DURING THE WORKSHOP	DACEL'S COMMENTS
		Gauteng.
	85. Call collection – need access to a telephone; more expensive	• Agree.
	86. Motorcycle – not cost effective as there is too little storage space; cheaper mode of transport	• Noted.
	87. Fixed collection round – good for private individuals who can afford it; only for urban/peri-urban areas	• Noted.
	88. With domestic waste collection – can't leave sharps containers on the sidewalk; transport must comply with SABS code; exchange of containers won't work – a separate system to get a replacement container needed; frequency – may need collection more than once per week; training needed for collection staff	• Agreed. This option is not seen as a very feasible nor safe scenario.
	89. Postal system – would need to use a courier company. Government could provide a subsidy as an incentive. Specialised container needed – triple layer with security on locking device. Rural areas may pose a problem	• Noted. This is seen as a possible national initiative and could be considered by the HCW Component of national DEAT project on implementation of the National Waste Management Strategy. Indication at the workshop was that industry is exploring this as an opportunity with the Postal Services.
	90. Home care professionals – helpful for those needing a service for a short period of time e.g. schools. They still need to take the waste somewhere.	• Agreed.
	91. Manufacturers – build cost into price of container; manufacturers would need to work together to standardize a system. Problem – the don't supply directly to end-users	• This is something that would need comprehensive consultations and support to become viable.
	92. Suggestion – provide multiple options for different generators and allow them to choose an option at registration. An exchange system will encourage compliance.	• Noted. Number of options will probably need to be balanced against the cost of establishing and administrating such systems.
E. Registration of small-scale HCRW generators		
1. Should all small scale HCRW generators be registered, including private homes?		
GROUP 1	93. Yes	• It is not recommended to require registration of chronically ill and private homes/individuals
GROUP 2	94. No, only commercial generators	• Agree.
GROUP 3	95. Yes. Diabetics especially need to register. Airports have a problem with diabetics and drug users putting sharps in the SHE bins. Chronically ill, Old Age Homes, shopping centres should also register	• It is not recommended to require registration of chronically ill and private homes/individuals
2. If so, how can a registration system be established, and who should manage the system?		
GROUP 1	96. Local Government and professional bodies for cross-referencing	• Noted.
GROUP 2	97. Should be managed by Local Authorities, preferably with existing business system	• Agreed.
GROUP 3	98. Organizations could compile and maintain lists of private generators e.g. Hospice, Private Nurse Practitioners,	• Agreed to be a possible operation approach and this will be considered in the further consultation with relevant professional

QUESTION AND GROUP	SUGGESTIONS DURING THE WORKSHOP	DACEL'S COMMENTS
	NGOs, pharmacies, Diabetic Association, CBOs, GPs, SHE providers, public clinics	bodies.
	99. Management of the system should be via DACEL as the umbrella organization in partnership with Local Authorities. Monitoring via DoH, EHPs, Statistics SA, Diabetic Association (expensive)	• It is suggested that Local Authorities should be the managers and that DACEL should provide guidance and support only. Possibly joint initiatives, eg., via Gauteng-SALGA could be considered.
3. Is it necessary/acceptable to register chronically ill persons receiving/self administering care in their homes?		
GROUP 1	100. Rather focus on training and awareness	• Agree.
GROUP 2	101. No, only voluntary due to sensitive issues like HIV	• Agree.
GROUP 3	102. Yes – see answer for Question 1	• It is not recommended to require registration of chronically ill and private homes/individuals

6. Plenary discussion

- Who should carry out follow up on registration – Environmental Health Practitioners always feel overloaded. Dr Rama replied that a system will need to be worked out.
- Registration of small HCRW generators – is it necessary?
- Diabetics should register and doctors should educate these patients on safe disposal of their syringes.
- Patrick Pringle - Resources Centre – Need a cradle to grave approach for potential waste – pharmacies to take back surplus medication and medication past its expiry date.
- Sanitary pads, razor blades – what about these? Mr Kristiansen replied that we need to consider the risk involved – these are low volume, low risk items.

7. Update on HCRW and Waste Reporting Regulations and Responsibilities

Paul Furniss gave a presentation outlining the purpose of the Health Care Waste Management Regulations and the roles and responsibilities of role players. Promulgation of the Regulations is expected to be 1 April 2004.

Role Players

- Health Care Risk Waste Major Generators
- Health Care Risk Waste Minor Generators
- Health Care Risk Waste Transporters
- Health Care Risk Waste Transfer Stations
- Health Care Risk Waste Treatment Facilities
- Other role players including natural persons, staff etc.
- Local and Provincial Government

General Provisions

Chapter 2 of the Regulations.

- Places duty of care on every person and specifically on major generators, transporters, treatment facilities and transfer stations.
- Includes general prohibitions like:
  - No person may segregate, containerize, store, collect, transport, treat, dispose of or otherwise manage HCRW other than in accordance with the Regulations.
  - No person may manually lift a container of HCRW which weighs > 15 kg.

- Specific requirements for the storage and final disposal of HCRW.
- Regulation 6: Initial registration of every HCRW generator, transporter, transfer station or treatment facility.
- It was important to note that this was a different registration process to that described in Waste Information Regulations. Registration for WIS is only for reporting to the system, not for authorization.
- The competent authority must publish a list of all registered person's in the Provincial *Gazette* and on the website annually.
- It was their duty to assist health care risk waste inspector
- Another duty was to provide documents to the health care risk waste inspector

Responsibilities: Major Generators

Defined as: *A HCRW generator that generates > 20 kg, including the container, per day of health care risk waste. Examples: Hospitals, Clinics, Community Health Centres etc*

Administrative Responsibilities:
- Existing facility: Submit a registration form to GDACEL within 90 days of promulgation of Regulations. (Form 2; Schedule 5).
- New facilities: Must register with same form prior to commencing operations.
- Obtain initial registration certificate from GDACEL which allows for operation for two years.
- Application for a renewal of a certificate must be made 30 days prior to the expiry of the previous certificate. (Form 2; Schedule 5).
- Existing facility: Submit a Health Care Waste Management plan not less than 180 days prior to an application for a renewed registration certificate. {See Schedule 7(2) for contents}.
- New facility: Submit a Health Care Waste Management plan 180 days prior to commencing operations.
- Submit an audit report not less than 180 days prior to each application for a renewal of a registration certificate. {See Schedule 7(3) for contents of audit report}
- The competent authority may not issue a further registration certificate to an existing facility unless the Health Care Waste Management plan and audit report have been approved.

Responsibilities: Minor Generators

Defined as: *A health care risk waste generator that generates up to 20kg per day of HCRW calculated as a monthly average, but does not include a domestic HCRW generator*

Operational responsibilities:
- Segregate HCRW from HCGW at source;
- Minimize the generation of waste at source;
- Package HCRW in accordance with the regulations (e.g. sharps waste must be in a sharps container);
- Store HCRW in accordance with the regulations;
- Treat and dispose of waste in accordance with the regulations;
- Ensure that the HCRW transporter transports waste to a permitted HCRW treatment facility.

Responsibilities: Transporters

Defined as: *Any person who transports HCRW but does not include any person who transports HCRW for the purposes of testing and research, internal transport, or < 10 kg per day.*

Administrative Responsibilities:
- Existing transporter: Submit a registration form to GDACEL within 90 days of promulgation of Regulations. (Form 2; Schedule 5).
- New transporter: Must register with same form prior to commencing operations.

- Obtain initial registration certificate from GDACEL which allows for operation for two years.
- Application for a renewal of a certificate must be made 30 days prior to the expiry of the previous certificate. (Form 2; Schedule 5).
- All HCRW transporters must submit an audit report not less than 180 days before each application for renewal (See Schedule 7(3) for contents of audit report).
- The competent authority may not issue a further registration certificate to an existing transporter unless the audit report has been approved.

Responsibilities: Transfer Stations

Defined as: *Any person who receives HCRW for temporary storage but does not treat such HCRW*.

Administrative Responsibilities:
- Must register with and be issued with an authorisation, by GDACEL, before commencing operations (Use forms 2 and 3 in Schedule 5 of Regulations).
- GDACEL may only issue an authorisation if the applicant has been issued with an Record of Decision (RoD) for the relevant transfer station.
- Authorisation must consider:
  - Record of Decision
  - Risk of harm to human health or the environment
  - Ability for compliance
  - Any other relevant factor

Responsibilities: Treatment Facilities

Defined as: *Any premises where HCRW is treated*.

Three categories are recognized:
- Treatment facilities not in existence upon commencement of Regulations;
- Treatment facilities in operation at commencement of Regulations but without a Record of Decision;
- Treatment facilities in operation at commencement of Regulation and with a Record of Decision (RoD).

Administrative responsibilities for new treatment facilities:
- Must register and obtain authorization before commencement of operation activities, using forms 2 and 3 in Schedule 5.
- Must submit applications together with a report that contains the information as set out in Schedule 7
- In reviewing the application, GDACEL will consider:
  - The RoD
  - The report submitted in terms of Schedule 7
  - Risk of harm to public health or the environment
  - Ability of applicant to safely operate the treatment facility
  - An authorization shall be valid for two years and is not transferable
  - All HCRW treatment facilities must apply for renewal of authorization not less than 60 days prior to expiry
  - An audit report must be submitted at least 180 days prior to application for renewal.

Administrative responsibilities of existing treatment facilities with no RoD:
- Must register and obtain temporary authorization within 180 days of commencement of Regulations, using Forms 1 and 2 in Schedule 5.
- The application must be accompanied by a report in accordance with Schedule 7 – results of performance tests and all other information.

- If the results of the performance test indicate that the applicant does not comply with the Minimal Environmental Performance Requirements (Schedule 3 and 4), the report must include a plan detailing the steps which the applicant will take, and the time frames within the steps, to achieve compliance.
- For temporary authorization, GDACEL will consider:
  - Report submitted in accordance with Schedule 7
  - Risk of harm to public health or the environment
  - Ability for compliance
- Temporary authorization is valid for two years and is not transferable.
- Must apply for authorization not less than 90 days before expiry of temporary authorization, using Form 3 of Schedule 5.
- For authorization, GDACEL will consider:
  - Compliance with the report submitted in accordance with Schedule 7
  - Risk of harm to public health or the environment
  - Ability for safe operation
- Must apply for renewal of authorization not less than 60 days prior to expiry.
- An audit report must be submitted at least 180 days prior to application for renewal.

Administrative responsibilities of existing facilities with RoD:

- Must register and obtain authorization before commencement of operation activities, using Forms 2 and 3 in Schedule 5.
- Must submit applications together with a report that contains the information as set out in Schedule 7.
- In reviewing the application, GDACEL will consider;
  - The RoD
  - The report submitted in terms of Schedule 7
  - Risk of harm to public health or the environment
  - Ability of applicant to safely operate the treatment facility
- An authorization shall be valid for two years and is not transferable
- All HCRW treatment facilities must apply for renewal of authorization not less than 60 days prior to expiry
- An audit report must be submitted at least 180 days prior to application for renewal

Responsibilities: Local Authorities:

- Provide a service for the safe collection and treatment of HCRW generated by minor generators.
- Before 1 March 2005, prepare Local Government Health Care Risk Waste Management Plans to achieve and implement the service, in accordance with Schedule 6 of the Regulations.
- Enforce existing responsibilities in terms of Occupational Health and Safety Act as well as new powers and duties of health care risk waste inspectors.

Responsibilities of GDACEL as the Competent Authority:

- Enforcement of Regulations
- Review of documents and submission of authorization/request for additional information within set timeframes
- Responsible for registration and issuing of temporary authorizations, authorizations and registration of certificates
- Setting of conditions of authorizations.

8. Section 26: procedure and requirements

Mr Hanrē Crous explained that the Information Section (Section 26) of the Regulations provides information that needs to be included in the report generated by HCRW treatment facilities. Prior to

the present project all facilities were non-compliant in terms of emissions. Section 26 requires that every treatment facility without a Record of Decision must register and obtain a temporary authorization.

Objectives of Section 26 (Ch. 6)

- Chapter 6 addresses requirements applicable to operators of HCRW treatment facilities.
- Section 26 addresses the registration and authorisation of existing HCRW treatment facilities without an RoD.

Relevant Schedules

- Schedules 3 & 4 – Environmental Performance Requirements
- Schedule 5 – Authorisation & Registration Forms
- Schedule 7(1) – Reporting Requirements
- Schedule 7(3) – Audit Report

Administrative Process (S26)

- Every existing HCRW Treatment Facility without an RoD must register and obtain temporary authorisation.
- Forms 1 and 2 should be completed as well as a Performance Report (and Compliance Plan if required).
- Temporary authorisation and authorisations thereafter are conditional and are valid for 2 years.
- Renewal (Form 3) is largely dependent on environmental performance (Audit Report).
- Time-frames apply.

Information & Reporting (Schedule 7)

- Schedule 7(1) contains information and results relating to the Performance Tests for the Temporary Authorisation Application.
- Schedule 7(3) contains the Audit Reports needed prior to Application for Renewal of Authorisation.

Performance Report [Schedule 7(1)]

- *Company Information* – name, location, local authority, responsible person, contact details, registration number.
- *Site Plan* – current/planned building & infrastructure, storage areas, waste & effluent storage/disposal, storm water, access & traffic, surrounding land-use, topography & elevation including buildings, with respect to dispersion.
- *Technical drawings* – design of treatment equipment, feed mechanism, primary/secondary chambers, cleaning/ de-ashing ports, stack/effluent outlet, pollution control incl. Retrofitting e.g. gas clean-up systems.
- *Technology* – type & quantity fuel/energy, nominal & typical throughput/ treatment rate, mass balances, type of environmental impacts incl. cumulative, mitigation, gaps in knowledge including assumptions & uncertainties, temperatures & monitoring/maintaining thereof, calculation of residence time & DRE, startup/shutdown management, retrofitting of technology, redundant infrastructure decommissioning.
- *Pollution control* – details, reduction/cleaning efficiency, alternatives, current & projected emissions, comparative technology performance, impact & management of construction, Q&Q and management of waste, raw materials, monitoring efficiency including on-line, operational & emergency procedures with respect to inefficiency/shutdown and maintenance.
- *HCRW Management* – waste receipt, weighing, record keeping, non-acceptable waste, storage & rotation, spills, back-up in case of extended down-time, needle-stick injury procedures.

- *Performance Tests* – results of tests with respect to compliance with requirements in Schedule 3/4 as applicable (air emissions, operation, ash/residues & sewer discharge vs. emissions, microbial inactivation, biological indicators, testing programs).
- *Public Participation* – previous records, advertise local & on-site, inform adjacent land owners, provide 30 days to comment, address comments.
- *Compliance Plan* – plan with steps and time-frames to achieve compliance, content is not prescribed.

Audit Report [Schedule 7(3)]

- Required for approval prior to application for renewal.
- *Audit to include* – HCRW stored/treated, report on operations incl. incidents, changes to management systems & infrastructure, waste tracking, results of performance tests as required by Schedule 3 or 4 as the case may be.

9. Questions for Clarity

- There was a query regarding guidelines about transportation of HCRW from home. Mr Crous replied that this will be looked at in the Transport Regulations – we need something practical and feasible.
- What role must treatment facilities play with regard to Section 26? Mr Crous replied that interaction with treatment facilities has been extensive and that they are already applying the regulations.
- Was the two-year renewal period feasible? Certain timeframes have been set to accommodate the administrative process in DACEL.
- Schedules 3 and 4 – are they being revised in light of submissions made during the course of the process? Mr Kristiansen replied that they have been revised following consultation with DEAT. Operating procedures have been introduced. Schedule 4 has not changed materially.
- The concern was expressed that the public participation process around facilities that are non-compliant but have been given a permit to clean up their act was a truncated process. Dee Fischer replied that the present 30 day comment period was part of the normal EIA process. The scoping process also allows for people to add to what the department has already stipulated.
- Will a generator be penalized if they use a facility that has not renewed their license? Mr Crous replied that such information would be publicized in the gazette or on the web page.
- In terms of SANS code the treatment facility must provide the necessary documentation to show they are registered.

10. The Waste Information System

Paul Furniss gave a presentation on the Waste Information System (WIS) and its objectives.

What is the Waste Information System (WIS)?:

- It is an on-line (Internet-based) waste information database. (www.dacel.gpg.gov.za).
- Initially developed as the Health Care Risk Waste Information System (HCWIS).
- Inclusion of other waste streams led to the Gauteng Waste Information System (GWIS).
- It is currently still in a voluntary reporting stage.
- Promulgation of Waste Information System Regulations (Notice 3002 of 2003) will enforce registration and reporting to the system.

Objectives:

- To compile and make available waste information which will further environmental protection and improve integrated waste management.
- To make information available for:
  - Education, research and development
  - State of Environment reporting

  - Spatial planning and EIA's
  - Monitoring success of waste management strategies / policies
- To create a uniform reporting method.

Who does the GWIS affect?

Table 4: Who does the GWIS affect?

Role Player	Threshold	Timeframe	
HCRW Generator	> 20 kg /day	Within 90 days of promulgation	
Waste Transport Operator	> 10 kg /day	HCRW Within 90 days of promulgation	Other hazardous waste Within 180 days of promulgation
Landfill Operator	GLB, GMB, H:H and H:h	Within 180 days of promulgation	
Treatment Facility Operator	Any HCRW treatment facility	Within 90 days of promulgation	
Hazardous and General Waste Recyclers	> 20 kg waste received for recycling per day	Voluntary	

How will role players be affected?

1. Registration: Every person listed in Schedule 1 of the Regulations must register with the competent authority (GDACEL). {Regulation 6 (1)}
   ➔ Every person must register

2. Reporting: Every registered person must, where applicable, submit a report to the competent authority in a specific format and at a specific interval. {Regulation 7 (1)}
   ➔ Not every registered person is required to report.

Registration

- Step 1: Obtain a registration form from GDACEL via e-mail, web-site download or facsimile. Once on-line registration is available, these steps will be completed on-line and submitted via e-mail.
- Step 2: Form is completed and is submitted to Waste Information Officer (WIO) in one of the following ways:
  - By fax
  - E-mail
  - By registered mail
- Step 3: Upon receipt of the form, the GDACEL Waste Information Officer (GWIO) will commit the data into the GWIS.
  - The system generates a unique registration number.
- Step 4: Within 30 days of receiving a form, the GWIO will in writing:
  - Request additional information
  - Issue a Registration Certificate with a unique registration number.

Registration number allocation

Table 5: Registration number allocation

HCRW Generator	ABC Hospital	GPG-00-001
Transporter	ABC Transporters	GPT-00-001
Treatment Facility	ABC Treatment Facility	GPF-00-001
Landfills	ABC Landfill	GPL-00-001
Recyclers	ABC Recyclers	GPR-00-001

The Registration process

- Registration for the Waste Information System is separate from the registration required by the Health Care Waste Management Regulations.
- Registration forms are in Schedule 2 of the Regulations.
- Please go to: http://www.csir.co.za/ciwm/register.html
- A registration certificate is valid for two years.
- All persons must reapply within 30 days of the expiry of the previous Registration Certificate.
- Registration is needed before reporting can commence.

Reporting requirements

- The requirements are listed in Schedule 4 of the Regulations.
- Requires reporting of specific information in a specific format and at a specific interval for each reporter.
- Recyclers will be voluntary reporters until they are added to Schedule 1.
- Weighbridge data must be used by H:H and H:h landfill operators.
- GLB* and GMB* can use density calculations for three years but must use weighbridge data thereafter.
- Reporting can be done on-line or off-line.

Table 3: Reporting requirements

Contractor	Reporting schedule	Report contents	First Report due
HCRW Transporters	Quarterly : March, June, September and December	• Date • Monthly totals of waste transported out of the Province per generator • Type of waste transported (HCRW = H06.02) • Registration numbers of generators and Province to which waste was transported	September 2004
HW Transporters	Quarterly : March, June, September and December	• Date • Monthly totals of waste	March 2005

Contractor	Reporting schedule	Report contents	First Report due
		transported out of the Province per generator • Type of waste transported (from a list) • Registration numbers of generators and Province to which waste was transported	
HCRW Treatment Facilities	Quarterly : March, June, September and December	• Date • Monthly totals of waste processed per generator • Type of waste processed (HCRW = H06.02 • Registration numbers of generators	September 2004
Landfill Operators (H:H, H:h; GLB*, GMB*	Quarterly : March, June, September and December	• Date • Monthly totals of waste disposed of per generator (metro or district municipality) • Type of waste disposed of (from a list) • Name of the generators (metro or district municipality) of the waste	March 2005
Recyclers	Voluntary at this stage: possibly monthly or quarterly	• Date • Monthly totals of waste recycled per generator • Type of waste disposed of (from a list) • Names of the generators (Province) of the waste	March 2005 or as soon as possible

11. Questions for Clarity

- Do the hospitals also have to re-apply for registration? Mr Furniss replied that they did, if they were not on the list on the website. A number have registered already.

12. Closure

Dr Rama extended thanks to everyone for attending and for their input. The next step would involve a workshop with local government and industries to see how the issues around small generators can be taken forward. The possibility of carrying out a pilot study in terms of waste produced by small generators would be investigated. A meeting would be held once again within 4 to 6 months to report on progress. Any comments should be submitted in writing to Torben Kristiansen, Paul Furniss, or Malcolm Mogotsi via e-mail or fax.

APPENDIX 1: LIST OF INVITEES AND ATTENDEES

Contact Person	Position	Company	Tel No	Fax No	Cell No	E-mail	Attendance
Adam Jacolette	Environmental Manager	Exigent	(012) 347-5890	(012) 347-5877	082 852 6417	jacolette@exigent.co.za	
Balchin, Clive, Mr		Netcare	(011) 256 5000			cbalchin@ho.netcare.co.za	yes
Barnard A C	Chief Professional Nurse	Edenvale Hospital	(011) 321-6004	(011) 443-6162		-	Yes
Barnard Johann	AD: Occupational Health	DOH: Mpumalanga	(013) 766-3466	(013) 766-3469/70		johannba@social.mpu.gov.za	
Beeslaar Andre	Deputy Manager	Tshwane Metropolitan	(012) 308-9461		082 896 1567	andrebe@tshwane.gov.za	
Berger David	Director	Basisa Technical Waste Solutions	(012) 771-9760		082 771 9760	david.berger@absamail.co.za	
Bodibe Refiloe	GDOH	Safety Officer	(011) 355-3498	(011) 355-3499	083 318 7844	refiloeb@gpg.gov.za	
Borland Julie	Environmental consultat		(011) 465-0350	086 672 1238	082 551 2431	borlandj@mweb.co.za	
Boswell Jenny	Depiuty Director	Midvaal Local Municipality	(016) 360-7662	(016) 590-1009		jennyb@midvaal.gov.za	
Botha Linda	Manager: EAP	Pikitup	(011) 712-5255	(011) 712-5322	082 855 9250	lindabotha@pikitup.co.za	
Bowman Kevin W, Mr	-	CLINX	(011) 902 9700	(011) 902 9700	083 400 1044	-	Yes
Brits Nic	General Manager	Interwaste (Pty) Ltd	(011) 792-9330	(011) 792-3861	082 652 9330	nic@interwaste.co.za	
Bryant Marian Sr	Committee Member	SA Society f occupatioal Health Nurses GP	(011) 894-1263	(011) 894-1263	083 325-0730	marian.bryat@eject.co.za	yes
Buthelezi M		GDACEL	(011) 355-1597			mabusib@gpg.gov.za	
Buthelezi Themba	Logistics Director	Buhle Waste	(011) 886-2316	(011) 866-2321	083 325 2435		Yes
Buys P P	Director	Atmos	(011) 972-6344	(011) 972-6304		pjbuys@acenet.co.za	
Campbell Bernie	CRO	Lenmed Clinic	(011) 213 2002	(011) 854 1002	083 547 2381		
Chaka Jerry	Director: environmental Health	Ekurhuleni Metro	(011) 861-2291	(011) 861-8835	082 454 7090	jerryc@ekurhuleni.com	
Crouse Hanre	Acting Deputy Director	DACEL	X 21933	(011) 337 2292	082 446 6414	hanrec@gpg.gov.za	Yes
Daneter Magda	Infection control siste	Germiston Hospital	(011) 345/1211	(011) 345-8255	082 404 6303		
De Jager Leonore	Unit Manager: Infection Control	Netcare - Femina Clinic	(012) 328-3838 x 2029	(012) 236-2945	082 823 3273	fhclinical@netcare.co.za	
Dimati MN, Mr	Environmental Health Officer	Western Gauteng Services Council	(011) 411-5132	(011) 412-3663	082 682-3292	medic@icon.co.za	
Dlamlenze T P Mrs	Healthcare Waste Officer	TARA Hospital	(011) 535-3058	(011) 535-3026	082 641 8299	-	
Dube Sylvester	Assistant Manager-Waste Management	Sedibeng District Municipality	(016) 427-1015	(016) 427-1014	082 901 6847	thembadludlu@webmail.co.za	

Contact Person	Position	Company	Tel No	Fax No	Cell No	E-mail	Attendance
Eleftheriades Christos	Member	Coal & Waste	(011) 316-1800	(011) 485-1070	083 267 5185	ceenviropicon.co.za	
Engles John	Member	North West Medical Waste CC	(011) 441-3766	(011) 522-0564	082 566 5753	john-henre.engles@sasol.com	
Feldtmann Ina	Infetion Control, OHS	Kopanong Hospital	(016) 428-7000	(016) 428-1148	082 290 4802		Yes
Fischer, Dee, Ms		DACEL Project Director	(011) 355 1956	(011) 355 1937	082 7729837	deef@gpg.gov.za	Yes
Fourie George	Member	North West Medical Waste CC	(011) 441-3766	(011) 522-0564	082 566 5753	john-henre.engles@sasol.com	
Foxcroft Albert	Occupatioal Health & Safety Officer	Far East Rand Hospital	(011) 817-1426	(011) 817-3535			
Gcwensa Qaphile	Deputy Director	National Department of Health	(012) 312-3141	(012) 312-3181	082 578 4509	ntseleq@health.gov.za	
Groenewalt N	Regional Environmetal Officer	Emfuleni Local Municipality	(016) 988-1064	(016) 988-1531			
Hattingh, Chrisma, Ms		ICASA, Arwyp Hospital	(011)922-1019	(011) 922-6288	833018242	Arwyp@icon.co.za	
Hoffman I	Sedibeng District		(016) 950-6119	(016) 950-6034			
Hoko T	Infection Control	Itireleng					Yes
Kekana Pamela	Environmental Health Officer	DOH	(012) 734-2553	(012) 734-1040	082 354 3000		
Kekane Alpheus	Occupational Health & Safety Officer	Far East Rand Hospital	(011) 817 1426	(011) 817 3525	083 494 1711		
Ker C E	ASD Officers	Proteria Academic Hospital	(012) 354-1596	(012) 354-2201		catherinek@gpg.gov.za	
Kgole Mmashela	Environmental Health Practitioner	Mogale City	(011) 410-771	(012) 410-4593	083 458 3283		Yes
Khoza Felix	Chief Environmental Health Officer	Merafong City	(018) 788-9837	(018) 788-9853	082 922 2542	felix@merafong.co.za	
Kkaza T L	Executive Manager	Sedibeng District -Mun Serv Entities	(016) 427-1015/6/7	(016) 427-1014	082 901 7590	thomasm@sedibeng.gov.za	
Koopman C	Senior Professional Nurse	Coronation Hosptal	(011) 470-9179	(011) 477-4177			Yes
Kristiansen, Torben, Mr	CTA	DACEL CTA	(011) 355 1664	(011) 355 1663	082 3323720	torbenk@gpg.gov.za	Yes
Kruger C	Staff Nurse	Coronation Hosptal	(011) 470-9133	(011) 477-4177			Yes
Lamprey	Sales Manager	New Promex Corporation (Pty) Ltd	(011) 444-7013	(011) 444-3700	083 357 3555	jane@promex.co.za	
Langa Nelson Mr	Environmental Health Practitioner	Midvaal Local Municipality	016-360-7668	016-590-1009	082 871 6152	-	
Langley L Dr.	Risk Consultant	Netcare			082 825 6049	llangley@ho.netcare.co.za	
Lesego Peters	EO	DACEL	(011) 355-1555		083 528 5009		

Contact Person	Position	Company	Tel No	Fax No	Cell No	E-mail	Attendance
Lesie Oupa	Snr Prof. Nurse	Sterkfontein Hospital	(011) 951-8327	(011) 951-8331	072 213 8366	sterkies@global.co.za	Yes
Lombaard Margaret	Manager	S A Waste	(011) 444-7177	(011) 444-7578	083 564 8988	margaret@sawaste.co.za	
Louw A Mrs	Superintendant	Jubileum Place of Safety Boksburg North	(011) 917-9514	(011) 917-3406		andriel@gpg.gov.za	
Loykisoonlal R Mr	Senior Environmental Health Practitioner	Gauteng Health	(012) 303-9192	(012) 303-9196	084 782 3665		Yes
Machika Tesresa	Team Leader of Household Aids	Pholosong Hospital	(011) 812-5022	(011) 738-3000			Yes
Magabane Louis	Acting Assistant Director	DOH	(011) 481-5327	(011) 481-5329	082 926 0219		
Magner Janet, Ms		SA – DACEL Consultant	(012) 653-1331	(012) 653-7683	083 702 7885	malemela@motswedipharm.co.za	
Maloisane KNE	Infection Control	Carletonville Hospital	(011) 787-2111 x 2227	(011) 787-4120	083 783 2111		Yes
Manodze Temba	Environmental Health Practitioner	Gauteng Health	(011) 983 1091	(011) 953 5400			
Maphosa Isaac	Environmental Health Practtioner	Gauteng Health	(011) 983 1091	(011) 953 5400			
Mareletse Dinah	Infection Control	Itireleng					Yes
Marumo, Albert, Mr		GDoH	(011) 355-3478	(011) 355-3481	082 448 3151	albertm@gpg.gov.za	
Mashigo, Conny, Ms		SANCO	(011) 738-5441	(011) 738-3205		n/a	
Mashini L Mrs	Infection Control Nurse	South Rand Hosptal	(011) 681-2034	(011) 435-0038			Yes
Matehebula Pat	Chief Clerk	Tembisa Hospital	(011) 923-2188	(011) 920-1195			
Matrn Manamela	Assistant Director	Tembisa Hospital	(011) 923-2188	(011) 920-1195			
Matsabu Mampiti	Director	Dynacon Environmetal	(011) 478-0601	(011) 478-0601	082 990 2236	mampiti@corpdial.co.za	
Mblalose Bertha	Assistant	Pikitup	(011) 712-5255	(011) 712-5322	082 855 9250		
Meyer H	Group Secretary Materials Manager	PPC Cement	(011) 488-1728	(011) 488-1787	082 882 9759	hmeyer@ppc.co.za	
Mfenyana Sandile	CEO	Tembisa Hospital	(011) 926-2722	(011) 926-2719	082 570 5504		Yes
Miller Mike	Assistant Director Waste Manager	Mogale City	(011) 951-2228	(011) 660-1507			
Miller Mike		Mogale City Municipality	(011) 951-2228	(011) 660-5171			
Mkhumane Gabriel Dr.	Director	Ama Trading CC	084 774 3893	(011) 339-4244		jab@union.org.za	
Mngemezule Cecelia		Gauteng Health	(011) 898-8314	(011) 892-0358	082 420 1715	ceceliam@mweb.co.za	
Mngomezulu C Mrs	HCW Officer	Tambo Memorial	(011) 898-8314	(011) 892-0358			
Modubu Grace	Environmetal Health Practitioner	Kungwini Local Municipality	(013) 932-6302	(013) 932-4091	083 346 0711	mayet@kungwinimun.co.za	
Moduro Grace	Environemental Health Practitioner	Kungwini Local Council	(013) 932-6302	(013) 932-4091	083 346 0711		

Contact Person	Position	Company	Tel No	Fax No	Cell No	E-mail	Attendance
Moeketsi Thabo	Environmetal Officer	Buhle Waste	(011) 886-2316	(011) 866-2321	073 212 1710		
Mogale P	Kalafong Hospital	Waste Management Officer	(012) 318-6865	(012) 373-4712	083 325 6004		
Mogorosi C	Infection Control Nurse	Itireleng					yes
Mogotsi Malcolm L Mr	PEO	DACEL	(011) 644-9586	(011) 337-2292		malcolmm@gpg.gov.za	
Molefe M W	OHS	Dr. Yusuf Dadoo Hospital	(011) 951-6000	(011) 953-2250			yes
Monama M F Mr.	Department Dir: Admin & Logistics	Pretoria Academic Hospital	(012) 354-1421	(012) 354-1548	082 449 7676	frantz@gpg.gov.za	
Mosedi E	Infection Control	Itireleng					
Motsoaledi Elizabeth Nini	HCRW Officer	Chris Hani	(011) 933-0255	(011) 933-9795	072 172 6297		
Mpele Nobantu	WMO	Leratong Hospital	(011) 411 3615	(011) 410 8421	083 362 9213	barbaraw@gpg.gov.za	yes
Mptheng Janet Senokoane-Malay	Assistant Manager	Sedibeng District- Waste Management	(016) 427-1015/6/7	(016) 427-1014	072 312 6005	janetts@lekoa.co.za	
Msiza Susan							
Mtetwa W Mr	Acting Assistant	Tambo Memorial	(011) 898-8314	(011) 892-0358	082 420 1715	ceceliam@mweb.co.za	
Mthetwa Dr	Project Co-ordinator	GEM	(011) 403-7666	(011) 403-7563		dmthethwa@gem.org.za	
Mzimba Wiseman	Waste Inspector	Mogale City	(011) 951-2000	(011) 660-1507			yes
Ndlovu L Mrs	Infection Control	Carletonville Hospital	(011) 787-2111 x 2227	(011) 787-4120	083 783 2111		yes
Ndluvu Nomqbelo	Environmental Health Officer	Central	(011) 355-3477	(011) 355-3338	02 967 5235		
Ngobeni K B	Enviromental Health Practitioner	Gauteng Health	(012) 303-9192	(012) 303-9196	082 707 9182		
Nieuwoudt CWA	Strategic Executive: community Services	Merafong City	(018) 788-9807	(018) 788-9853	082 920 5222	cwanieuwoudt@merafong.co.za	
Nkomo Khethiwe	CPN	Sizwe Tropical Disease Hospital	(011) 531-4384	(011) 882-9992			
Nuiwenhuysen H J	Chief Environmental Health Officer	Emfuleni Local Municipality	(016) 988-1064	(016) 988-1531	083 417 2218		
Otto, Kobus		KO & Ass.	(011) 391-5665	(011) 391-5666	823769673	jbotto@global.co.za	yes
Oxenham David	Member	Envirocin Pet Cremation	(011) 708-2458	(011) 708-2863	082 389 9950	envirocin@iafrica.com	yes
Pather Thya		DWAF	(012) 392-1380	(012) 392-1359	082 809 5729	-	
Pietersen H B		Midrand MLC	(011) 237-8050	(011) 237-8040		harryp@joburg.org.za	
Potgiete Willie	Member	Ecopot	(011) 726-7933	(011) 482-5500	082 577 1827	willie@potgieter.co.za	
Potgieter S E Ms	OHS Co-Ordinator	Netcare	(012) 330-0324	(012) 331-2558	082 321 1408	potgietjhj@mweb.co.za	yes

Contact Person	Postion	Company	Tel No	Fax No	Cell No	E-mail	Attendance
Pretorius Kobie	Deputy Manager	City of Tshwane	(012) 308-0550	(012) 308-0503	082 786 0869	kobiep@tshwane.gov.za	
Pretorius Rudi	Assistant Director	Tshwane			082 807 6876	infect@mweb.co.za	
Pringle P Mr	Attorney	LRC Legal Resource Centre	(011) 836 9831	(011) 836-8680	-	grossouw@evertrade.co.za	
Rama Dhiraj	Director	DACEL	(011) 355 1903	(011) 355 1903	082 373 7706	dhirajr@gpg.gov.za	Yes
Ramathar Sharmaine	Project Secretary	GDACEL	(011) 355-1673	(011) 355-1663	082 683 2067	sharmainer@gpg.gov.za	
Rasesemola Nomathamsanqa	HCRW Officer	Chris Hani	(011) 933-0255	(011) 933-9795	082 703 6349		
Raubenheimer R T	Executive Cahirperson	Pharmaceutical Society of South Africa	(012) 348-6713	(012) 348-6713	082 575 2222	htr@pharmail.co.za	yes
Rossouw G	Sales Manager	EMW	(011) 613-8115	(011) 613-8182	083 607 3286	grossouw@evertrade.co.za	
Sanga Desire	Environmental Health Practitioner	Mogale city Local	(011) 951-2037	(011) 665-1781	083 528 0560		
Segone Joshua		CWM	(011) 837-8838	(011) 839-3854	083 603 368	joshs@cwm.co.za	
Sharon Molefe	Environmental Officer	DEAT	(012) 310-3949	(012) 320-0024	082 881 1454	smolefe@deat.gov.za	
Sibanda A Mrs	Infection Control Nurses	South Rand Hosptal	(011) 681-2034	(011) 435-0038			yes
Sibondana Matsietsi	Senior Admin Officer	GDACEL	(011) 355-1949	(011) 355-1663	082 588 9252		
Sibongile Mathibela	Healthcare Waste Officer	DOH: Cullinan Care and Rehabilitation	(012) 734-1038	(011) 734-1040	072 216 4640		
Sithole L M Mr	Facility Manage	Kopanong Hospital	(016) 428-7086	(016) 428-1148	082 323 1663		yes
Slabbert Sharon	Executive Officer	Hospital Association of SA	(011) 478-0156	(011) 478-0410	083 267 7480	sharon@hasa.co.za	
Smith Ron	Sales Consultant	Compass Waste Services	(031) 700-5655	(031) 700-5663	082 809 7097	compass@compass.za.net	yes
Soeter Jane	National Infection Control Co-Ordinator	Netcare	(011)489-1242	(011) 489-1205	082 7856119	jsoeker@netcare.co.za	yes
Stevens Charles	Snr. Environmental Ehalth Practitioner	Randfontein Local Municipality	(011) 411-0164	(011) 412-4117		renegordon@randfontein.org.za	yes
Stevenson B Dr.		SA Veterinary Association	(011) 609-3091	(011) 452-2507	082 463 3690	bruce@stfrancisvets.co.za	yes
Thage D D	Kalafong Hospital	Waste Management Officer	(012) 318-6865	(012) 373-4712	083 325 6004		
Thieme Andreas	Director	Saubatech	(011) 794-8798	(011) 794-8797	082 457 6858	-	
Thomson Brian Mr.	Macro Tech		(011) 433-2013	(011) 433-2017	083 409 7925	macrotech@global.co.za	
Tsou Aaron	PEO	DACEL	(011) 355-1946		073 338 8821		
Van As Hennie Clr	Councillor	Randfontein Local Municipality	(011) 411-0305	(011) 412-4117	03 652 5742	hennie.vanas@randfontein.org.za	yes
Van der Merwe Rothney	Consultant	CLINX Waste	(011) 902 9700	(011) 902 9700	084 5177179	-	yes
Van Staden Glen	Sales Manager	Sanumed Healthcare	(011) 422-2560		083 675 1616	glenv@millenium-waste.co.za	

Contact Person	Position	Company	Tel No	Fax No	Cell No	E-mail	Attendance
Van Staden Mrs	HCW Assistant	Tambo Memorial	(011) 898-8314	(011) 892-0358			
Van Zyl Sue	Project Co-ordinator	Group for Environmental Monitoring	(011) 403-7666	(011) 403-7563	082 372 2497	sue@gem.org.za	yes
Venter A Ms	Environmental Health Practitioner	Gauteng Health	(012) 303-9192	(012) 303-9196	082 376 0605		yes
Vermaak J S	Chief Environmental Health Officer	Merafong City	(018) 788-9807	(018) 788-9853	082 577 5903	spieterse@merafong.co.za	
Vian Belinda	Infection Control & Occupational Health	Dental School UP	(012) 319 2644	(012) 321-6598	084 505 9593	bvian@medic.up.ac.za	
Warren Liz	Deputy Director	DACEL	(011) 355-1927		082 330 40 13	-	
Xaba Saki Mr	OHS Officer	Far East Rand Hospital	(011) 817-1426	(011) 817-3525	083 494 1711		
Yawich Joanne	HOD	DACEL	(011) 355-1440	(011) 333-0667	082 571 5337	joanney@gpg.gov.za	
Yousefi Vali		NCOH, DoH	(011) 720-0209	(011) 725-5324		yousev@health.gov.za	
Nkomo Zenzo	Med Waste Africa	Ama Trading CC	(011) 337-5410	(011) 337-5410	082 844 0524		
Nekhavhambe Amos		Ekuruleni Local Council	(016) 988-1064	(016) 988-1531			
Gugu Ntse		Itireleng Clinic	011 988 0304	011 988 9195			Yes
Patrys Laubscher		Anglo Gold		(018)4786223	082 3399170	palaubscher@anglogol.co.za	Yes
Themba Mtshali		Westonaria LM	(011)278 3105	(011)754 1150	082 2579446		Yes
Alice Sibanda		Dr Y D Hospital	(011)951 6053	(011)953 2000	083 522 5247		Yes
Khanyi Duke		Sanumed	(011)422 2560		082 454 1539		Yes
Refilwe Tshabalala		Sedibeng District	(016)950 6118	(016)9506034	082 457 6039		Yes
Agnes Mnguni		Marie Stope SA	(011)838 3271/2	(011)838 3278	082 9014009	agnesmn@mweb.co.za	Yes
Kefilwe Ralesego		Mogale City	(011)410 7711	(011)4104593	084 5808541		Yes
Ofentse Relesego		Ikageng HBC			073 1966673		Yes
Joa van der Merwe		ClinX Waste Management	(011)902 9700	(011)902 9700	082 3316421		yes
Mr Senokwane Maloy		Sedibeng District Municipality	(016)988 1064	(016)427 1014	082 5602306		
N Koning		GEM	(011)403 7666	(011)403 7563	082 3722497	sue@gem.org.za	