

## Assessment and National Report of Existing Healthcare Waste Management Practices

### ALBANIA



## DEVELOPING AN EU STANDARDISED APPROACH TO VOCATIONAL QUALIFICATIONS IN HEALTHCARE WASTE

With the support of the Lifelong Learning Programme of the European Union

Grant Agreement No 541982-LLP-1-2013-1-UK-LEONARDO-LNW

<b>Deliverable number</b>	3.2
<b>Dissemination level</b>	Four (Public)
<b>Delivery date</b>	31/09/2014 v.1
<b>Status</b>	Version 1
<b>Author(s)</b>	ICERMS Limited



## Contents

Chapter 1 Executive Summary.....	3
Chapter 2 Summary of Audit Findings.....	4
Albania.....	4
Lezhe Regional Hospital.....	4
Vlore Regional Hospital .....	5
Durrës Regional Hospital .....	5
Tirana University Hospital Centre – Mother Teresa.....	6
Elbasan Regional Hospital.....	7

## Chapter 1 Executive Summary

The standard on the overarching Albanian public healthcare system is not good and it suffers from chronic underfunding. As a consequence conditions in healthcare facilities are often poor and levels of corruption are high.

There is a blossoming private sector and standards in these facilities are better than the state sector. These private sector hospitals are Greek and Turkish in origina with one of Albanian origin and backed by Italian expertise.

In waste management erms there are good laws in place but sadly these laws, as is often the case in Albania, are not implemented nor are they enforced by the state regulatory authorities. In some cases enforcement is carried out to serve apolitical purpose and the fines levied are purely to swell the coffers of the regulator nothing more. Court cases for offenders, normally hospital directors, are unheard of.

Against this backdrop the management of healthcare wastes is sadly not a priority and international efforts to build capacities and assist with capital investments have largely fallen well short of expectation. Most of these well intended projects fall flat because the Albanian healthcare institutions do not have the resources, in the form of core funding, to operate the systems or equipment put in place to improve the healthcare waste management situation in the country.

Staff are briefly engaged and competencies are built during these international interventions but they lack sustainable funding and as a consequence staff become demoralised; equipment falls into disrepair and consummables run out resulting in system collapse.

The waste management situation is that with this system failure we see no segregation and all healthcare waste going to the municipal waste route which in most cases ends up on a dumpsite operated by the municipality. At these site healthcare waste are scavenged by the Roma community who are also able, in most cases, to scavenge the wastes at the hesalthcare facilities themselves.

These human scavengers are responsible for most of the recycling collections in Albania. They are the unofficial collectors for the Albanian recycling companies and this is the only way that materials recycling occurs in Albania.

## Chapter 2 Summary of Audit Findings

### Albania

#### General description of the Health Care Units been audited

The table below summaries the audited facilities and their specific localization.

	Facility	Position in the country	Person in charge of HCWM	Auditor Name
1	Lezhe Regional Hospital	Regional Hospital	Chief Nurse	Scott Crossett
2	Vlore Regional Hospital	Regional Hospital	Infection Control Nurse	Scott Crossett
3	Durres Regional Hospital	Regional Hospital	Chief Nurse	Scott Crossett
4	Tirana University Hospital Mother Teresa	Tirana	Healthcare Waste Manager	Scott Crossett
5	Elbasan Regional Hospital	Tirana	Chief Nurse	Scott Crossett

These audits were conducted by ICERMS as part of contracts between the company and the World Health Organisation; the Before the audits took place, SINERGIE provided all the people in charge of the Western Balkans Infrastructure Investment Fund and the United Nations Cleaner Production Programme between 2011 and 2013. The full audit outputs are the subject of separate reports to those financing agencies.

The five hospitals chosen for the waste management audit were selected on the basis of their status and of their different capacities in terms of waste treatment. The table below shows the general information details on each of the 5 facilities.

#### Lezhe Regional Hospital

Lezhe Regional Hospital is the smallest of all the regional hospitals with only 10 departments. Unlike Vlore Regional Hospital, the waste disposal company for infectious waste is far less reputable and do not uphold the same standards as Meditel. Secondary equipment is not provided by the waste disposal company, and the exact specifications of the waste they collect is not clear, therefore almost all of the waste produced at the hospital, is taken away by the company.

The Institute of Public Health in Tirana provides sharps boxes and disposes of the filled containers separately from the other waste disposal company. These sharps boxes are used in each of the departments. Anatomical waste is returned to the patient, or the family of the patient, in a plastic bag. Waste segregation is fairly good, although there is obvious room for improvement. PPE is not routinely used and the staff members have a very limited knowledge of waste management practices and the risks associate with infectious healthcare waste.

There are very few storage rooms, and the ones that do exist are cluttered and unorganised making them unsuitable for waste storage. The secondary equipment in place is typically in good repair and is usually clean.

## Vlore Regional Hospital

Vlore Regional Hospital benefits from a contract with Meditel for the treatment of infectious (including anatomical from the maternity ward) waste. Meditel provide the consumables (sharps boxes, infectious waste boxes and yellow bags) and replace them after they uplift the waste for treatment. There is a freezer within the maternity ward where the placentas are stored, before being uplifted by Meditel. In all other departments, anatomical waste is returned to the patient, or the family of the patient, in a plastic bag.

Segregation practices are relatively average. A fair attempt has been made to segregate waste types into different waste streams; however a lack of education has hindered the success of this. Furthermore, the distribution and use of the secondary equipment provided by Meditel is disorganised in many departments meaning that the correct segregation practices are not always carried out.

For the most part, the waste collection equipment is kept in a suitable area, and is normally clean and in a state of good repair.

Staff members do not wear gloves or any other personal protective equipment as a matter of course, and training is not carried out routinely.

There is room for improvement with regards to waste management practices; however there is, at the very least, a foundation on which a new and functionally correct system can be built.

## Durres Regional Hospital

Segregation of Healthcare Waste at Durres Regional Hospital is determined by an order from the hospital directors. The following are the key points from that order:

- In order to improve the environmental impact of the hospital and the quality of working environment within the hospital a new waste management system is being introduced at the hospital.
- All members of staff have a responsibility to make sure that wastes being generated as a result of the treatment of patients at the hospital are managed safely and disposed of in accordance with national legislation.
- It is important that we all recognise that potentially infectious healthcare waste pose a hazard to our own health and to the environment if they are not managed correctly.
- The new healthcare waste treatment centre at the hospital will ensure that all potentially infectious wastes is treated and sterilised before leaving the hospital for disposal.
- In this regard we are now implementing a system of segregation within the hospital and it is imperative that all members of staff comply with the simple segregation instructions. Chief Nurses will ensure that staff within their departments following the segregation instructions which are being placed at strategic waste generation points throughout the hospital and are in the form of a simple segregation chart.
- All general or municipal waste will be placed in black bags. All soft infectious waste will be placed in yellow bags and lastly all sharps waste will be placed in the sharps boxes provided. The specific items of waste to be placed in each colour coded waste receptacle are highlighted in the waste segregation chart.

- The waste segregation system will be implemented with the support of the hospital waste manager and the hospital waste working group. The performance of the system will be monitored and supervised by the hospital hygiene inspectorate. Copies of the segregation chart are available from the Chief Nurse, Hermion Dabaj.
- Compliance with this order is mandatory and failure to comply with this segregation policy may result in disciplinary proceedings.

## Tirana University Hospital Centre – Mother Teresa

The Tirana University Hospital Centre – Mother Teresa (TUHC) has seven different functioning hospitals, and a new hospital which is yet to be opened for use.

In each of these seven hospitals, a new waste management system was implemented for the correct management of infectious waste. This was done in accordance with the installation of new infectious waste treatment technology; installed by Hydroclave.

Secondary resources were purchased, and relevant training was carried out for all the necessary parties involved (e.g. Hydroclave operators, nursing staff, waste managers, etc.) before the new system was fully implemented.

Over the last few months, there has been a real push to get the system, not just operational, but to get the system working correctly. To ensure that the new system was functioning correctly, two assessments were carried out; a system review and a final full audit of the new system.

The first assessment allowed the experts to provide guidance and to tackle poor management/practice issues that were still in place before the final assessment took place. Not every department had a member of staff present at the training courses, so not every department had the appropriate beginning. However, they did receive guidance from the experts, and the members of the waste working group during the implementation of the new system.

The system review and evaluation was carried out one month before the final review. The experts visited a selection of departments from each of the hospitals, along with the hospital's designated waste manager.

During this stage a number of problematic issues were highlighted, including:

- Training deficiencies
- Poor attitudes
- Incorrect secondary equipment allocation
- Poor segregation practices
- Poor waste management practices

During the final performance audit, all departments in each of the seven hospitals were visited and assessed. This was done over a five day process. The results were recorded and the following findings were highlighted.

- The attitude to waste management had improved in many departments, as the nurses seemed keen to bring about change, and to learn the new system. In comparison to the system review, the final performance audit demonstrated a significant improvement in waste management practices.

- It was found that some of the departments were conducting their own internal training for the nurses for correct waste management practices on a regular basis.
- The condition of the hospital buildings are directly related to attitudes regarding waste management. Buildings which are of very poor quality, reflect poor attitudes to waste management.
- There was an improvement in segregation practices, and the staff seemed to have a better knowledge of the waste. There had also been segregation charts allocated to each of the departments after the system review, which seemed to bring about an improvement in waste management knowledge.
- The biggest issue, in relation to infection control and waste management practices, was the re-capping of needles before placing them in the sharps box.
- The issues regarding secondary equipment allocation had significantly improved, and with a newly amended distribution plan for the next three months, the problems encountered during the first distribution process should be avoided.
- A new contract with Meditel for the disposal of anatomical waste is now in place.

Overall, there are still improvements to be made, which is to be expected. Some extra training or awareness raising sessions will have to be conducted, by the waste working group, where there is knowledge gaps within departments.

Additionally, poor segregation practices have caused problems with the Hydroclave treatment technology, as items which should not be put in the Hydroclave are going into the infectious waste stream, causing the Hydroclave to become blocked. This has an impact on the treatment cycles, as the machine cannot operate until the problem is fixed, so the waste must remain in the treatment facility until the Hydroclave is operational again.

As part of the duties of the waste manager and the waste working group, regular audits will also have to be carried out to ensure the correct management of healthcare waste.

The Hospital has a new Environment Department and a recognized waste manager who chairs a Waste Working Group for Healthcare Waste Management. The main objective of the working group is to clarify the role and the task of each stakeholder regarding proper management of healthcare waste within existing organizational chart of the Hospital.

## Elbasan Regional Hospital

Elbasan Regional Hospital has an incinerator on site, and all perceived hazardous waste is destroyed by incineration. Waste within the hospital is segregated into at least two or three waste streams however, this segregation is not standardised across the departments. In some cases there were as many as four or five waste bins for “different” waste types. Typically there were three waste streams: sharps waste, infectious waste and non-infectious waste.

In many cases the location of the waste collection equipment was in the hallway, which is unsuitable and there were only a few waste storage areas which were suitable or had the potential to be suitable.

The staff members have limited knowledge on healthcare waste, and segregation practices are fair but improvements can be made. Personal protective equipment is not always used by doctors, nurses and sanitary staff.

A register of waste production is kept in each department and also by the incinerator operators.

No yellow bags are used for the collection of infectious waste, and bags containing infectious waste are only distinguished by a makeshift label, made from medical tape.

Again, there is a very basic system in place which can easily be improved on, on condition that adequate training and the correct consumables are provided.

The director of the hospital was not met on this occasion and is proving to be a difficult contact in this project. Instead, the head nurse assisted us with a tour of the hospital.

**Statistical data on the findings of the audits**

Name/Category	Number of Staff at Hospital			Number of beds	No of Departments	Number of outpatients/day	Number of waste contractors	Waste Treatment Capacity
	Total	Medical	Non-medical					
<i>Lezhe Regional Hospital/Secondary</i>	218	174	44	174	13	NK	2	None
<i>Vlore Regional Hospital/Secondary</i>	392	362	30	345	15	NK	1	None
<i>Durres Regional Hospital/Secondary</i>	410	312	98	378	18	NK	1	Incinerator
<i>TUHC Mother Teresa/Tertiary</i>	1988	1571	417	1277	74	NK	3	Autoclave
<i>Elbasan Regional Hospital/Maternity</i>	508	386	122	357	18	NK	1	Incinerator

In terms of the quality of HCW management, the following table summarizes the key performance indicators.

	<b>PPE Worn by Staff</b>	<b>Level of Staff Awareness to HCWM issues</b>	<b>Availability of Waste Segregation Equipment</b>	<b>Location of Waste Segregation Equipment</b>	<b>Visibility of Waste Segregation Chart</b>	<b>Waste Segregation in Practice</b>	<b>State of waste collection equipment</b>	<b>Waste Uplift</b>	<b>Waste Storage</b>	<b>Internal Waste Transfer Note</b>
<i>Lezhe Regional Hospital</i>	Y	A	PB SB	S	V	3	PR	S	U	NU
<i>Vlore Regional Hospital</i>	Y	A	PB SB	S	V	3	PR	S	U	NU
<i>Durres Regional Hospital</i>	Y	A	PB SB	S	V	3	PR	S	U	NU
<i>TUHC Mother Teresa</i>	Y	A	PB SB	S	V	3	PR	S	U	U
<i>Elbasan Regional Hospital</i>	Y	A	PB SB	S	V	3	PR	S	U	NU

## **Hospital Waste Management of Specific Materials**

### **Waste contractors**

All the facilities employ only 1 waste contractor with the exception of facility 4 which is the only tertiary level hospital which has 3 waste contractors. This on account of the fact that it produces, radioactive waste and cytotoxic/cytostatic material. Facility 1 has 2 waste contractors the municipality for non hazardous waste and a private contractor for all hazardous waste. They are the only hospital not to have in house treatment capacity. All non hazardous wastes are managed by the municipal waste management company.

### **Material Inputs to the Hospital**

The hospitals do not yet have a procurement system that ensures that hazardous materials are procured on the basis of any defined procurement policy related to sustainability and environmental risk. This leads to problems with the management of hazardous materials and these are often inappropriately stored and quickly become a waste product as they either degrade or are kept beyond their use by dates.

### **Wastes Produced by the Hospital**

Only the tertiary facility TUHC Mother Teresa produces Cytotoxic and Cytostatic wastes as well as radioactive wastes. The other hospitals all produce the waste materials on the list in the addit questionnaire. No records are kept of hazardous material inputs to the facilities.

### **Discharges to drain and discharge records**

All the facilities discharge liquid wastes directly to drain. There are no waste water treatment facilities in Albania with the exception of a very small facility near Durrës. Investments in this regard across the country are planned. No records of discharges are kept.

### **Hospital Waste Disposal**

In the case of the facilities audited all non hazardous wastes is contracted to the municipal waste company and in this regard all non hazardous waste are therefore taken to the municipal landfill sites for disposal.

All other hazardous waste are disposed of via the hospitals in house treatment/disposal routes. Facility 1 does not have treatment capacity and therefore all hazardous wastes are managed by a private contractor. In this case the final disposal route is via autoclave.

### **Waste Storage**

All non hazardous waste is storage in 1100l metal storage bins in designated locations within the hospital grounds. These locations are uplifted from on a daily basis by the municipal waste companies.

Hazardous wastes from treatment/disposal at the hospital; own waste treatment centres are delivered directly to those points where they are processed the same day they are deposited there.

In the case of Vlore Regional Hospital the wastes which are to be collected by the contractor are uplifted directly from storage locations within the hospital.

Only in the case of TUHC Mother Teresa are their designated interim storage locations within the hospital. In all other cases wastes are collected from their points of generation and taken directly to external storage points by the hospital cleaning staff.

### **Spillage's**

Spillages occurring within the healthcare facilities are managed by the cleaning staff BUT there are no formal spillage procedures.

In the case of TUHC Mother Teresa the Municipal cleaning company disinfects the external storage areas from where it uplifts the waste. This is done using a disinfectant powder and is done on a daily basis.

### **Resources, Procedures and Training**

In all cases of the facilities visited there are significant issues with resourcing; procedures and training.

All hospitals lack an appropriate budget for healthcare waste management and as a result a significant proportion of hazardous waste is deposited into the non hazardous waste stream managed by the municipal waste management companies. This is a real issue as the disposal sites are nothing more than dump site with the exception of Tirana where there is a modern landfill site.

There are also a lack of procedures in most hospitals however where procedures do exist the lack of financing, for different coloured plastic bags for example, means that the procedures are rarely implemented.

There is a law which states that all medical waste should be segregated between hazardous and non hazardous and managed accordingly. This law is ignored, even by the hospital sanitary inspectors, and it is only if the hospital director has an environmental interest will money be spent on this issue.

There have been a number of international efforts to improve the situation through investments in training, infrastructure, equipment and materials however these all fail because the Albanian system cannot afford to fund these expensive pieces of equipment. Waste management unfortunately is just not a priority. Given the state of the healthcare waste system overall it is no difficult to see why.

### Hospital Waste Management of Specific Materials

Asbestos	YES	NO	Unknown/not applicable	Comments
Please specify any equipment in the Hospital that may contain asbestos? (E.g. kilns, ovens, heat tiles etc.)	0%	100%	0%	No equipment containing asbestos.

Batteries	YES	NO	Unknown/not applicable	Comments
Does the Hospital use any of the following batteries and how are they disposed of?				
Lead acid	100%	0%	0%	All Batteries are disposed of as municipal waste
Nicad (rechargeable)	100%	0%	0%	
Lithium	100%	0%	0%	
Mercury	100%	0%	0%	

Clinical Wastes	YES	NO	Unknown/not applicable	Comments
Are wastes classed as 'clinical' produced by the Hospital?	100%	0%	0%	
From what operations/processes? How are they disposed of?				Clinical waste is produced from specific activities of each department and from medical care and assistance. They are disposed of either by incineration or autoclave which are inhouse waste treatment/disposal options. In the case of Vlore Regional Hospital by specialized contractors.
Does the Hospital have its own written procedures in place to advise staff on Clinical Waste handling, transportation and disposal? If so please attach a copy.	100%	0%	0%	

Cleaning and Degreasing	YES	NO	Unknown/not applicable	Comments
-------------------------	-----	----	------------------------	----------

Is any equipment contaminated with mineral oils cleaned or degreased in the Hospital? Please specify equipment and cleaner/degreaser used.	0%	0%	100%	
Does any effluent leaving the Hospital contain mineral oil equal to or greater than 0.1%? From what operations?	0%	0%	100%	
Are paper towels, rags etc., contaminated with mineral oils or other substances classified as Special Wastes produced by the Hospital? How are they disposed of?	0%	0%	100%	

<b>Compressed Gas Cylinders</b>	<b>YES</b>	<b>NO</b>	<b>Unknown/not applicable</b>	<b>Comments</b>
Does the Hospital use compressed gas cylinders? Please list types.	100%	0%	0%	Types of compressed gas cylinders are: oxygen, CO2, nitric oxide, nitrogen.
Where are they stored prior to use/disposal?				They are stored in deposits and technical rooms. Cylinders are not disposed of since they are returned to the supplier.
Does the Hospital have any redundant cylinders which require disposal (other than by return to supplier)?	0%	0%	100%	

<b>Drum/Container Disposal</b>	<b>YES</b>	<b>NO</b>	<b>Unknown/not applicable</b>	<b>Comments</b>
How are empty containers that contain residues of their former contents disposed of?				Disposed of as scrap metal or if plastic taken back by the supplier and/or recycled
Do all of these drums/containers still have correct labelling e.g. contents, hazard data info etc.?	100%	0%	0%	
Are any containers which contained hazardous substances flushed out with water, solvents etc., to remove residues prior to disposal? Please specify and where the flushing effluent is disposed to.	0%	100%	0%	
Are any drums/containers in poor condition (rusty, blown ends etc.)?	0%	100%	0%	

<b>Equipment: Computer Hardware</b>	<b>YES</b>	<b>NO</b>	<b>Unknown/not applicable</b>	<b>Comments</b>
How is redundant Hospital computer hardware disposed of?				Redundant computer hardware is stored or disposed of a municipal waste.
Are "Duty of Care" / WEEE notes produced for disposal?	0%	100%	0%	
If computer equipment is disposed off-site, are hard disks (if present) wiped clean?	0%	100%	0%	For 2 facilities computer equipment is not disposed off-site so the question is not applicable.

<b>Equipment White Goods (fridges, cookers, washing machines etc.)</b>	<b>YES</b>	<b>NO</b>	<b>Unknown/not applicable</b>	<b>Comments</b>
How does the Hospital dispose of redundant 'white goods'?				They are disposed of to municipal waste or to a scrap metal merchant.
Are "Duty of Care" notices raised for their disposal?	0%	100%	0%	
Are 'scrap' refrigerators transferred to waste managers who remove the refrigerant before final disposal?	0%	0%	100%	

<b>Equipment: Other Electrical</b>	<b>YES</b>	<b>NO</b>	<b>Unknown/not applicable</b>	<b>Comments</b>
How is electrical equipment other than 'white goods' or computer hardware disposed of?				They are disposed of to municipal waste or to a scrap metal merchant.
Is equipment ever donated e.g. to a charity organisation or school?	0%	100%	0%	
Are "Duty of Care" notices raised for equipment disposal?	0%	100%	0%	

<b>Equipment: General</b>	<b>YES</b>	<b>NO</b>	<b>Unknown/not applicable</b>	<b>Comments</b>
---------------------------	------------	-----------	-------------------------------	-----------------

Other than 'white goods' or computer hardware, what types of waste equipment does the Hospital produce? Please specify.				The facilities produce furnishings and electrical equipment.
How is this equipment disposed of?				To the municipal waste or kept in storage.
Is equipment ever donated e.g. to a charity organisation? If yes please give details.	0%	100%	0%	
Are "Duty of Care" notices raised for equipment disposal?	0%	100%	0%	

<b>Emissions to Air</b>	<b>YES</b>	<b>NO</b>	<b>Unknown/not applicable</b>	<b>Comments</b>
Does the Hospital produce any specific emissions to air? Please specify and from what operations/processes they result from.	25%	50%	25%	Emissions are reported only by one structure with reference to activities related to pathologic anatomy. The hospital has few emissions as the building has district heating instead of boilers.
Have all release points been identified for all emissions?	25%	0%	75%	Applicable only for one facility.
Has any attempt been made to measure and record emissions?	0%	75%	25%	Emissions have not been mapped since they are scarce or not present.

<b>Fluorescent Tubes</b>	<b>YES</b>	<b>NO</b>	<b>Unknown/not applicable</b>	<b>Comments</b>
Does the Hospital dispose of any redundant fluorescent tubes? If so how are they disposed of?	100%	0%	0%	Fluorescent tubes are disposed to municipal waste.

<b>Glass Ware</b>	<b>YES</b>	<b>NO</b>	<b>Unknown/not applicable</b>	<b>Comments</b>
Is contaminated and non-contaminated waste glass segregated prior to disposal?	0%	100%	0%	
Are sharps boxes that comply with British Standard BS 7320 and UN3291: Specification for Sharps Containers used for the disposal of glassware?	0%	100%	0%	No. All sharps are disposed of into recycled water bottles or to municipal waste of glass

How is non-contaminated waste glass disposed of in the Hospital?	Municipal waste
How is contaminated waste glass disposed of in the Hospital?	Municipal waste

Laboratory Sharps	YES	NO	Unknown/not applicable	Comments
How are laboratory sharps contaminated with Special Wastes disposed of?				Cardboard boxes or recycled plastic drinks bottles.
How are uncontaminated laboratory sharps disposed of?				Cardboard boxes or recycled plastic drinks bottles.
Are sharps boxes that comply with British Standard BS 7320 and UN3291: Specification for Sharps Containers used for the disposal of glassware?	0%	100%	0%	

Medicines	YES	NO	Unknown/not applicable	Comments
Does the hospital use any “prescription only” medicines? Please specify.	100%	0%	0%	When patients are hosted by the hospital facility, all medicines are given under prescription.
How are medicines stored prior to use and disposal in the Hospital?				Medicines are stored according to the producers’ instructions and to internal procedures for the control of medicines (expiration date, package integrity).
How are they disposed of?				At present medicines are either in storage or have been disposed of to landfill or incineration if available.

Mineral Oils (waste engine, lubricating and hydraulic oils etc.)	YES	NO	Unknown/not applicable	Comments
Does the Hospital produce waste mineral or synthetic oils? Please specify:	0%	0%	100%	
Are any waste oils disposed of as Special Waste?	0%	0%	100%	

Are any waste oils recycled through a licensed contractor?	0%	0%	100%	
If so where and how are they stored?	0%	0%	100%	
Are Duty of Care notices produced for disposal?	0%	0%	100%	
If 'no' to all above how are waste oils disposed of?	0%	0%	100%	
How are empty waste mineral oil containers disposed of?	0%	0%	100%	

<b>Paints, Dyes, Inks, Enamels etc.</b>	<b>YES</b>	<b>NO</b>	<b>Unknown/not applicable</b>	<b>Comments</b>
Does the Hospital produce any waste paints, dyes, inks, enamels, etc.? Please specify.	100%	0%	0%	
If so how are they disposed of?				They are employed and managed by external companies that care also for the disposal. However mostly they are disposed of into the municipal waste stream.
<b>Pesticides</b>	<b>YES</b>	<b>NO</b>	<b>Unknown/not applicable</b>	<b>Comments</b>
Does the Hospital use pesticides? Please Specify.	0%	100%	0%	
Are pesticides stored according to statutory requirements (or BASIS standard)?	0%	0%	100%	
How are waste pesticides and/or their containers disposed of?				Not applicable.
Are/is it suspected that the Hospital stores pesticides containing DDT? Please give details.	0%	0%	100%	

<b>Photographic Materials</b>	<b>YES</b>	<b>NO</b>	<b>Unknown/not applicable</b>	<b>Comments</b>
Does the Hospital produce any photographic waste chemicals? Please specify.	100%	0%	0%	
How are they disposed of?				Discharged to sewer.
Are any photographic chemicals recycled?	0%	100%	0%	

<b>Plastics</b>	<b>YES</b>	<b>NO</b>	<b>Unknown/not applicable</b>	<b>Comments</b>
Does the Hospital produce plastic wastes from any of its operations? Please specify.	100%	0%	0%	Plastic wastes are classified as municipal waste according to the rules for separate collection.
Are any plastic wastes contaminated with Special Wastes?	0%	100%	0%	
How are they disposed of?				
<b>Polychlorinated biphenyls (PCB's)</b>	<b>YES</b>	<b>NO</b>	<b>Unknown/not applicable</b>	<b>Comments</b>
Is there any electrical equipment (pre 1986) within the Hospital containing/suspected to contain, PCB's (e.g. oil filled electrical switch gear, transformers, capacitors, fluorescent light ballast's/transformers, power factor correction devices, power supplies for lasers and radiography equipment, oil cooled welding equipment and fractional horsepower motors)?	0%	100%	0%	
If so has the unit/s ever leaked? Please give details/locations etc.?				Not applicable.
How often and by whom are these units inspected and maintained?				Not applicable.
Have any items containing PCB's ever been disposed of off-site in the past?				Not applicable.

<b>Poisons</b>	<b>YES</b>	<b>NO</b>	<b>Unknown/not applicable</b>	<b>Comments</b>
Are any poisons used within the Hospital?	0%	100%	0%	
Is there a dedicated poison store?				Not applicable.
How is access to it controlled?				Not applicable.
If no, how are poisons stored?				Not applicable.
Is an inventory kept of stored poisons?				Not applicable.
How are waste poisons disposed of?				Not applicable.

<b>Printer Cartridges and Ribbons</b>	<b>YES</b>	<b>NO</b>	<b>Unknown/not applicable</b>	<b>Comments</b>
Are printer cartridges and ribbons recycled?	0%	100%	0%	
If not, how are they disposed of?				To Municipal Waste Stream.

<b>Protective Clothing</b>	<b>YES</b>	<b>NO</b>	<b>Unknown/not applicable</b>	<b>Comments</b>
Is contaminated protective clothing disposed of according to the classification of its contamination?	100%	0%	0%	
If no, how is it disposed of?				Mostly this waste is autoclaved however it can in some cases end up as municipal waste.

<b>Radioactive Sources</b>	<b>YES</b>	<b>NO</b>	<b>Unknown/not applicable</b>	<b>Comments</b>
Does the Hospital have any radioactive sources? Please give details.	20%	80%	0%	Radioactive sources are related to X-ray equipment and CAT (computerised axial tomography).
How are radioactive sources/aqueous waste disposed of?				Radioactive sources are disposed of according to regulations by the supplier.

<b>Scrap Metals</b>	<b>YES</b>	<b>NO</b>	<b>Unknown/not applicable</b>	<b>Comments</b>
Does the Hospital produce any scrap metals? Please specify: If yes how are they disposed of?	100%	0%	0%	They are disposed of by the contractors or by specialised firms. Scrap metals are related to plumbing fittings, handles, etc.
Are "Duty of Care" notices produced for materials disposed of as scrap metal?	100%	0%	0%	
Are ferrous and non-ferrous metals segregated prior to disposal?	0%	100%	0%	
Is a registered carrier used for disposal?	0%	100%	0%	

Has the disposal site been checked to ensure that it can accept scrap metal under licence or exemption?	0%	100%	0%	
---	----	------	----	--

<b>Solvents (including paint thinners, anti-freeze, degreasers etc.)</b>	<b>YES</b>	<b>NO</b>	<b>Unknown/not applicable</b>	<b>Comments</b>
Does the Hospital use solvents? If so what types?	0%	0%	100%	
Are different solvents segregated in storage (e.g. chlorinated and non-chlorinated)?				Not applicable.
Are waste solvent containers adequately labelled (including hazard data info)?	0%	0%	100%	
Is any equipment cleaned using solvents? Please specify?	0%	0%	100%	
What happens to the solvent effluent and any contaminated paper towels etc., produced by the cleaning?				Not applicable.
How are waste solvents disposed of?				Not applicable.

<b>Hazardous Wastes Other than Solvents (see Hazardous Waste Disposal Guide for definition)</b>	<b>YES</b>	<b>NO</b>	<b>Unknown/not applicable</b>	<b>Comments</b>
Is specialist guidance on the identification of Hazardous Wastes produced by the Hospital available?	20%	80%	0%	
Please specify all types of hazardous wastes used in the Hospital other than solvents listed elsewhere:				Chemicals; Chemotherapy; Pharmaceuticals
How are Hazardous Wastes disposed of?				They are disposed of by specialised companies or through the municipal company or incinerated.
Are procedures to deal with the disposal of Hazardous Wastes adequately disseminated to hospital staff?	0%	100%	0%	
Are Hazardous Wastes properly identified, labelled and segregated to minimise risk during handling, storage, transportation, and disposal?	0%	100%	0%	
How are wastes stored in the Hospital prior to transfer? Is a record kept of their location in the Hospital?	0%	100%	0%	Wastes are stored in deposits.
How is access to this storage area controlled?				The area is closed and only accessible by authorized personnel.

On average how long are Hazardous Wastes stored within the Hospital before transfer or disposal?	Hazardous Wastes can be stored indefinitely. A recent clear out at TUHC disposed of a significant amount of laboratory chemicals/reagents dating back to the 1970's
What is the best and worst case scenarios?	

