

123 Sample Corp.

Waste Assessment Report

SUBMITTED TO: JOHN SMITH
CONDUCTED BY: Everest Environmental Group Inc.
DATE: March 1, 2010

I. GENERAL INFORMATION

Name of Owner and/or Operator of Entity(ies) and Company Name: 123 Sample Corp.			
Name of Contact Person: John Smith		Telephone #: (123) 456 -7890 x. 111	Email address: Smith@123SampleCorp.com
Street Address(es) of Entity(ies): 123 Address Line			
Municipality: City, Province Canada A1A 1A1			
Type of Entity (check one)			
<input type="checkbox"/> Retail Shopping Establishments	<input type="checkbox"/>	Hotels and Motels	<input type="checkbox"/>
<input type="checkbox"/> Retail Shopping Complexes	<input type="checkbox"/>	Hospitals	<input type="checkbox"/>
<input type="checkbox"/> Office Buildings	<input type="checkbox"/>	Educational Institutions	<input type="checkbox"/>
<input type="checkbox"/> Restaurants	<input type="checkbox"/>	Large Manufacturing Establishments	<input checked="" type="checkbox"/>

II. DESCRIPTION OF ENTITY

123 Sample Corp.
<p>123 Sample Corp. is a manufacturer that produces salty snacks and fruit beverages. The facility is 165,000 square feet and employs 180 people. The facility runs various production lines that work 3 rotational shifts throughout the year. The average production line operates 24 hours a day 5 days a week. The chips production line runs 24 hours a day 7 days a week. The fabricated chip production line runs 24 hours a day 5 days a week and the popcorn production line runs 5 days a week 1 shift a day (8 hours). There is also a production line that manufactures canister chip containers.</p> <p>Packaging material for the various products produced at 123 Sample Corp. are not manufactured on site. 123 Sample Corp will be investigating the feasibility of using packaging with recyclable content.</p> <p>The 123 Sample Corp. head office and production facility also has two (2) cafeterias for its employees, office space and 13 washrooms in total.</p> <p>The current recycling program at 123 Sample Corp. includes cardboard, pallets (scrap wood), containers (drums and totes) and organics (juice, waste cooking oil and pre-consumer organics) recycling.</p> <p>There are also programs to recover florescent light bulbs, hazardous material and lab/testing food products.</p>

III. HOW WASTE IS PRODUCED AND DECISIONS AFFECTING THE PRODUCTION OF WASTE

Categories of Waste	How Is the Waste Produced and What Management Decisions/Policies Affect Its Production?
Paper Fiber	Generated by employees in the cafeterias and in office

	area. No recycling program in place to capture this material.
OCC (cardboard)	Generated in the production area. High volumes generated by de-packaging and packaging materials. There is a program in place to recover this material.
Boxboard	Generated in cafeteria, production area and office area. No recycling program in place to capture this material.
Aluminum food and beverage cans	Generated in cafeteria, production area and office area. No recycling program in place to capture this material.
Glass food and beverage bottles/jars	Generated in cafeteria, production area and office area. No recycling program in place to capture this material.
Steel food and beverage cans	Generated in cafeteria, production area and office area. No recycling program in place to capture this material.
PET (#1) plastic food and beverage bottles	Generated in cafeteria, production area and office area. No recycling program in place to capture this material.
HDPE (#2) plastic jugs, crates, totes, drums	Generated in production area. No recycling program in place to capture this material.
Shrink Wrap (LEDP (#4) plastic film)	Generated in production area. No recycling program in place to capture this material.
Polystyrene (#6)	Generated in the cafeteria and office. No recycling program in place to capture this material.
Organics	Generated in the production area. There is a program in place to recover this material.
Juice	Generated in the production area. There is a program in place to recover this material.
Waste Cooking Oil	Generated in the production area. There is a program in place to recover this material.
Scrap Wood	Generated in the production area. There is a program in place to recover this material.
Steel Drums	Generated in the production area. There is a program in place to recover this material.
IT equipment/audio-visual equipment	Generated in the production area. No recycling program in place to capture this material.
Furniture	Generated in the office, cafeteria and production area No recycling program in place to capture this material.
Building/renovation material	Generated in the office, cafeteria and production area No recycling program in place to capture this material.
RESIDUAL (Garbage)	Generated in production area, cafeteria, offices and washrooms. Various misdirected material due to lack of recycling program

V. MANAGEMENT OF WASTE

Category	Waste to be Disposed	Reused or Recycled Waste
Paper Fiber	Staff may place in garbage bins	Staff place paper in garbage receptacles. Collection staff later collects paper.
OCC (cardboard)	Staff may place in bins or totes	Material is taken to baler and placed in trailer.
Boxboard	Staff may place in garbage bins	Material is placed in garbage receptacles.
Aluminum food and beverage cans	Staff may place in garbage bins	Material is consolidated and dumped in one of two compactors.
Glass food and beverage bottles/jars	Staff may place in garbage bins	Material is consolidated and dumped in one of two compactors.
Steel food and beverage cans	Staff may place in garbage bins	Material is consolidated and dumped in one of two compactors.
PET (#1) plastic food and beverage bottles	Staff may place in garbage bins	Material is consolidated and dumped in one of two compactors.
HDPE (#2) plastic jugs, crates, totes, drums	Staff may place in garbage bins	Material is consolidated and dumped in one of two compactors.
Shrink Wrap (LEDP (#4) plastic film)	Staff may place in garbage bins	Material is consolidated and dumped in one of two compactors.
Polystyrene (#6)	Staff may place in garbage bins	Material is consolidated and dumped in one of two compactors.
Organics	Staff may place in totes	Material is transported to on-site trailer for removal
Juice	Material is collected in drums	Material is collected in plastic totes
Waste Cooking Oil	Material is collected in drums	Material is collected on pallets in the loading dock for removal.
sScrap Wood	Material is stacked on a pallet	Material is collected in a central area on the loading dock
Steel Drums	Material is collected on a pallet	Material is collected in a central area on the loading dock.
IT equipment/audio-visual equipment	Material is placed on a pallet	Material is collected on pallets in the loading dock for removal.
Furniture	Material is placed on a pallet	Material is collected on pallets in the loading dock for removal.
Building/renovation material	Material is placed on a pallet	Material is collected on pallets in the loading dock for removal.
RESIDUAL (Garbage)	Material is placed in garbage bins	Material is consolidated and dumped in one of two compactors.

VI. OBSERVATIONS

Overall Material Generation

The results of the waste audit indicate that the facility produces 5280.4 MT of waste material per year. Of this amount, 706.7 MT per year is sent to landfill, and 4573.7 MT per year, is recycled.

Figure 1.0 provides the percentage distribution of the overall waste material generated at 123 Sample Corp., and incorporates both the garbage and recovered materials.

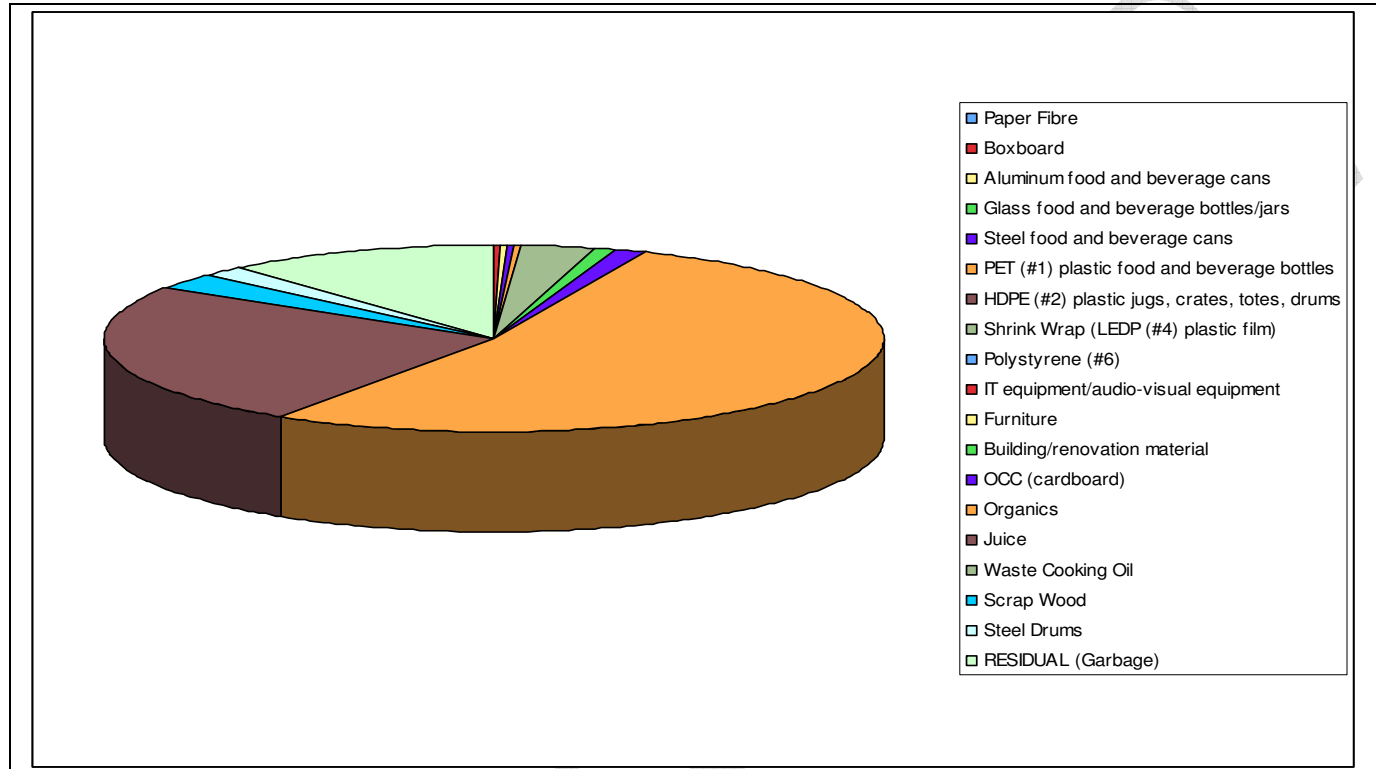


Figure 1.0. Percent distribution of total waste material.

Garbage Stream Material Generation

The annual total amount of garbage stream material is estimated to be 706.7 MT/year. The distribution of materials found in the facility's garbage stream is provided below in Figure 1.1.

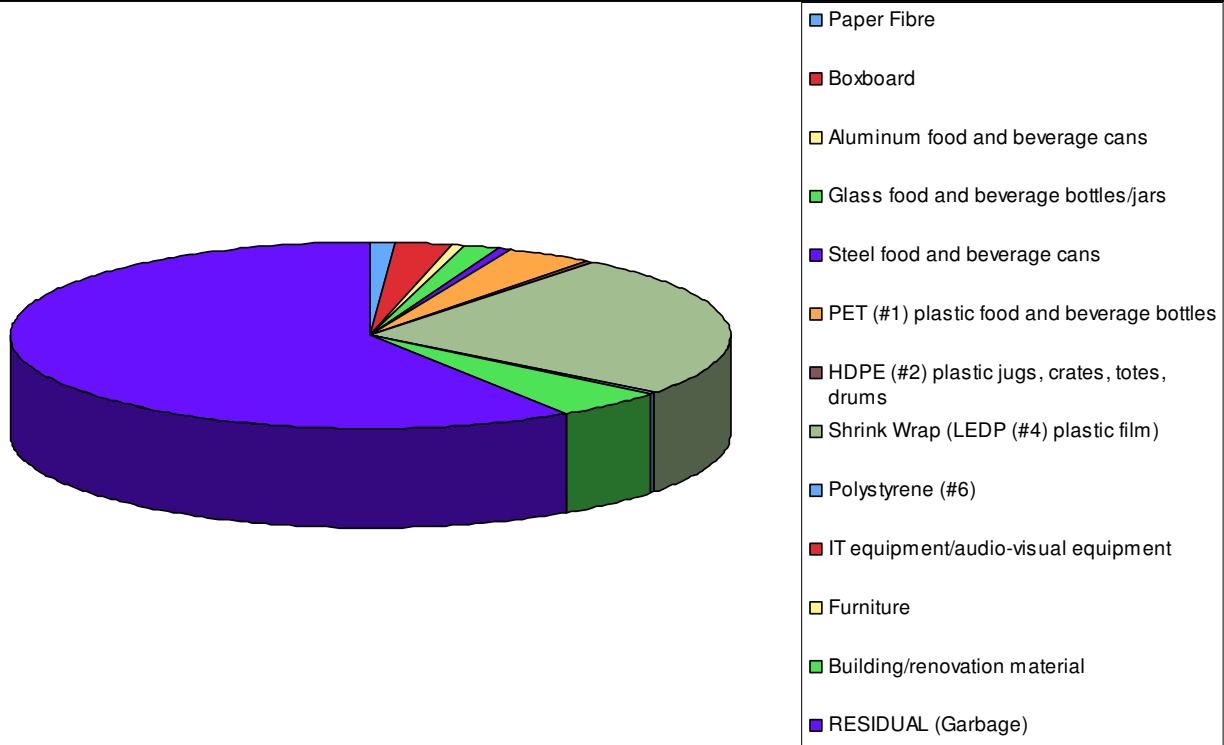


Figure 1.1. Percent distribution of garbage stream materials.

Recovery Stream Material Generation

The annual total amount of recovery stream material is estimated to be 4573.7 MT/year. The distribution of materials found in the facility's recovery stream is provided below in Figure 1.2.

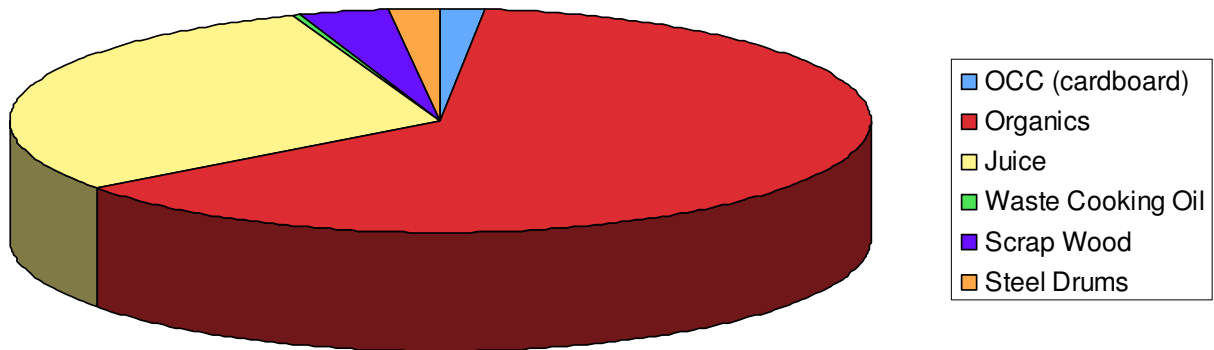


Figure 1.2. Percent distribution of recovery stream materials.

Untargeted Materials

Based on the results of the waste audit, untargeted materials represented a small but significant portion of the garbage stream. The untargeted materials observed included; paper fiber, boxboard, Aluminum food and beverage containers, glass food and beverage bottles/jars, steel food and beverage containers, plastic food and beverage bottles, plastic jugs, crates, totes, drums, shrink wrap, Polystyrene, IT equipment/audio visual equipment, furniture and building/renovation material.

In order to increase the diversion rate at 123 Sample Corp. and move to a zero waste facility new recovery programs must be developed. The subsequent Waste Reduction Work Plan will discuss the feasibility of new programs taking into account generation quantities, generation rates, handling and storage requirements, service providers, and, of course, cost.

Misdirected Materials

A waste management program that is operating at maximum recovery levels has no misdirected materials in garbage stream. The identification of these materials in the garbage stream represents an opportunity to recover more material, and thus reduce the amount of material being sent to landfill.

The misdirected recoverable materials observed in the garbage stream include; cardboard, organics and scrap wood. The Waste Reduction Work Plan will discuss Promotion and Education Programs to encourage higher recycling rates where programs are in place.

Maximum Recovery

Attaining maximum recovery requires that a facility achieve 100% capture of all recoverable materials, thereby maximizing its potential diversion rate. A diversion rate is a measure of the proportion of all outgoing material that has been diverted away from landfill. In place of landfill disposal, these materials are disposed of via existing recovery programs.

Diversion rate is calculated as follows:

$$\text{Diversion Rate} = \frac{\text{(amount recovered by facility)}}{\text{(total amount of material recovered and landfilled)}} \times 100\%$$

Based on the results of the waste audit, the current diversion rate at 123 Sample Corp. is 86.6%. However, through improved capture of recoverable materials in the existing recovery programs and development of new programming aimed at untargeted materials, the facility has the potential to achieve a Maximum Recovery diversion rate of 89.0%.

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