

## Introduction

In 2010-11 it is estimated that the Victorian healthcare system generated 41,674 tonnes of waste. About 70 per cent was general waste, 20 per cent was recycled and 10 per cent was clinical waste. Clinical waste is the most expensive waste stream comprising on average two-thirds of total waste costs.

Waste audits are an essential waste management tool to enable healthcare providers to understand how their waste management system is performing, waste management practices across their sites and to verify waste data and costs provided by the waste contractor. The Department of Health has prepared this example waste audit specification to assist Victorian public healthcare services in undertaking waste audits.

The example specification is provided solely on the basis that healthcare services will be responsible for making their own assessment of the applicability of the information provided to their circumstances. Those relying on it are advised to verify all relevant statements and information and obtain independent advice where appropriate. The department does not accept any liability to any person for the information or advice (or the use of such information or advice) that is provided in this example tender clause or incorporated into it by reference.

## Example Specification

### Overview

The objective of the waste audit is to provide <Healthcare Service> with data on:

- Amount of waste generated and the waste types
- Levels of waste in waste containers
- Levels of correct segregation per ward/department
- Instances of contamination – providing specific detail of ward/department and materials and recommendations for resolution

The audit data will also allow <Healthcare Service> to:

- Identify strategies to reduce waste and identify waste diversion opportunities
- Understand how efficiently their waste management systems and procedures are operating
- Verify waste data and costs provided by the waste contractor

## Waste Audit Responsibility

The waste contractor shall be responsible for undertaking waste audits for the waste they are contracted to collect. The waste classifications are as follows:

- General Waste
- Recyclable Waste
- Clinical Waste

## Waste Audit Program

The waste contractor shall undertake three levels of waste audit for the duration of their contract as described below:

- Waste Audit - combined audit of all <Healthcare Service> sites on a bi-annual basis. The first audit shall be conducted within two months of the waste contractor being appointed.
- Waste Validation - combined audit of all <Healthcare Service> sites on a six monthly basis. The first audit shall be conducted six months after the waste contractor is appointed. <This audit is optional>
- Waste Assessment - targeted audit of <15 per cent> of all clinical areas every 6 months and <10 per cent> of all non-clinical areas every 12 months. The first audit shall be conducted within two months of the waste contractor being appointed.

<Healthcare Service> shall nominate the areas and sites to be audited.

## Waste Audit Methodology

The waste contractor shall undertake the waste audits in strict accordance with the methodology listed below.

### Audit Planning

#### Planning Meeting

An audit planning meeting shall be held with representative(s) from <Healthcare Service> at least 14 days prior to conducting any waste audit. The purpose of this meeting is to confirm:

- Scope of audit, i.e. waste type, site to be audited, department/ward to be audited
- Audit methodology
- Date of audit of each site
- That the waste contractor is using staff/consultants with waste audit experience.
- That all parties are prepared for the audit
- The sorting area(s) required for the audit
- Communication protocols
- Occupational Health and Safety (OHS) management
- Submission of Safety Risk Assessment and Safe Work Method Statements (SWMS)
- Waste streams applicable

## **Familiarisation Tour**

The waste contractor shall visit the selected sites at least 14 days prior to an audit being conducted. The purpose of this visit is to:

- Ensure the waste contractor is familiar with the site
- Visit department/wards and inform staff of what the audit requires
- Provide an opportunity to take observations on contamination of general waste containers, recycling containers, sharps containers and yellow-bag waste, and make observations on operational items such as bin placement and signage
- Identify any OHS issues such as overfilling and/or not appropriately locking sharps containers.

A representative(s) from <Healthcare Service> may choose to accompany the waste contractor during the familiarisation process.

## **Waste Audit**

### **General and Recyclable Waste**

Prior to conducting the audit, label each waste container with a unique ID number that identifies the waste container number, container type, waste type and department/ward.

Weigh all waste generated in a 24 hour period at each site. The total weight shall be determined by weighing the waste in existing waste containers and then deducting container weight to arrive at the net weight.

Record the waste container ID number, container type, waste type, department/ward, gross weight and net weight in the audit data sheet.

Conduct a composition audit (by mass) on a representative sample of waste containers using the waste categories listed in the *Victorian Public Health Service Data Reporting Tool*. The waste contractor shall sample from each site, whichever is the greater, three waste containers or 20 per cent of all waste containers.

For each waste type, record the mass in kilograms to two decimal places. The percentage composition of each waste type shall then be calculated.

Record the amount of contamination present by waste type.

The total weight of the waste samples shall be compared to the net container weight for verification purposes. The audit shall be deemed acceptable if a discrepancy of less than or equal to 10 per cent is achieved. Anything greater and the audit shall be repeated with a different set of waste containers.

### **Clinical Waste**

Prior to conducting the audit, label each clinical waste container with a unique ID number that identifies the waste container number, container type, waste type and department/ward.

Weigh all clinical waste generated in a 24 hour period at each <Healthcare Service> site. The total weight shall be determined by weighing the waste in existing waste containers and then deducting container weight to arrive at the net weight. Where larger waste containers (i.e. 660 litre bins) are used, this may require removal of the clinical waste bags for individual weighing.

Record the waste container ID number, container type, waste type, department/ward, gross weight and net weight in the audit data sheet.

Open the clinical waste bags and conduct a <visual contamination assessment> / <physical sort> to quantify the contamination rate of the clinical waste stream.

The waste contractor shall calculate the additional cost of disposing non-clinical waste through the clinical waste stream across <Healthcare Service> based on the contamination rates.

## **Sharps**

Record the weight of the closed sharps bins

Conduct a visual assessment of the level of contamination in the sharps container. Sharps are not to be physically handled.

Note that container weights should be included in the sharps weight if the facility uses disposable containers and excluded if the facility uses reusable sharps containers.

## **Waste Validation <Optional>**

A key assumption within the *Victorian Public Health Services Waste Reporting Tool* is a predetermined waste density, which assumes that all waste containers are full when collected. To validate this assumption it is necessary to conduct audits of waste containers bins to verify their density.

The validation audit shall be undertaken as follows:

- Weigh all waste generated in a 24 hour period at each site. Total weight shall be determined by weighing the waste in existing waste containers and then deducting container weight to arrive at the net weight.
- Record the waste container ID number, container type, waste type, department/ward, gross weight and net weight in the audit data sheet.
- Calculate the waste density of each waste container by waste type.

## **Waste Assessment**

The waste contractor shall conduct a visual assessment of the level of contaminants in all waste bins in all departments/wards.

The waste contractor shall record the type of contamination as well as the estimated level of contamination by mass.

## **Waste Audit Report**

The waste audit report shall be prepared by the waste contractor and shall include the following:

- Waste audit/assessment details
- Date and location of waste audit
- Type of audit
- Waste Classification
- Audit methodology
- Audit results
- Sample size
- Waste composition by mass (kg) and percentage of sample
- Level of contamination by mass and percentage of sample
- Assessment observations and photographs

All reports shall be submitted as electronic files as a PDF file as well as in a manipulable file format (i.e. MS Word, MS Excel).