



Mobile Climate Control

2019 WASTE AUDIT & WASTE REDUCTION WORK PLAN

October 17, 2019

MOBILE CLIMATE CONTROL
7540 JANE STREET
VAUGHAN, ONTARIO

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November 5, 2019

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Re: 7540 Jane Street, Vaughan, Ontario – Waste Audit & Waste Reduction Work Plan Report

Dear Mr. Sukovski,

Union Sustainable Solutions is enclosing a Waste Audit & Reduction Work Plan Report that will keep 7540 Jane Street, Vaughan, Ontario in compliance for 1 year for the period of October 17th, 2019 to October 17th, 2020. This report complies with Ontario Regulation 102/94 - Ministry of the Environment & Climate Change of the Environmental Protection Act. We are confident that this report will assist in gaining a better understanding of the materials currently being disposed of via the waste and recycling streams.

The methods used for this audit are appropriate for evaluating and expanding the existing waste diversion programs. However, the waste and recycling composition data was based from a one-day sample and from actual weights obtained from pick-ups and therefore cannot take into consideration all intermittent activities from the entire year. In order to maintain as accurate information as possible, numbers enclosed in this report may be a combination of the one-day sample, historical diversion reports, and scaled hauling weights. Therefore, the results should not be used for any other purposes, other than those contained within this report.

The current diversion rate of 7540 Jane Street, Vaughan, Ontario is 85.42%.

Please ensure that you sign the completed Waste Audit & Waste Reduction Work Plan Documents, as required by the Ministry of the Environment & Climate Change (MOE). The regulation also requires that the Waste Reduction Work Plan be posted in public sight on the premises of your facility. Please note that facilities that meet the threshold criteria of O. Reg. 102/94 (Waste Audits & Waste Reduction Work Plans), must also comply with O. Reg. 103/94 (Source Separation Programs).

Please do not hesitate to contact Union Sustainable Solutions if you have questions or concerns related to this report.

Sincerely,



Carlo Caponigro
Union Sustainable Solutions
416.527.8217
info@unionss.ca

Executive Summary

In accordance with Ontario Regulation 102/94, Union Sustainable Solutions was retained to conduct a composite Waste Audit for 7540 Jane Street on October 17th, 2019 and developed a Waste Reduction Work Plan based on the observations. Table 1 summarizes the audited waste and recycling weights provided by Union Sustainable Solutions. Based on available data and estimation where necessary, the diversion rate (percentage of waste materials diverted from landfill) is 85.42%

Table 1. Waste Material Stream Composition derived from the 1-day sort sample

	1 Day Sample	
NON-RECYCLABLE ITEMS (WASTE)	122.57	Kg
RECYCLABLE ITEMS FOUND IN WASTE STREAM	79.13	Kg
WASTE GENERATED OVER 24 hr SAMPLE	201.70	Kg

Shown in Figure 1, 39% of the 201.70 kg that was destined for waste was found to be divertible using recycling programs currently in place for cans/bottles/plastics/disposable beverage cups, shrink wrap, cardboard, organics and mixed paper fiber, organics.

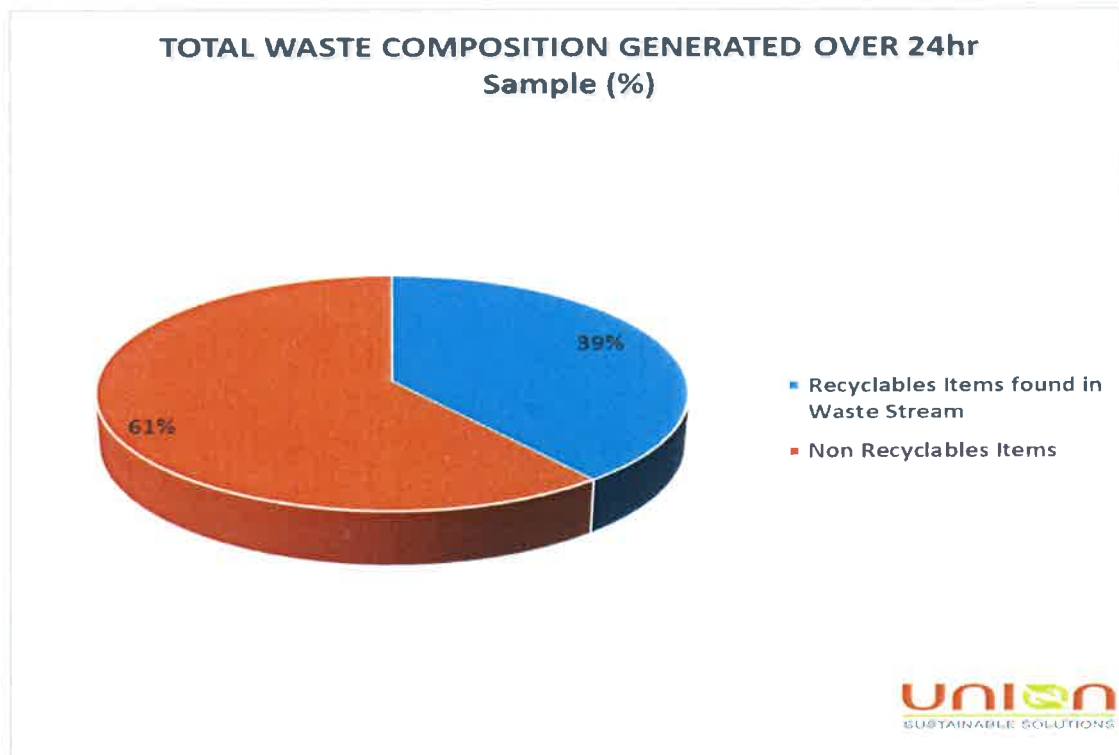


Figure 1. Total Composition of Material in the Waste Stream – 7540 Jane Street, Vaughan

Total Waste - Sort Sample

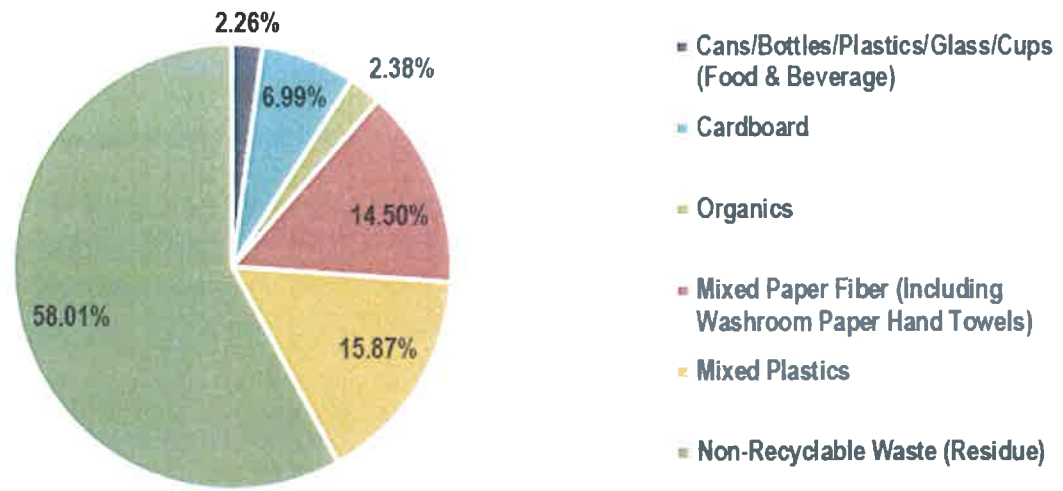


Figure 2. Daily Material Composition of the Waste Stream – 7540 Jane Street, Vaughan

Annual Waste Composition in Waste Stream (kg)

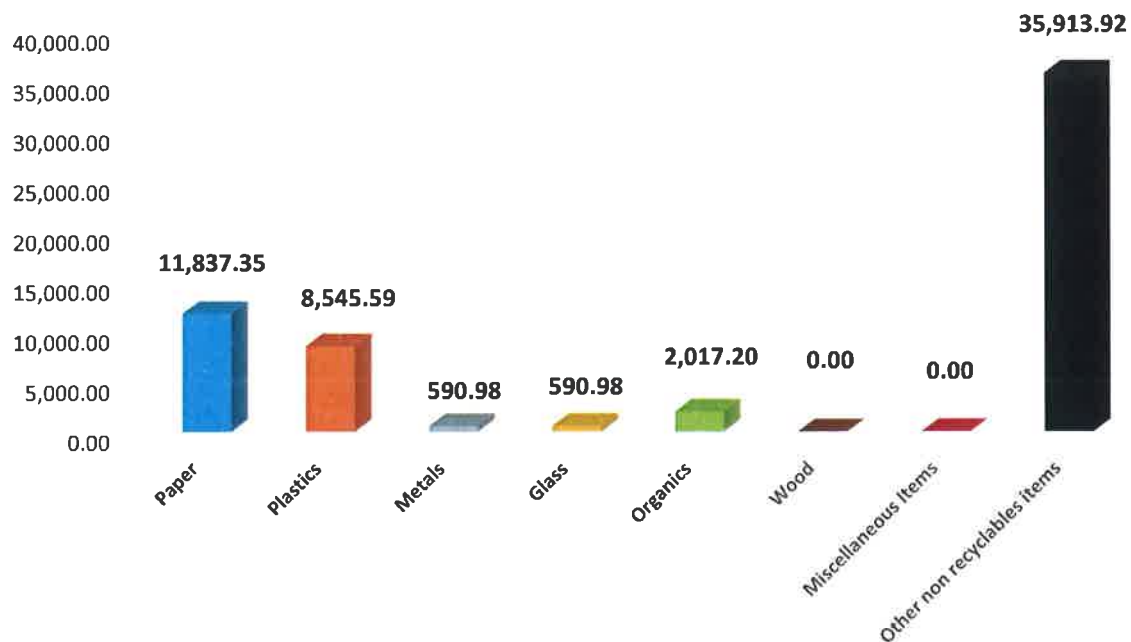


Figure 3. Projected Annual Material Composition in the Waste Stream – 7540 Jane Street, Vaughan

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1.0 – Introduction

A waste audit is an analysis of your facility's waste stream. It can identify what types of recyclable materials and waste your facility generates and how much of each category is recovered for recycling or discarded. Using the data collected, your plant can identify the feasibility of enhancing its recycling efforts and the potential for cost savings.

A waste reduction work plan (WRWP) is a plan to reduce, reuse and recycle waste. The plan sets out who will implement each part of the plan, when each part will be implemented and what the expected results are. The WRWP plan is based on the results of the completed waste audit.

Many benefits can be gained through the performance of a Waste Audit. Waste audits provide the opportunity to gain a better understanding of the materials being disposed of by a facility. Auditing both the recycling and waste streams illuminates the strengths and weaknesses of the current recycling program.

Over the past decade or so, many facilities have taken up the challenge of making their operations more environmentally sustainable. There is increasing pressure to find effective and efficient ways to improve the environmental performance of these facilities and save money simultaneously. Solid waste management has proven to be a worthwhile starting point. By diverting waste from disposal through waste reduction, reuse and recycling activities, facility owners and management are realizing significant environmental and cost saving benefits.

Specific benefits derived from implementing an energetic waste diversion program include improved system efficiencies resulting in reduced waste haulage and disposal costs and increased revenue from the sale of specific recyclables. Other benefits include reduced greenhouse gas generation and resource conservation through product and packaging reduction and reuse and the substitution of recycled materials for virgin materials during manufacturing. Finally, an important indirect benefit is the enhanced corporate image and pride that result from the waste diversion initiatives.

Solid waste reduction efforts also are being driven by Ontario Government initiatives including the Ontario Ministry of the Environment's (MOE) 3Rs regulations and the Ontario Government's goal to divert 60% of waste from landfill. More specifically, the MOE 3Rs regulations require designated facilities to participate in the Waste Audit and waste reduction planning process.

Ontario Government 3 Rs Initiatives

MOE 3Rs Regulatory Requirements

In 1994 the Ontario Ministry of the Environment & Climate Change enacted a set of environmental regulations requiring the institutional, commercial, and industrial (IC&I) sectors to address their solid waste streams. Regulations 102 and 103 require IC&I generators in designated sectors to carry out a Waste Audit and develop a Waste Reduction Work Plan. The regulations also prescribe source separation requirements for specific generators.

O. Reg. 102/94 – Waste Audits and Waste Reduction Work Plans

According to O. Reg. 102/94 Waste Audits and Waste Reduction Work Plans, a Waste Audit required under the regulation shall address:

- a. The amount, nature, and composition of the waste;
- b. The manner by which the waste gets produced, including management decisions and policies that relate to the production of waste; and
- c. The way in which the waste is managed.

An audit of the solid waste stream and the formation of an action plan for waste reduction as required under O. Reg. 102/94 is therefore an ongoing process, which make waste reduction through 3Rs activities a routine part of daily operations. The following is a list of other basic requirements for compliance with the provincial regulations.

- The Waste Audit summary sheet and Waste Reduction Work Plan are to be prepared on a form provided by the MOE or in a similar format.
- Audit and Work Plan must be held on file for at least five years.
- A work plan must set out who will implement each part of the plan, when and expected results.
- Owner/operator of facility must submit the most recent audit and work plan within 7 days to a Ministry Director when requested to do so.

You need to comply with Ontario Regulation 102/94 – Waste Audits & Waste Reduction Work Plans

Large Manufacturing Establishments

The owner or operator of a “large manufacturing establishment” is subject to O. Reg. 102/94 if persons employed at the site work in excess of 16,000 hours in any one calendar month during the preceding two calendar years. The owner or operator must conduct a waste audit covering the waste generated by the establishment operating at the site, and prepare and implement a waste reduction work plan.

The owner is also required to update the waste audit and the accompanying written report and the waste reduction work plan on an annual basis.

The owner or operator will become subject to O. Reg. 102/94 in the first calendar year following a calendar month in which persons employed at the site worked more than 16,000 hours.

The owner or operator will cease being subject to O. Reg. 102/94 if during the two preceding calendar years there was no calendar month in which the hours worked by the persons employed at the site exceeded 16,000 hours.

- “owner” includes the operator of a manufacturing establishment, but does not include a landlord;
- “site” means one property and nearby properties owned or leased by the same person, where passage from one property to another involves crossing, but not traveling along a public highway.

O. Reg. 103/94 Industrial, Commercial & Institutional Source Separation Programs

O. Reg. 103/94 builds upon the Waste Audit and Waste Reduction planning process by stipulating which recyclable materials a designated generator must recycle.

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Table 2. Ontario Regulation 103/94 – Source Separation Program

Ontario Reg. 103/94 – Source Separation Programs											
FACILITY TYPE	QUALIFICATION	Aluminum	Cardboard	Fine Paper	Glass	Newsprint	Polyethylene (high density)	Polyethylene (Film)	Polystyrene (Foam)	Polystyrene (Ryas, Reels, Pool)	Steel Wood
Large Manufacturing Establishments	The owner shall implement a source separation program for the waste generated by the operation of the establishment at the site or shall ensure that such a program is implemented if during the two preceding calendar years the hours worked by the persons employed at the site exceeded 16,000 hours	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.0 – Methodology

All waste and recycling material streams were collected from their generation areas and kept overnight on-site at 7540 Jane St. at the loading dock. The bags were labeled and identified as follows;

- Office Area
- Washrooms
- Lunchroom
- Outside Bins
- Production Area

Photographs were taken during the entire process to help illustrate certain situations. The pictures have been included to support observations and highlight the exact nature and composition of the materials being discarded.

Certain materials are removed from the site by alternative companies or are considered hazardous and require special handling. The weights from these materials are provided to **Union Sustainable Solutions** by management and are included into our calculations.

The methods used for this audit are appropriate for evaluating and expanding the existing waste diversion programs. However, the waste and recycling composition data was extrapolated from a one-day sample and

therefore cannot take into consideration all intermittent activities from the entire year. Therefore, the results should not be used for any other purposes, other than those contained within this report.

A "Green Audit" was maintained throughout the entire process and all recyclable materials removed from the waste were discarded in appropriate recycling containers for landfill diversion. All Health and Safety Regulations, as prescribed in the provincial Health and Safety Act, were held in compliance throughout the audit process.

3.0 – Current Waste Handling Processes and Containers

Mobile Climate Control currently see that the following materials are diverted from landfill;

- Corrugated Cardboard (OCC)
- Mixed Food and Beverage Containers including Coffee Cups
- Mixed Papers
- Scrap Metals
- Scrap Wood
- Wipers, Motors, Contaminated Metals
- Plastic Hose Reels
- Electronic Wastes
- Light Tubes/Ballasts
- Batteries
- Wood Pallets
- Printer Toners
- Reusable Plastic Bins

Materials are collected from functional areas of the facility and stored or placed into the appropriate location. Recycling containers are emptied on a scheduled service or as required by private contractors.

4.0 – Building information

Mobile Climate Control is located at 7540 Jane St., Vaughan, ON. There are 310 employees that work over 3 shifts in one day. The plant is closed 72 days per year.

MCC develops heating, cooling, ventilation and air conditioning for buses, trucks, construction, compact, agricultural, forestry, mining, material handling, utility and military vehicles.

4.1 – Pre-Waste Audit Summary & Questionnaire

Union Sustainable Solutions contacted Boris Sukovski, Director of Quality, North America. During the pre-waste audit meeting, instructions for staff, cleaners and employees were provided. The generation areas and a description of the materials to be sorted, audit logistics, and methodology were also discussed.

5.0 – Waste Stream Analysis - Sort Sample

A full sample of 24hrs waste was separated and fully audited.

5.1 – Waste Stream Analysis % and Kg



Figure 4. Daily Material Composition in the Waste Stream (kg) – 7540 Jane Street, Vaughan



Figure 5. Annual Material Composition in the Waste Stream (kg) – 7540 Jane Street, Vaughan

Customer Name: Mobile Climate Control Site Address: 7540 Jane Street Waste Audit date: October 17, 2019	%	%	Annual Waste (kg)	Monthly (kg)	Weekly (kg)	Daily (kg)
PAPER						
White copy paper		14.86%	1759.03	180.11	42.02	6.00
Cash register receipts		0.09%	10.65	1.09	0.25	0.04
Envelopes		0.01%	1.18	0.12	0.03	0.00
Colored paper		0.40%	47.35	4.85	1.13	0.16
Yellow legal pads		0.00%	0.00	0.00	0.00	0.00
Letterhead		0.00%	0.00	0.00	0.00	0.00
Newspapers		3.59%	424.96	43.51	10.15	1.45
Magazines		2.00%	236.75	24.24	5.66	0.81
Corrugated cardboard		10.00%	1183.73	121.20	28.28	4.04
Mixed waste paper		1.00%	118.37	12.12	2.83	0.40
Unwanted mail		0.00%	0.00	0.00	0.00	0.00
Stick-on notes		0.00%	0.00	0.00	0.00	0.00
Paperboard (e.g., cereal boxes)		1.25%	147.97	15.15	3.54	0.51
Paper plates/cups		11.00%	1302.11	133.32	31.11	4.44
Napkins/towels		52.80%	6250.12	639.94	149.32	21.33
Tissue paper		1.00%	118.37	12.12	2.83	0.40
Wax-coated paper		2.00%	236.75	24.24	5.66	0.81
Total Paper	20.03%	100.00%	11837.35	1212.02	282.80	40.40
PLASTIC						
#1 PET (e.g., soda bottles)		80.00%	6836.47	699.98	163.33	23.33
#2 HDPE bottles (e.g., milk jugs)		8.90%	760.56	77.87	18.17	2.60
#2 HDPE film		2.80%	239.28	24.50	5.72	0.82
#3 Vinyl bottles, pipe, siding		0.00%	0.00	0.00	0.00	0.00
#4 LDPE film		2.30%	196.55	20.12	4.70	0.67
#5 Polypropylene		0.00%	0.00	0.00	0.00	0.00
#6 Polystyrene foam		1.00%	85.46	8.75	2.04	0.29
#6 Rigid polystyrene		1.00%	85.46	8.75	2.04	0.29
Other plastic		4.00%	341.82	35.00	8.17	1.17
Total Plastics	14.46%	100.00%	8545.59	874.97	204.16	29.17
METAL						
Aluminum cans		75.00%	443.24	45.38	10.59	1.51
Aluminum foil		0.00%	0.00	0.00	0.00	0.00
Other aluminum (e.g., rain gutters, etc.)		3.00%	17.73	1.82	0.42	0.06
Steel cans		4.00%	23.64	2.42	0.56	0.08
Other ferrous metals		2.00%	11.82	1.21	0.28	0.04
Other metals		16.00%	94.56	9.68	2.26	0.32
Total Metals	100%	100.00%	590.98	60.51	14.12	2.02
GLASS						
Brown		0.00%	0.00	0.00	0.00	0.00
Clear		100.00%	590.98	60.51	14.12	2.02
Other glass		0.00%	0.00	0.00	0.00	0.00
Total Glass	1.00%	100.00%	590.98	60.51	14.12	2.02
FOOD SCRAPS						
Baked goods		2.00%	32.39	3.32	0.77	0.11
Cooking oil		0.00%	0.00	0.00	0.00	0.00
Fruit/vegetable scraps		80.40%	1301.91	133.30	31.10	4.44
Grease		0.00%	0.00	0.00	0.00	0.00
Meat scraps		4.00%	64.77	6.63	1.55	0.22
Other food scraps		13.60%	220.22	22.55	5.26	0.75
Total Food Scraps	2.74%	100.00%	1619.29	165.80	38.69	5.53
WOOD						
Crates		0.00%	0.00	0.00	0.00	0.00
Pallets		0.00%	0.00	0.00	0.00	0.00
Other wood		100.00%	0.00	0.00	0.00	0.00
Total Wood	0.00%	100.00%	0.00	0.00	0.00	0.00
MISCELLANEOUS ITEMS						
Furniture		50.00%	0.00	0.00	0.00	0.00
Linens/towels		50.00%	0.00	0.00	0.00	0.00
Total Miscellaneous Items	0.00%	100.00%	0.00	0.00	0.00	0.00
Other Material						
Uniforms, clothes		25.00%	8978.48	919.30	214.50	30.64
Other non-recyclable material		75.00%	26935.44	2757.89	643.51	91.93
Total Other Material	60.77%	100.00%	35913.92	3677.19	858.01	122.57
Total Annual Weight	100.00%		59098.10	6051.00	1411.80	201.70

Table 3. Waste Material Stream Data derived from the 1-day sort sample

5.2 – Generation Area Waste Stream Analysis – Sort Sample

All weights are in kilograms (kg)								
MOBILE CLIMATE CONTROL	Cans/Bottles/Plastics/Glass/Cups (Food & Beverage)	Cardboard	Organics	Mixed Paper Fiber (Including Washroom Paper Hand Towels)	Mixed Plastics	Non-Recyclable Waste (Residue)	Total Weight	%
Office Area	0.50	0.80	0.40	3.50		10.30	15.50	7.68%
Washrooms	0.25		0.60	13.20		6.55	20.60	10.21%
Lunchroom	0.90	0.10	2.20	2.20		6.50	11.90	5.90%
Outside Bins	1.30	0.20	0.40	0.35		4.45	6.70	3.32%
Production Area	1.60	13.00	1.20	10.00	32.00	89.20	147.00	72.88%
Daily Projection	4.55	14.10	4.80	29.25	32.00	117.00	201.70	100.00%
%	2.26%	6.99%	2.38%	14.50%	15.87%	58.01%	100.00%	-

Table 4. Waste Material Stream Data derived from the 1-day sort sample

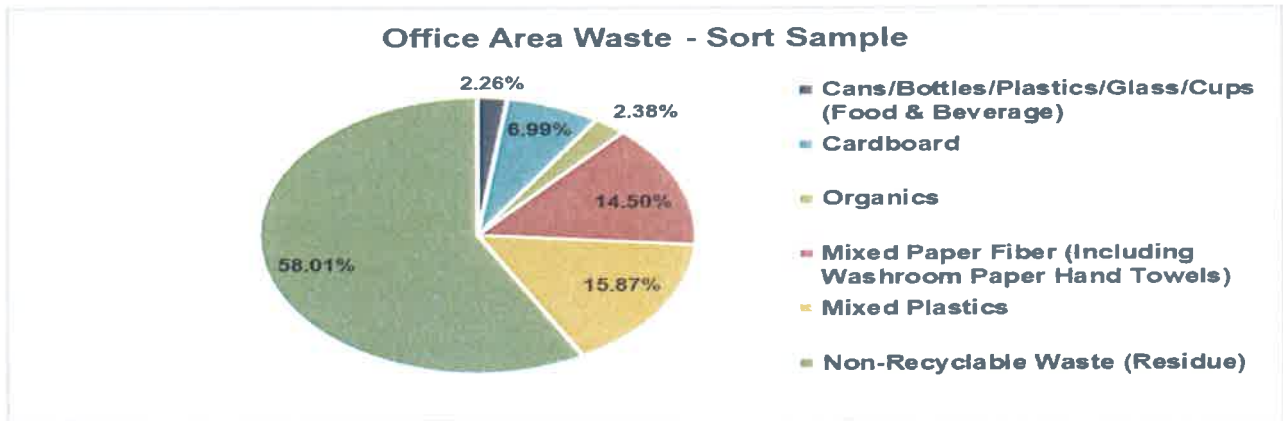


Figure 6. Office Area Detailed Composition of Material in the Waste Stream – Sort Sample Only

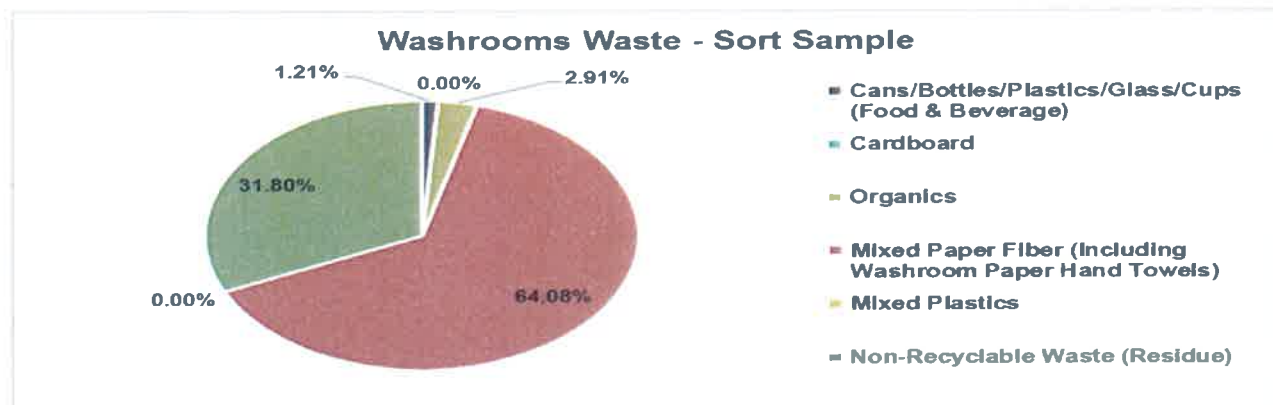


Figure 7. Washroom Area Detailed Composition of Material in the Waste Stream – Sort Sample Only

Lunchroom Waste - Sort Sample

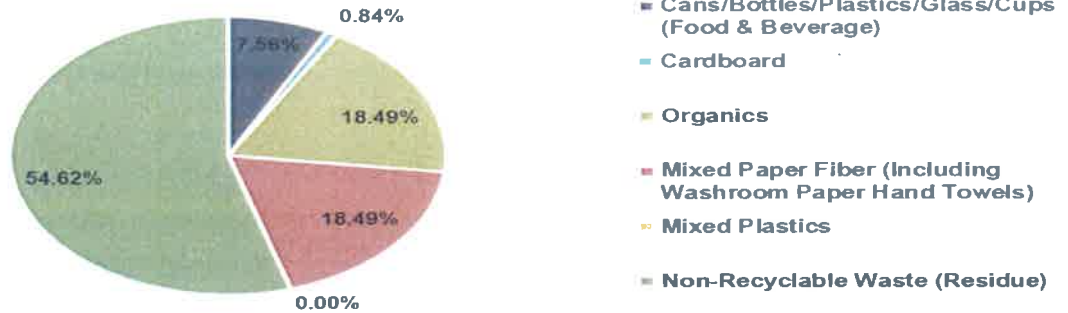


Figure 8. Lunchroom Area Detailed Composition of Material in the Waste Stream – Sort Sample Only

Outside Bins Waste - Sort Sample

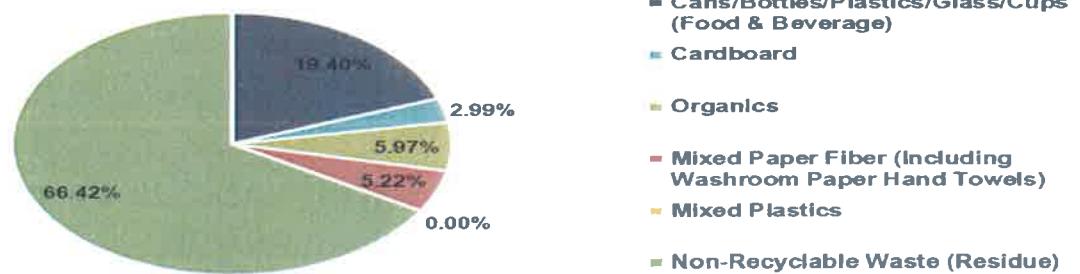


Figure 9. Outside Bins Detailed Composition of Material in the Waste Stream – Sort Sample Only

Production Area Waste - Sort Sample

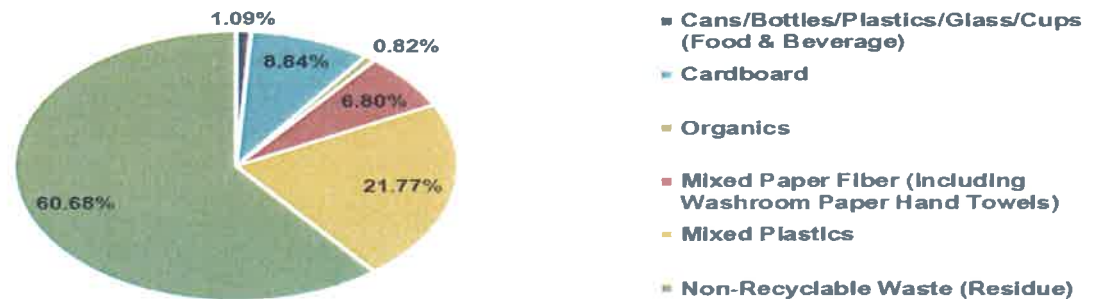


Figure 10. Production Area Detailed Composition of Material in the Waste Stream – Sort Sample Only

6.0 – Recycling in Waste Analysis – Sort Sample

Figure 11 shows overall recycling percentage measured from the audit sort sample.

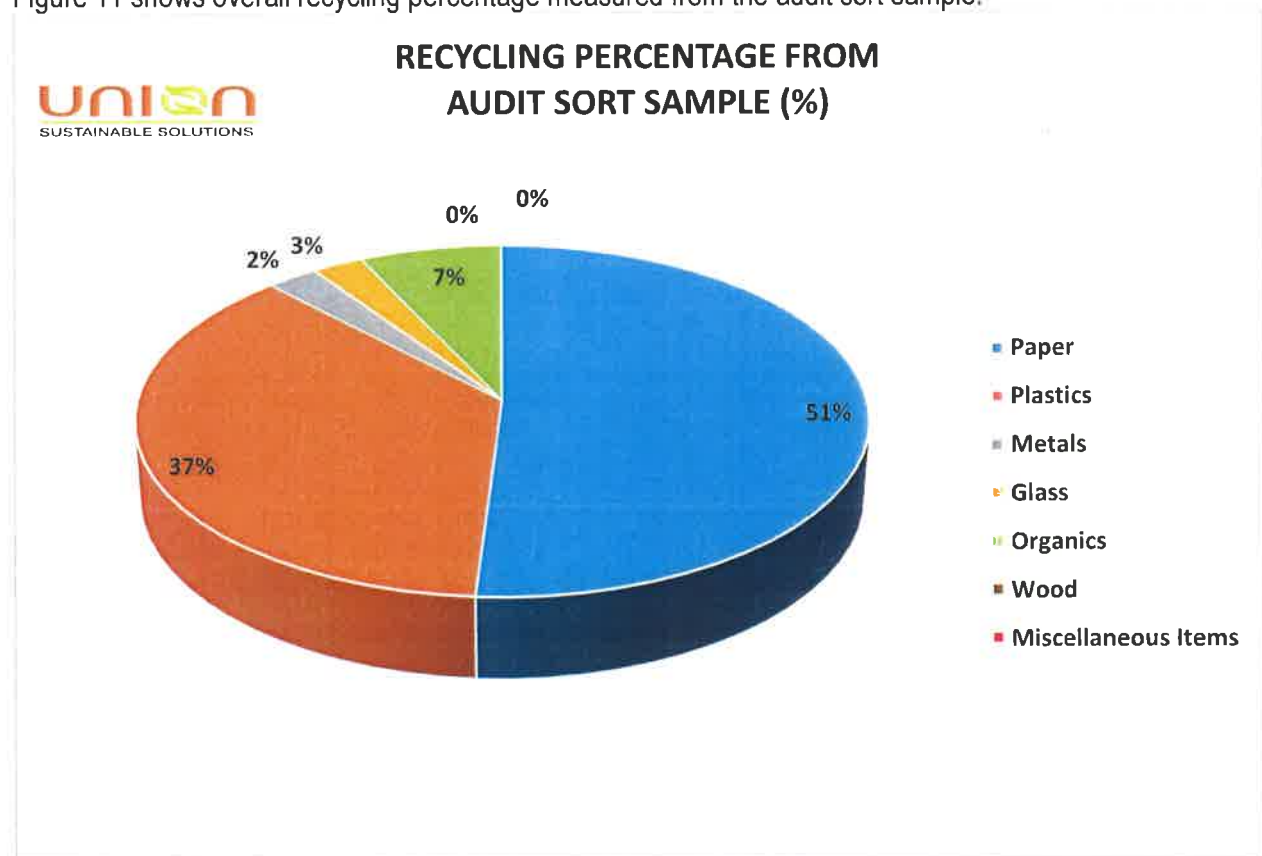


Figure 11. Recycling percentage (%) from audit sort sample – 7540 Jane Street, Vaughan

6.1 – Recycling Analysis in Waste Sample Weights

	Total (Kg)	Total %
Paper	40.40	51.06%
Plastics	29.17	36.86%
Metals	2.02	2.55%
Glass	2.02	2.55%
Organics	5.53	6.98%
Wood	0.00	0.00%
Miscellaneous Items	0.00	0.00%
Total	79.13	100.00%

Table 5. Recycling Material Stream Data derived from the 1-day waste sample

7.0 Annual Diversion Rate and Capture Rate

Diversion rate is the total quantity of waste that is diverted for reuse or recycling as a function of the total quantity of all wastes generated. A diversion rate can be expressed as a percentage or on a per capita basis.

Capture rate is the total quantity of a recoverable waste that is diverted for reuse or recycling as a percentage of the total quantity of the recoverable waste generated. A capture rate can be used as a measure of the success of a recycling and/or reuse program. A higher capture rate is indicative of more material being reused or recycled, rather than being sent to disposal.

7.1 Diversion Rate

Based on industry standards, service information and available monthly data reporting, 692,430 kilograms or 692.43 metric tonnes of materials are removed and recycled from Mobile Climate Control plant on an annual basis (January 201 to December 2019)

MATERIAL DESTINATION	WEIGHT GENERATED (kg)	WEIGHT GENERATED (MT)*
Landfill	118,180.00	118.18
Recycled	692,430.00	692.43
Total Material Generated	810,610.00	810.61

Table 6. Diversion rate– 7540 Jane Street, Vaughan

Current Annual Diversion Rate Percentage

The annual waste diversion percentage rate is calculated as follows:

$(\text{waste} + \text{recycling} / \text{generated}; \text{recycling} / \text{generated} \times 100 = \text{diversion percentage})$

Therefore, the current annual diversion rate percentage when all initiatives are accounted for is 85.42%

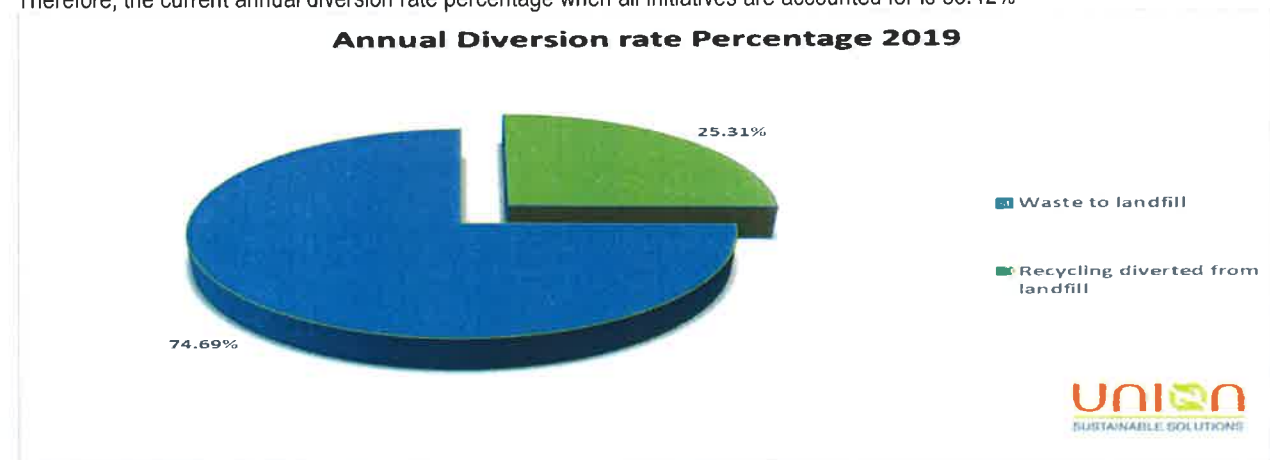


Figure 12. Annual Diversion Rate – 7540 Jane Street, Vaughan

7.2 Capture Rate

The annual mass of all materials currently diverted from disposal is 692,430 kilograms or 692.43 metric tonnes. The annual mass of all materials that could have been diverted from disposal, but were found in the stream headed for disposal is 59,098.10 kilograms or 59.10 metric tonnes. To Determine the building's capture rate based on the following calculation: $[A / (A+C)] \times 100$

$$\left[\frac{692.43}{(692.43 + 59.10)} \right] * 100$$
$$= 92.13\%$$

A = Annual mass of all materials *currently* diverted from disposal

C = Annual mass of all materials that *could have been* diverted from disposal, but were found in the stream headed for disposal

8.0 – Recommendations

MCC is an HVAC vehicle systems manufacturing company that develops heating, cooling, ventilation, air conditioning and refrigeration for conventional and electrical City/Transit, Coach/Tourist, School, Shuttle/Mini buses, vocational trucks, construction, compact, agricultural, forestry, mining, material handling, side-by-side, utility and military/defense vehicles, as well as battery and electronics cooling.

MCC makes continuous improvements to their products and systems to reduce environmental impact, right from the start. They always try to replace harmful substances with alternatives with less environmental impact. MCC's environmental work includes minimizing energy consumption in the production process and maximizing materials recycling. Our Management System complies with and is certified to ISO14001.

To improve its sustainability efforts and bring the plant to the highest standards, MCC and its employees have put a lot of efforts for all the years of service to minimize the amount of waste generated and sent to landfill by incorporating different recycling initiatives that have been of great success, but nevertheless, there is room for improvement, especially when the company has increased significantly since over the last few years. In order to improve this effort and the effectiveness of any recycling program, there are several initiatives to consider.

To potentially divert as much recyclable materials as possible from the waste stream(landfill) there needs to be a focus on source separating recyclable material.

8.1. Improve Paper and Cardboard Recycling

From the waste audit sample, paper and cardboard materials contributed to 20.03% of the overall waste sample. White copy paper, mixed paper, cardboard and tissue and toweling accounted for the four highest subcategories of paper fibers found in the waste. Providing proper recycling receptacles at point of generation with adequate signage will help to eliminate these issues.

These items are recyclable and should be disposed of through the new recycling program rather than into the waste stream.

8.2. Improve Plastics Recycling

14.46% of the waste audit sample consisted of plastic materials. Recyclable plastics, such as PETE #1 comprised mainly of water bottles and take-out containers, HDPE #2 mainly bottles and plastic jugs from kitchens, and other plastics Clear and Hard, such as coffee cup lids and thin yogurt containers, were the three of the highest categories of plastic found in the waste audit sample.

Providing proper recycling receptacles at point of generation with adequate signage will help to eliminate these issues. These items are recyclable and should be disposed of through the new recycling program rather than into the waste stream.

8.3. Improve Organics Recycling Program

Organics material represented 2.74% of the total waste audit sample. Diverting as much organic waste from the waste stream as possible will greatly increase the diversion rate and reduce the amount of waste sent to landfill annually. Materials to be incorporated in the organics recycling program include food waste, soiled paper towel and tissue, compostable food and beverage containers, and garden and yard waste (plants, soils, etc.). Assessing generation areas for proper bin placement and estimating waste levels should be the first step to implementing these solutions.

8.4. Signage and Education

Employees Education and Awareness:

Educational information should be displayed on an 'Environmental Board' and frequently updated to encourage and engage employee participation. These boards can be displayed in common areas to engage employees and to encourage them to participate in the recycling programs available. Posting information in the area near the recycling receptacles will show management initiative and engage employees. While education and training on waste reduction should be ongoing, formal education should take place sporadically (for example, 1-2 times per year).

Receptacles:

Clear, visible guidelines and signage are very important to the success of the recycling program. All areas of the facilities should be equipped with appropriate signage to clearly indicate to visitors and employees which materials are accepted in the receptacles and to remind them of the importance of their involvement in the recycling program. Recycling guidelines should be posted wherever receptacles and collection containers are stationed.

8.5. Monitoring and Evaluation

One of the keys to a successful recycling program is gathering quantifiable results to follow the progress of the program over the course of time. Ensure that a waste audit is completed once every twelve months and keep track of the data results year to year to compare disposal and recycling rates. Continue to receive monthly diversion reports and displaying or sending out results in a newsletter to reach all tenants and pinpoint where improvements can be made.

It is suggested that waste and recycling disposal areas be monitored so that the number of receptacles and pick up schedule can be adjusted as necessary. Maintain up-to-date records of waste diversion initiatives (e.g. diversion charts, educational or promotional efforts etc.) to see if changes need to be made to the recycling program.

9.0 – Conclusion

In order to address and monitor the effectiveness of the recycling program at Mobil Climate Control, Vaughan, consider the following suggestions to improve the existing program and efforts:

- Provide recycling stations wherever garbage bins exist so that there are no excuses for not participating in the recycling program.
- Ensure that adequate signage is placed on or above all recycling stations and that the signage remains consistent throughout the building.
- Ensure proper disposal bins from hauler are supplied to encourage cleaners to place material in the adequate container
- Education throughout the facilities can be promoted through promotional and awareness events
- Provide guests with information on recycling procedures and services.

The success of these initiatives depends on the involvement of all parties, from management to employees and members, as well as visitors to the plant. The more involved all parties are in the waste reduction goals of MCC the greater the success of the program.

10.0 – WASTE REDUCTION WORK PLAN

Please refer to **Appendix G** for the completed Ministry of Environment & Climate Change - Waste Audit and Waste Reduction Work Plan Forms and a single page summary to be posted on a public board.

Mobile Climate Control is currently offering full recycling programs for staff, tenants and visitors to participate in. After reviewing the Waste Audit, the following Waste Reduction Work Plan was formulated which refers back to many of the observations and conclusions expressed within the Waste Audit report. Current programs are assessed and new programs could be considered to control waste costs and increase the diversion of waste from landfill and incineration.

A Waste Reduction Work Plan provides management suggestions to make continuous improvements to the facility's recycling programs, and monitor their effectiveness. It should be remembered that recycling is just one way to reduce waste. To be really effective, the 4Rs hierarchy (Reduce, Reuse, Recycle and Refuse) should be incorporated into the daily activities of all occupants. Reducing the amount of waste produced is, by far, the most effective way to counter the flow of garbage to landfill.

- 1. Equipment Inventory:** A thorough inspection and survey should be conducted to ensure each desk and/or workstation from management and operating offices are fully equipped to support the various recycling programs. Before any education programs can begin, it would be best to verify that each area is properly equipped. This would include blue bins for waste paper, cans/glass/plastic food and beverage containers, and a centrally located green bin for organic food waste. Separate black bins should be used for waste collection. Easily accessible collection bins will increase participation and limit health and safety issues associated with cross contaminating wastes or material staging. Once all areas have been equipped the educational aspect of the program may start.
- 2. Continue using clear collection bags instead of black:** Local municipal experiences and waste studies have shown that using clear bags for garbage contributes to increased diversion of recyclables, food wastes and Hazardous Wastes from landfill. Another key benefit of using clear bags is the health and safety aspect. Clear bags help collection staff identify potential hazards, such as broken glass, needles and other sharp items that can potentially cause injuries during collection.
- 3. Increase Program Accountability:** There must be strict enforcement procedures in place to ensure the program is progressing. Continual spot checks, audits, and education will help keep the program current and fresh. Information gathered for the reports must be correct, clear, and concise so that the program can be measured accurately. The cleaners and employees from each occupied space may be questioned to provide feedback in areas where the program is not working. Once a problem area is identified continual follow-up and communication may be required to ensure that a solution is reached.
- 4. Monitoring Cleaners:** There is a need to continuously educate and monitor the cleaning and maintenance staff with regards to the recycling program. A cleaners meeting is encouraged to help

educate them to identify those materials that are to be kept out of the waste. The cleaning personnel are the "eyes" of the program because they not only see the materials generated on a nightly basis but also where they are generated. The cleaners can help identify opportunities where equipment or signage is missing or better student and/or employee education is needed. If not already in place, a "Cleaners Log Sheet" is recommended and will help document and solve any concerns associated with the recycling program on a day-to-day basis. The log sheet also aids in keeping the program updated and acts as a constant reminder to the cleaners of the priorities they need to maintain.

5. **Monitor the Organics Recycling Program:** Currently there is an organics program for recycling food waste and coffee grounds. A continuous review and assessment of the program is always recommended to ensure that the program runs effectively and to take into account any areas of improvement. Monitoring and re-educating the occupants throughout the year will help increase landfill diversion.
6. **Consider Food & Beverage Container Alternatives:** Occupants should be encouraged to use ceramic or reusable plastic/metal containers wherever possible.
7. **Hold "Green Team" Meetings:** In an effort to not only control the waste and recycling streams generated within the building, but also maintain the costs associated with waste management, an environmental "Green Team" is important. This "Green Team" is headed by building management and includes participation from interested building tenants, all cleaning contractors, and the waste contractor.

It is recommended that the "Green Team" should continue with their focus on the following initiatives.

- A. **Educate Staff, cleaners and guests.** The recycling program relies on proper source separation. Teaching all occupants of the acceptable processes involved with each waste stream would only increase the amount of recyclables diverted from landfill.
 - B. **Increase Program Awareness.** The marketing and promotion of the recycling program is very important. Promoting the building "Green Team" diversion goals and accomplishments would increase awareness and therefore participation and link the program to MCC's sustainability goals and objectives
 - C. **Constant Program Monitoring.** Information will always need updating. The program will benefit from the constant exchange of information between all employees and management and service contractors. Successes should be acknowledged, and failures should be examined for how to improve continuously.
8. **Promote Waste Minimization Benefits:** Waste is a resource which can lead to greater business productivity if managed correctly. Shifting from standard methods and thinking of waste disposal to processes of waste reduction can bring a range of key benefits;

- Businesses may save money through more efficient use of raw materials, packaging and technology.
 - Compliance with environmental legislation may become cheaper and more straightforward.
 - Businesses can improve their reputation among customers, suppliers, potential employees and insurers, who may want to be sure that they take their environmental responsibilities seriously.
 - Companies may also boost morale.
9. **Maintain compliance with Ontario Regulation 102/94:** It is important that your facility remains in compliance with Ontario Regulation 102/94 – Waste Audits and Waste Reduction Work Plans. The Ministry of the Environment & Climate change requires that you conduct a Waste Audit and Waste Reduction Work Plan on an annual basis. If found in non-compliance you may be given anywhere from a few weeks to 2 months to complete a Waste Audit and Waste Reduction Work Plan along with a Notice of Violation.

APPENDICES

Appendix A

Glossary of Items

Capture Rate:

Capture rate is the percentage of recyclable materials that are diverted from landfill and captured in the recycling stream. Capture rates measure the effectiveness of a recycling program. Achieving a capture rate of 100% requires that all recyclables be placed in the recycling stream and that the waste stream consist solely of non-recyclable residual materials.

$$\frac{\text{Total Weight of Recycling}}{\text{Total Weight of Recycling + Recyclable Material in Waste}} \times 100 = \text{Capture Rate (\%)}$$

Diversion Rate:

The diversion rate reflects the percentage of all outgoing materials that are diverted to recycling from those disposed of. Achieving a diversion rate of 100% requires that all outgoing material be recyclable and placed in the recycling stream, in other words no residual materials.

$$\frac{\text{Total Weight of Recycling}}{\text{Total Weight of Recycling + Total Waste}} \times 100 = \text{Diversion Rate (\%)}$$

Hazardous Waste:

Waste generated during production or other activities by society that can pose a substantial or potential hazard to human health or the environment when improperly managed.

Landfill:

Designed, controlled and managed disposal site for municipal solid waste spread in layers, compacted to the smallest practical volume, and covered by material applied at the end of each operating day.

Recycling:

The process by which materials otherwise destined for disposal are collected reprocessed, or manufactured, and are reused.

Residual Waste:

Any material that is not diverted (reduced, reused, recycled) in any way and thus is disposed of via the waste garbage stream and sent to landfill.

Solid Waste:

Waste composed of solid matter from household, commercial, institutional and industrial sources.

Waste:

Unwanted materials left over from any human activity

Waste Diversion:

The redirection of waste material that was landfill bound through reuse, recycling, or recovery of that material. It does not include source reduction.

Waste Reduction:

Waste reduction is a broad term encompassing all waste management methods – source reduction, recycling, composting – that result in reduction of waste to going to a combustion facility or landfill.

Waste Stream:

The waste output of a community, region, or facility. Total waste can be categorized into different waste stream components) e.g., wet organics waste, construction waste, household hazardous waste, or white goods).

Waste-to-Energy (WtE) or Energy-from-Waste (EfW) System:

A method of converting municipal solid waste into a usable form of energy, usually through combustion.

Appendix B

Diversion Report

MOBILE CLIMATE CONTROL - 2019						
MONTH	WOOD Tonnes	OCC Tonnes	WASTE Tonnes	Paper Tonnes	Bottles & Cans Tonnes	METALS
January	14.61	17.27	6.41	44	15	
February	18.37	7.50	10.77	48	12	
March	15.77	8.60	8.56	49	12	
April	13.09	16.22	12.85	42	12	
May	14.42	14.85	11.92	35	15	
June	11.21	9.74	8.49	34	12	
July	12.08	16.93	12.40	39	15	
August	12.99	10.63	9.73	29	12	
September	9.54	11.85	5.25	31	12	
October	13.56	12.62	9.60	39	13	
November	13.56	12.62	9.60	39	13	
December	13.56	12.62	9.60	39	13	
Total	162.76	151.45	115.18	468.00 x 100kg/1000	156.00 x 50kg/1000	
				46.8	7.8	980.04

Appendix C

Pre-Audit Questionnaire

Company Name:	Mobile Climate Control
Address:	7540 Jane St., Vaughan, ON
Product Manufactured	heating, cooling, ventilation and air conditioning for buses, trucks, construction, compact, agricultural, forestry, mining, material handling, utility and military vehicles.
Number of Employees	310
Do Employees Work More Than 16,000 hours per month combined?	Yes
# of Shifts per Day:	3
Number of days operational per week and year:	293 per year
Waste and Recycling Hauler:	All Waste Removal Urban Waste Recycling Canada Fibers Ltd.
Organics Recycling Program:	No
Audit On-Site or Off-Site	On-Site
Are there any dangerous/hazardous materials that could end up in the waste? (broken glass, sharps, chemicals, etc.)?	No
Are there any current renovations taking place?	No
Onsite Contact:	Boris Sukovski
Full Contact and Mailing Information for Person Receiving Waste Audit Report:	Boris Sukovski Director of Quality, North America Mobile Climate Control 905-482-2768 boris.sukovski@mcc-hvac.com

Appendix D

Scale Calibration

Urban Resource Group Inc., Affiliated with Canada Fibers Ltd. has seen to it that the scales we use for waste auditing are calibrated on a regular basis. The scale has been checked and calibrated as per the manufacturer's specifications on scale calibration. To ensure that the scale is performing properly three checkpoints are used during calibration process. Each checkpoint has an acceptable tolerance for the scale readout.

Checkpoint	Tolerance	Readout
50 lb.	+/- 0.5 lb.	50 lb.
100 lb.	+/- 1 lb.	100 lb.
150 lb.	+/- 1.5 lb.	150 lb.

The calibrated readouts were within the accepted tolerance range at three different check points.

Next calibration date: March 22, 2020

Appendix E

Material Destination and Service Schedule

Re: Material Handling and Disposition – Union Sustainable Solutions

- **WASTE** is picked up by All Waste and taken to Canada Fibers Ltd. transfer station located at 122 Arrow Road. Waste processed by Canada Fibers Ltd. may be further transported to Covanta located in the State of New York, a Waste to Energy Facility
- **CARDBOARD** is picked up by All Waste and taken to Canada Fibers Ltd. Arrow Road Material Recovery Facility. The plant is located at 122 Arrow Road, Toronto, Ontario, M9M 2M1. The cardboard is separated and sent to various paper mills depending on the market.
- **PAPER** is picked up by All Waste and taken to Canada Fibers Ltd. Arrow Road Material Recovery Facility. The plant is located at 122 Arrow Road, Toronto, Ontario, M9M 2M1. The paper is sorted and baled and sent to various paper mills across South Eastern Canada.
- **CANS, BOTTLES & PLASTICS** are picked up by All Waste and taken to Canada Fibers Ltd. Arrow Road Material Recovery Facility. The plant is located at 122 Arrow Road, Toronto, Ontario, M9M 2M1. Plastics are sent to Urban Polymers and broken down to flakes or pellets then sold to various recyclers.

Material Type	Equipment Total and Method of Service	Frequency
Waste	1 roll off compactor	on-call
Cardboard (OCC)	1 roll off compactor	on-call
Cans/Bottles/Plastics/Glass	3 x 95 gallon totes- rear load	1 x week
Mixed Paper	23 x 95 gallon totes- rear load	1 x week
Wood	1 roll off 40 yard bin	on-call

APPENDIX F

PICTURES FOUND IN WASTE STREAM

PAPER FIBERS AND CARDBOARD



PLASTICS



ORGANICS AND CANS & BOTTLES



OTHER PICTURES



Appendix G

Report of Waste Audit

Ministry of the Environment & Climate Change Waste Form

Industrial, Commercial and Institutional Establishments

As required by O. Reg. 102/94

This report must be prepared 6 months after becoming subject to O. Reg. 102/94 and a copy retained on file for at least five years after it is prepared, and be made available to the ministry upon request.

For large construction and demolition projects, please refer to the forms included with "A Guide to Waste Audits and Waste Reduction Work Plans for Construction and Demolition Projects as Required Under Ontario Regulation 102/94" (revised July 2008)

I. General Information

Name of Owner and/or Operator of Entity(ies) and Company Name: Mobile Climate Control Inc			
Name of Contact Person: Boris Sukovski Title Director of Quality, North America Company Name Mobile Climate Control Inc	Telephone #: 905-482-2768	Email address: boris.sukovski@mcc-hvac.com	
Street Address(es) of Entity(ies):		7540 Jane Street	
Municipality:		Vaughan	
Date:		October 17, 2019	
Type of Entity (check one)			
<input type="checkbox"/> Retail Shopping Establishments	<input type="checkbox"/>	<input type="checkbox"/> Hotels and Motels	<input type="checkbox"/>
<input type="checkbox"/> Retail Shopping Complexes	<input type="checkbox"/>	<input type="checkbox"/> Hospitals	<input type="checkbox"/>
<input type="checkbox"/> Office Buildings	<input type="checkbox"/>	<input type="checkbox"/> Educational Institutions	<input type="checkbox"/>
<input type="checkbox"/> Restaurants	<input type="checkbox"/>	<input checked="" type="checkbox"/> Large Manufacturing Establishments	<input checked="" type="checkbox"/>

Note: O. Reg. 102/94 does not apply to multi-unit residential buildings.

II. Description of Entity

Provide a brief overview of the entity(ties):

Mobile Climate Control is located at 7540 Jane St., Vaughan, ON. There are 310 employees that work over 3 shifts in one day. The plant is closed 72 days per year. MCC develops heating, cooling, ventilation and air conditioning for buses, trucks, construction, compact, agricultural, forestry, mining, material handling, utility and military vehicles.

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?
Aluminum food and beverage cans	Generated by occupants purchasing beverage containers in the building and by bringing containers from home and purchasing outside the building.
Glass food and beverage bottles	(same as Aluminum food and beverage cans)
Steel food and beverage cans	(same as Aluminum food and beverage cans)
PET (#1) plastic food and beverage bottles	(same as Aluminum food and beverage cans)
HDPE (#2) plastic jugs, crates, totes and drums	(same as Aluminum food and beverage cans) Additionally, may be generated from material or supplies from the facility.
LDPE (#4) plastic film	(same as Aluminum food and beverage cans) Additionally, may be generated from material or supplies from the facility.
Polystyrene (#6)	(same as Aluminum food and beverage cans) Additionally, may be generated from material or supplies from the facility.
Other Plastics	(same as Aluminum food and beverage cans) Additionally, may be generated from material or supplies from the facility.
Cardboard	Cardboard is generated through new supplies and materials from the facility. Cardboard is used for convenience packaging.
Paper Products Recycling Program: Fine paper, Newsprint, Boxboard shoe boxes, cereal boxes, etc., Glossy magazines, catalogues, flyers	Office paper is generated by occupants printing documents on the printers and from incoming faxes.
Washroom Paper Hand Towels	Generated by occupants in the washrooms. They are used for hand drying.
Confidential Shredding	Shredding is generated by occupants when they dispose of confidential documents.
Organics	Generated by occupants eating/preparing food in the building.
Scrap Wood	Generated by materials being delivered to the facility or from process conducted within the facility.
Wood Skids	Generated by materials being delivered or removed from the facility.
Toner Cartridges	Generated by occupants. Some occupants use reconditioned toner cartridges and some send back with their supplier.
Scrap Metal	Generated by materials being delivered to the facility or from process conducted within the facility.
Plastic Strapping	Generated inside the building from operations.
Batteries	Generated inside the building from operations.
Wires, Motors, Contaminated Metals	Generated inside the building from operations.
Plastic Hose Reels	Furniture can be sent to charities or recycled when occupants no longer need it.
Electronic Waste	Generated by occupants. E-waste is sent for reuse or recycling when the occupant has no further need for it.
Gloves	Generated inside the building from operations.
Reusable Plastic Bins	Generated inside the building from operations.
Fluorescent Tubes	Generated inside the building from operations.
Reusable Motor Packaging Trays	Generated inside the building from operations.

IV. Management of Waste

Category	Waste to be Disposed	Reused or Recycled Waste
Aluminum food and beverage cans	Material is periodically disposed in garbage due to employees' lack of participation for the recycling program.	Occupants place in containers provided. Cleaners and staff are responsible for collecting and staging for pickup.
Glass food and beverage bottles	(same as Aluminum food and beverage cans)	(same as Aluminum food and beverage cans)
Steel food and beverage cans	(same as Aluminum food and beverage cans)	(same as Aluminum food and beverage cans)
PET (#1) plastic food and beverage bottles	(same as Aluminum food and beverage cans)	(same as Aluminum food and beverage cans)
HDPE (#2) plastic jugs, crates, totes	(same as Aluminum food and beverage cans)	(same as Aluminum food and beverage cans)
LDPE (#4) plastic film	(same as Aluminum food and beverage cans)	(same as Aluminum food and beverage cans)
Polystyrene (#6)	(same as Aluminum food and beverage cans)	(same as Aluminum food and beverage cans)
Other Plastics	(same as Aluminum food and beverage cans)	(same as Aluminum food and beverage cans)
Cardboard	Material is periodically disposed in garbage due to employees' lack of participation for the recycling program.	Occupants place in designated cardboard collection bin for storage before pickup.
Paper Products: Fine paper, Newsprint, Boxboard shoe boxes, cereal boxes, Glossy magazines, catalogues, flyers	Material is periodically disposed in garbage due to employees' lack of participation for the recycling program.	Occupants place in containers provided. Cleaners are responsible for collecting and staging for pickup.
Washroom Paper Hand Towels	Material is periodically disposed in garbage due to employees' lack of participation for the recycling program.	Occupants place in containers provided. Cleaners are responsible for collecting and staging for pickup.
Confidential Shredding		Occupants place material into shredding bin to be destroyed by a secure contractor.
Organics	Material to be placed in waste	
Scrap Wood	Material is periodically disposed in garbage due to employees' lack of participation for the recycling program.	This material is to be placed into a collection bin for storage until it is picked up.
Wood Skids	Material is periodically disposed in garbage due to employees' lack of participation for the recycling program.	There is a take a skid leave a skid policy in place.
Toner Cartridges	Material is periodically disposed in garbage due to employees' lack of participation for the recycling program.	Occupants send back to suppliers for reuse and recycling.
Scrap Metal	Material is periodically disposed in garbage due to employees' lack of participation for the recycling program.	This material is to be placed into a collection bin for storage until it is picked up.
Plastic Strapping	Material is periodically disposed in garbage due to employees' lack of participation for the recycling program.	If there is a construction project, material is collected in a bin.
Batteries	Material is periodically disposed in garbage due to employees' lack of participation for the recycling program.	Occupants place batteries in designated bins. Batteries are stored until arrangements are made to be picked up by an authorized collector.
Wires, Motors, Contaminated Metals	Material is periodically disposed in garbage due to employees' lack of participation for the recycling program.	This material is to be placed into a collection bin for storage until it is picked up.
Plastic Hose Reels	Material is periodically disposed in garbage due to employees' lack of participation for the recycling program.	This material is to be placed into a collection bin for storage until it is picked up.
Electronic Waste	Material is periodically disposed in garbage due to employees' lack of participation for the recycling program.	Occupants place E-waste in designated bins. E-waste is stored until arrangements are made to be picked up by an authorized collector.
Gloves	Material to be placed in waste.	
Reusable Plastic Bins	Material is periodically disposed in garbage due to employees' lack of participation for the recycling program.	Reused
Fluorescent Tubes	Material is periodically disposed in garbage due to employees' lack of participation for the recycling program.	Fluorescent tubes are stored until arrangements are made to be picked up by an authorized collector.
Reusable Motor Packaging Trays	Material is periodically disposed in garbage due to employees' lack of participation for the recycling program.	Reused

Note: When completing this form, write "n/a" in the columns where the entity will not produce any waste for a category of waste.

V. Estimated Quantity of Waste Produced Annually

Waste Categories	Estimated Amount of Waste Produced in Metric Tonnes											
	Generated			Reused			Recycled			Disposed		
	"A" Base Year 2016	"B" Current Year 2019	"C" Change (A-B)	"A" Base Year 2016	"B" Current Year 2019	"C" Change (A-B)	"A" Base Year 2016	"B" Current Year 2019	"C" Change (A-B)	"A" Base Year 2016	"B" Current Year 2019	"C" Change (A-B)
Aluminum food and beverage cans	0.95	1.46	-0.51	0.00	0.00	0.00	0.85	1.00	-0.15	0.10	0.46	-0.36
Glass food and beverage bottles	0.95	1.09	-0.14	0.00	0.00	0.00	0.85	0.50	0.35	0.10	0.59	-0.49
Steel food and beverage cans	0.47	1.02	-0.55	0.00	0.00	0.00	0.42	1.00	-0.58	0.05	0.02	0.03
PET (#1) plastic food and beverage bottles	0.47	7.34	-6.87	0.00	0.00	0.00	0.42	0.50	-0.08	0.05	6.84	-6.79
HDPE (#2) plastic jugs, crates, totes and drums	0.47	2.00	-1.53	0.00	0.00	0.00	0.42	1.00	-0.58	0.05	1.00	-0.95
LDPE (#4) plastic film, Vinyl Shrink Wrap	0.47	1.20	-0.73	0.00	0.00	0.00	0.42	1.00	-0.58	0.05	0.20	-0.15
#5 PP	0.00	0.80		0.00	0.00		0.00	0.80	-0.80	0.00	0.00	0.00
Polystyrene (#6)	0.47	1.17	-0.70	0.00	0.00	0.00	0.42	1.00	-0.58	0.05	0.17	-0.12
# 7 Other Plastics	5.21	1.34	3.87	0.00	0.00	0.00	4.69	1.00	3.69	0.53	0.34	0.19
Cardboard	107.59	152.63	-45.04	0.00	0.00	0.00	104.07	151.45	-47.38	2.52	1.18	1.34
Mixed Paper	44.21	2.98	41.23	0.00	0.00	0.00	41.64	0.00	41.64	2.67	2.98	-0.31
Washroom Paper Hand Towels	72.05	6.37	65.68	0.00	0.00	0.00	67.96	0.00	67.96	5.09	6.37	-1.28
Confidential Shredding	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Organics	1.92	1.62	0.30	0.00	0.00	0.00	0.00	0.00	0.00	1.93	1.62	0.31
Scrap Wood	112.05	157.20	-45.15	0.00	0.00	0.00	112.05	157.20	-45.15	0.00	0.00	0.00
Wood Skids	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toner Cartridges	0.11	0.00	0.11	0.00	0.00	0.00	0.11	0.00	0.11	0.00	0.00	0.00
Scrap Metal	459.99	980.04	-520.05	0.00	0.00	0.00	459.99	979.93	-519.94	0.00	0.11	-0.11
Cooking Oil	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Batteries	0.15	0.00	0.15	0.00	0.00	0.00	0.15	0.000	0.15	0.00	0.00	0.00
Electronic Waste	0.04	0.00	0.04	0.00	0.00	0.00	0.04	0.00	0.04	0.00	0.00	0.00
Disposable Beverage Containers	0.00	1.30	-1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.30	-1.30
Fluorescent Tubes	0.15	0.00	0.15	0.00	0.00	0.00	0.15	0.00	0.15	0.00	0.00	0.00
Fine Mixed Paper Totes	0.00	46.80	-46.80	0.00	0.00	0.00	0.00	46.80	-46.80	0.00	0.00	0.00
Miscellaneous Items	18.40	0.16	18.24	0.00	0.16	-0.16	18.40	0.00	18.40	0.00	0.00	0.00
Non recyclable waste	49.44	35.91	13.53	0.00	0.00	0.00	0.00	0.00	0.00	49.44	35.91	13.53
Total	875.56	1402.44	-526.88	0.00	0.16	-0.16	813.05	1343.18	-530.13	78.28	59.10	19.18
Percentage Change (total C/total A x 100)	N/A	N/A	-60.18%	N/A	N/A	N/A	N/A	N/A	-65.20%	N/A	N/A	24.50%

VI. Extent to Which Materials or Products Used or Sold by the Entity Consist of Recycled or Reused Materials or Products

Please answer the following questions:

1. Do you have a management policy in place that promotes the purchasing and/or use of materials or products that consist of recycled and/or reused materials or products? If yes, please describe.

No, but Mobile Climate Control tries to purchase 'green' products including those that contain recycled and/or reused materials or products, if available and feasible.

2. Do you have plans to increase the extent to which materials or products used or sold consist of recycled or reused materials or products? If yes, please describe.

Yes. The washroom paper hand towels and toilet paper are made of recycled materials.

Please attach any additional page(s) as required to answer the above questions.

I hereby certify that the information provided in this Report of Waste Audit is complete and correct.

Signature of authorized official:

James Salowski

Title:

Dir. of Quality

Date:

2019-11-21

Ministry of the Environment & Climate Change Waste Form

Report of Waste Reduction Work Plan Industrial, Commercial and Institutional Establishments As required by O. Reg. 102/94

This report must be prepared 6 months after becoming subject to O. Reg. 102/94 and a copy retained on file for at least five years after it is prepared, and be made available to the ministry upon request.

I. General Information

Name of Owner and/or Operator of Entity(ies) and Company Name:			
Mobile Climate Control Inc			
Name of Contact Person: Boris Sukovski Title Director of Quality, North America Company Name Mobile Climate Control Inc	Telephone #: 905-482-2768	Email address: boris.sukovski@mcc-hvac.com	
Street Address(es) of Entity(ies):		7540 Jane Street	
Municipality:		Vaughan	
Date:		October 17, 2019	
Type of Entity (check one)			
Retail Shopping Establishments	<input type="checkbox"/>	Hotels and Motels	<input type="checkbox"/>
Retail Shopping Complexes	<input type="checkbox"/>	Hospitals	<input type="checkbox"/>
Office Buildings	<input type="checkbox"/>	Educational Institutions	<input type="checkbox"/>
Restaurants	<input type="checkbox"/>	Large Manufacturing Establishments	<input checked="" type="checkbox"/>

Note: O. Reg. 102/94 does not apply to multi-unit residential buildings.

II. Description of the Entity

Provide a brief overview of the entity(ties)

Mobile Climate Control is located at 7540 Jane St., Vaughan, ON. There are 310 employees that work over 3 shifts in one day. The plant is closed 72 days per year.

MCC develops heating, cooling, ventilation and air conditioning for buses, trucks, construction, compact, agricultural, forestry, mining, material handling, utility and military vehicles.

III. Plans to Reduce, Reuse and Recycle Waste

Waste Category (as stated in Part V of your "Report of a Waste Audit")	Source Separation and 3Rs Program
Aluminum food and beverage cans	Reduce: Occupants will be encouraged to use travel mugs and bottles, instead of take-out cups. Reuse: Occupants will be encouraged to use ceramic mugs provided instead of disposable plastics and paper cups. Recycle: Occupants will be provided with instructions via email. Receptacles will be provided. Occupants place material into centralized containers. Cleaners will empty centralized containers into bulk container for collection by recycling company.
Glass food and beverage bottles	(Same as Aluminum food and beverage cans)
Steel food and beverage cans	(Same as Aluminum food and beverage cans)
PET (#1) plastic food and beverage bottles	(Same as Aluminum food and beverage cans)
HDPE (#2) plastic jugs, crates, totes and drums	Reduce: Use/produce less of this material Reuse: Large containers, drums or similar items may be reused for same/additional material storage. May also return to supplier if applicable. Recycle: (Same as Aluminum food and beverage cans)
LDPE (#4) plastic film, Vinyl Shrink Wrap	Reduce: Use/produce less of this material Reuse: Material such as stretch/pallet wrap may be reused as a packaging material. May also return to supplier if applicable. Recycle: (Same as Aluminum food and beverage cans)
Polystyrene (#6)	Reduce: Use/produce less of this material Reuse: Material may be reused as a packaging material. May also return to supplier if applicable. Recycle: (Same as Aluminum food and beverage cans)
Other Plastics	(Same as Aluminum food and beverage cans)
Cardboard	Recycle: Cleaners and staff are to collect cardboard and stage for collection.
Mixed Paper	Reduce: Occupants will be encouraged to print on both sides of each sheet. Reuse: Discarded paper with print only on one side will be used for note pads/scrap. Recycle: Occupants will be provided with instructions via email. Receptacles will be provided. Occupants place material into centralized containers. Cleaners will empty centralized containers into bulk container for collection by recycling company.
Washroom Paper Hand Towels	Recycle: Receptacles will be provided. Occupants place material into centralized containers. Cleaners will empty centralized containers into bulk container for collection by recycling company.
Confidential Shredding	Recycle: Occupants place material into shredding bin to be destroyed by a secure contractor.
Organics	Material to be placed in waste. Feasibility to start a program will be looked into.
Scrap Wood	Recycle: Occupants are to ensure that wood is collected in a separate bin and recycled responsibly.
Wood Skids	Reuse: Employees and suppliers are encouraged to take a skid for reuse when they leave a skid. Recycle: All skids that are not in reusable condition are sent to a skid recycler.
Toner Cartridges	Recycle: All toners are taken back through the supplier and / or sent to recycling company to be <u>reused</u> and <u>recycled</u> .
Scrap Metal	Recycle: Occupants are to ensure that scrap metal is collected in a separate bin and recycled responsibly.
Cooking Oil	Recycle: Contractors are to ensure that cooking oil is collected in a bin and recycled responsibly.
Batteries	Reuse: Employees are encouraged to use rechargeable batteries. Recycle: Batteries are recycled through an authorized collector.
Electronic Waste	Recycle: E-waste is recycled through an authorized collector.
Disposable Beverage Containers	Recycle: (Same as Aluminum food and beverage cans)
Fluorescent Tubes	Recycle: Fluorescent tubes are recycled through an authorized collector.
Fine Mixed Paper Totes	Reduce: Employees will be encouraged to print on both sides of each sheet. Reuse: Discarded paper with print only on one side will be used for note pads/scrap. Recycle: Employees will be provided with instructions via email. Receptacles will be provided. Employees place material into centralized containers. Cleaners will empty centralized containers into bulk container for collection by recycling company.

IV. Responsibility for Implementing the Waste Reduction Work Plan

Identify who is responsible for implementing the Waste Reduction Work Plan at your entity(ies). If more than one person is responsible for implementation, identify each person who is responsible and indicate the part of the Waste Reduction Work Plan that each person is responsible for implementing.		
Name of Person	Responsibility	Telephone #
Name of Contact Person: Boris Sukovski Title Director of Quality, North America Company Name Mobile Climate Control Inc	Implement and monitor program	Tel: Phone # 905-482-2768
Cleaning Company and Operations Representative(s) N/A	N/A	N/A

V. Timetable for Implementing Waste Reduction Work Plan

Source Separation and 3Rs Program	Schedule for Completion
Aluminum food and beverage cans	An equipment survey will be conducted to ensure that all occupants have the proper cans, bottles and plastics receptacles along with the proper labeling and signs. This will be completed by April 2020 .
Glass food and beverage bottles	(Same as Aluminum food and beverage cans)
Steel food and beverage cans	(Same as Aluminum food and beverage cans)
PET (#1) plastic food and beverage bottles	(Same as Aluminum food and beverage cans)
HDPE (#2) plastic jugs, crates, totes and drums	(Same as Aluminum food and beverage cans)
LDPE (#4) plastic film	(Same as Aluminum food and beverage cans)
Polystyrene (#6)	(Same as Aluminum food and beverage cans)
Other Plastics	(Same as Aluminum food and beverage cans)
Cardboard	Memos will be sent out to ensure that all occupants know where cardboard is to be staged. This will be completed by April 2020 .
Mixed Paper	An equipment survey will be conducted to ensure that all occupants have the proper paper receptacles along with the proper labeling and signs. This will be completed by April 2020 .
Washroom Paper Hand Towels	An equipment survey will be conducted to ensure that all occupants have the proper receptacles along with the proper labeling and signs. This will be completed by April 2020 .
Confidential Shredding	Complete. Shredding is removed from the facility by a secure contractor.
Organics	An equipment survey will be conducted to ensure that employees have the proper organic receptacles along with the proper labelling and signs. This will be completed by April 2020 .
Scrap Wood	Complete. Scrap wood is collected when generated and recycled responsibly.
Wood Skids	Complete. Skids are taken back by suppliers. Leave a skid take a skid policy.
Toner Cartridges	Complete. All toner cartridges are taken back by suppliers or recycled.
Scrap Metal	Complete. Scrap metal is collected when generated and recycled responsibly.
Cooking Oil	Complete. Cooking Oil is collected by contractors when generated and recycled responsibly.
Batteries	Complete. All batteries are collected by an authorized collector for recycling.
Electronic Waste	Complete. All e-waste are collected by an authorized collector for recycling.
Disposable Beverage Containers	(Same as Aluminum food and beverage cans)
Fluorescent Tubes	Complete. Fluorescent Tubes are collected by contractors when generated and recycled responsibly.
Fine Mixed Paper Totes	An equipment survey will be conducted to ensure that all occupants have the proper paper receptacles along with the proper labeling and signs. This will be completed by April 2020 .

VI. Communication to Staff, Customers, Guests and Visitors

Explain how the Waste Reduction Work Plan will be communicated to employees, customers, staff, guests/visitors and tenants:

A memo will be sent out to all staff, management and visitors explaining the recycling programs. Attached to the memo will be signage that can post above containers and on notice boards explaining the program.

Holding "Green Team" Meetings are a good method to discuss, monitor and implement the Waste Reduction Work Plan.

All areas with a moderated amount of recycling found in their waste will be visited to work on improving program.

The Waste Reduction Work Plan will also be posted on a notice board in a public area on site.

VII. Estimated Waste Produced by Material and Projected Amount for 7540 Jane Street (in Metric Tonnes)

Material Categories (as stated in Part III)	Annual Total Waste Produced (tonnes)	Name of Proposed 3Rs Program (as stated in Part III)	Projections to Reduce, Reuse or Recycle Total Waste Generated (tonnes)			Estimated Annual Amount to be Diverted ** (%)
			Reduce	Reuse	Recycle	
Aluminum food and beverage cans	1.44	Aluminum food and beverage cans	0.14	0.07	1.01	85%
Glass food and beverage bottles	1.09	Glass food and beverage bottles	0.11	0.05	0.76	85%
Steel food and beverage cans	1.02	Steel food and beverage cans	0.10	0.05	0.72	85%
PET (#1) plastic food and beverage bottles	7.34	PET (#1) plastic food and beverage bottles	0.73	0.37	5.14	85%
HDPE (#2) plastic jugs, crates, totes and drums	1.76	HDPE (#2) plastic jugs, crates, totes and drums	0.18	0.09	1.23	85%
LDPE (#4) plastic film	1.20	LDPE (#4) plastic film	0.12	0.06	0.84	85%
# 5 PP	0.00	# 5 PP	0.00	0.00	0.00	100%
Polystyrene (#6)	1.43	Polystyrene (#6)	0.14	0.07	1.00	85%
Other Plastics	1.34	Other Plastics	0.13	0.07	0.94	85%
Cardboard	152.63	Cardboard	15.26	7.63	106.84	85%
Paper Products Recycling Program: Fine paper, Newsprint, Boxboard shoe boxes, cereal boxes, etc., Glossy magazines, catalogues, flyers, Yellow pages books	4.40	Paper Products Recycling Program: Fine paper, Newsprint, Boxboard shoe boxes, cereal boxes, etc., Glossy magazines, catalogues, flyers, Yellow pages books	0.44	0.22	3.08	85%
Washroom Paper Towels	6.25	Washroom Paper Towels	0.63	0.31	4.38	85%
Confidential Shredding	0.00		0.00	0.00	0.00	85%
Organics	1.62	Organics	0.16	0.08	1.13	85%
Scrap Wood	157.20	Scrap Wood	15.72	7.86	110.04	85%
Wood Skids	0.00	Wood Skids	0.00	0.00	0.00	85%
Toner Cartridges	0.00	Miscellaneous Items	0.00	0.00	0.00	85%
Scrap Metal	980.05	Scrap Metal	98.01	49.00	686.04	85%
Cooking Oil	0.00	Cooking Oil	0.00	0.00	0.00	85%
Batteries	0.00	Batteries	0.00	0.00	0.00	100%
Electronic Waste	0.00	Electronic Waste	0.00	0.00	0.00	100%
Disposable Beverage Containers	0.00	Disposable Beverage Containers	0.00	0.00	0.00	85%
Fluorescent Tubes	0.00	Fluorescent Tubes	0.00	0.00	0.00	100%
Fine Mixed Paper Totes	46.80	Fine Mixed Paper Totes	4.68	2.34	32.76	85%
Non-Recyclable Waste	35.91	Non-Recyclable Waste	3.59	1.80	1.80	20%

I hereby certify that the information provided in this Waste Reduction Work Plan is complete and correct.

Signature of authorized official:

Title:

Date:

Boris Jukewski, Dir. of Quality 2019-11-21

Recently, a Waste Audit was conducted at 7540 Jane Street in order to maintain compliance with Ontario Regulation 102/94 - Ministry of the Environment & Climate Change of the Environmental Protection Act.

A Waste Reduction Work Plan provides management and staff with the ability to make continuous improvements to the facility's recycling programs, and to monitor their effectiveness. This plan reviews ways the facility can reduce, reuse and recycle all materials disposed. This includes cans/bottles/plastics/disposable beverage containers, cardboard, organics, paper, washroom paper hand towels, toners, e-waste, batteries, light tubes, cooking oil, shredding, wood, metal, drywall and concrete.

In order to reduce, reuse, and recycle at this plant the following top 3 recommendations have been provided:

1. Conduct an equipment survey, by making sure all areas have the proper equipment and all areas and equipment have the proper signage and labeling,
2. Increase program accountability, and
3. Continue educating staff about the recycling program.

The regulation requires that the Waste Reduction Work Plan, which is created based on the results of the Waste Audit, is posted in a public area and available for the public to view.

If you would like to review the full Waste Reduction Work Plan for 7540 Jane Street, please contact management.

Thank you for your continued efforts to Reduce, Reuse, and Recycle.

Recycling Facts

Recycling 1 tonne of paper:

Saves 4,100 kWh of energy

Saves 26,498 litres of water

Saves 1,438 litres of oil

Saves 17 trees

Saves 3.3 cubic metres of landfill space

Reduces greenhouse gas emissions by 1 tonne of carbon equivalent

Recycling 1 tonne of plastic:

Saves 5,774 kWh of energy

Saves 2,593 litres of oil

Saves 23 cubic metres of landfill space

Recycling 1 tonne of Glass:

Saves 42 kWh of energy

Saves 19 litres of oil

Saves 1.5 cubic metres of landfill space

Saves 3.4 kg of air pollutants from being released

Recycling 1 tonne of aluminum:

Saves 14,000 kWh of energy

Saves 5,882 litres of oil

Saves 7.64 cubic metres of landfill space

Source: US EPA, 2008

CERTIFICATE of COMPLIANCE

THIS ACKNOWLEDGES THAT



Mobile Climate Control

7540 JANE ST. HAD A CERTIFIED, COMPLIANT WASTE AUDIT CONDUCTED BY

