



**June 2022** 

2022 WASTE AUDIT REPORT

Prepared for F&P Manufacturing Inc. 1 Nolan Road Tottenham, Ontario LOG 1W0 Prepared by Waste Solutions 392 Colborne Street London, Ontario N6B 2S9



### **EXECUTIVE SUMMARY**

Waste Solutions conducted a waste audit at 1 Nolan Road for F&P Manufacturing Inc. to achieve compliance with *Ontario Regulation 102/94: Waste Audits and Waste Reduction Work Plans* (Ontario Regulation 102/94) set by the Ministry of the Environment, Conservation and Parks (MOE).

The audit was conducted on June 1, 2022 and followed the Recycling Council of Ontario's (RCO) Standard Waste Audit Methodology (SWAM). Waste Solutions analyzed a 24-hour sample of waste that consisted of all the non-hazardous, solid waste generated from regular activities at the site, including waste destined for reuse, recycle, and disposal. Table 1 provides a summary of the audit findings.

Table 1. Summary of audit findings.

		PLANT 1	PL	ANT 2		OVERALL
	SAMPLE VALUE	ANNUAL VALUE	SAMPLE VALUE	ANNUAL VALUE	SAMPLE VALUE	ANNUAL VALUE
TOTAL WASTE GENERATED	233.95 kg	22,242,740.00 kg	122.44 kg	247,239.00 kg	356.39 kg	22,489,979.00 kg
TOTAL WASTE SENT TO ENERGY RECOVERY	233.95 kg	109,050.00 kg	122.44 kg	29,680.00 kg	356.39 kg	138,730.00 kg
TOTAL WASTE SENT TO LANDFILL	N/A	16,920.00 kg	N/A	N/A	N/A	16,920.00 kg
TOTAL WASTE DIVERTED THROUGH RECYCLING STREAMS	0.00 kg	22,116,770.00 kg	0.00 kg	217,559.00 kg	0.00 kg	22,334,329.00 kg
OVERALL DIVERSION RATE		99.43%	8	8.00%		99.31%
OVERALL CAPTURE RATE	99.97%		9	9.57%		99.97%

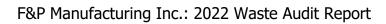
In addition, Waste Solutions observed the site's current waste collection, handling, and storage practices, as well as the organization's culture and attitude towards sustainability and waste diversion. Using the information gathered through the site observations and the waste audit, Waste Solutions created meaningful recommendations to increase the site's diversion and capture rates; improve on-site waste collection and handling processes; and inspire change within the culture of the organization. The following recommendations were created for F&P Manufacturing Inc:

- 1. The 3 R's recommendation
- 2. Education and training
- 3. Continuous monitoring



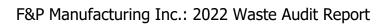
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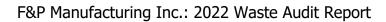




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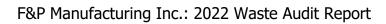
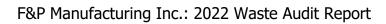




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### 1.0 INTRODUCTION

On June 1, 2022, Waste Solutions conducted a waste audit of 1 Nolan Road, Tottenham, Ontario, on behalf of F&P Manufacturing Inc. Table 2 provides a description of the site.

The purpose of the audit and this waste audit report is to achieve compliance with *Ontario Regulation 102/94: Waste Audits and Waste Reduction Work Plans* (Ontario Regulation 102/94), and confirm compliance with *Ontario Regulation 103/94: Industrial, Commercial and Institutional Source Separation Programs* (Ontario Regulation 103/94). Additionally, Waste Solutions evaluated whether F&P Manufacturing Inc complies with the acceptance criteria set by the site's waste haulers.

The waste audit was completed as per the Standard Waste Audit Methodology (SWAM) set by the Recycling Council of Ontario (RCO).

Table 2. Description of the site.

	DESCRIPTION
Name of Site	F&P Manufacturing Inc.
Site Address	1 Nolan Road, Tottenham, Ontario
Size	441,000 ft <sup>2</sup>
Type of Establishment	Manufacturing
Environmental Certification	ISO 14001

The following audit was designed to exceed the minimum guidelines for waste audits as set forth by Canadian provincial regulatory authorities. The conclusions, observations, and recommendations contained in the report represent the opinions of Waste Solutions. The information in this report was provided to Waste Solutions by the client, its representatives, and partners. As a result, Waste Solutions has relied on the information to be accurate and for which no assurances are intended and no representations or warranties are made. This report and the information contained herein is produced for the expressed use of F&P Manufacturing Inc. and the Ministry of the Environment, Conservation and Parks. Waste Solutions prohibits redistribution of this report and the material contained herein in whole or part without expressed written permission of Waste Solutions.



#### 1.1 AUDIT SCOPE

Waste Solutions conducted a waste audit of F&P Manufacturing Inc., located at 1 Nolan Road, Tottenham, Ontario, on June 1, 2022. Waste Solutions analyzed a 24-hour sample of waste that consisted of all the non-hazardous, solid waste generated from regular activities at the site between 7:00 a.m. on May 31 and 7:00 a.m. on June 1, 2022.

Waste excluded from the audit included:

- 1. hazardous waste;
- 2. non-solid waste; and
- 3. temporary waste generation not representative of a typical day at the site.

#### 1.2 AUDIT OBJECTIVES

The main objectives of the audit were to:

- 1. Achieve compliance with Ontario Regulation 102/94 by conducting a waste audit on a representative sample of waste generated at the site under normal operating conditions.
- 2. Confirm effective implementation of a source separation program in compliance with Ontario Regulation 103/94.
- 3. Identify if the site meets the waste hauler's acceptance criteria, including the allowable contamination limits and storage methods.
- 4. Recommend initiatives to increase the site's diversion and capture rates; improve on-site waste collection and handling processes; and inspire change within the culture of the organization.

# 1.3 AUDIT CRITERIA: ONTARIO REGULATION 102/94 AND ONTARIO REGULATION 103/94

Ontario Regulation 102/94 requires the owner or operator of a manufacturing establishment to annually complete a waste audit and implement a waste reduction work plan if during the two preceding calendar years, there was a calendar month in which the hours worked by the persons employed at the site exceed 16,000 hours.

Under Ontario Regulation 102/94, the audit must 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 (Ontario Regulation 102/94, s. 2.).



Ontario Regulation 103/94 requires the owner or operator of a manufacturing establishment to implement a source separation program for the following materials, if during the two preceding calendar years, there was a calendar month in which the hours worked by the persons employed at the site exceed 16,000 hours:

- 1. Aluminum
- 2. Cardboard (corrugated)
- 3. Fine paper
- 4. Glass
- 5. Newsprint
- 6. Polyethylene (high density) jugs, pails, creates, totes, and drums
- 7. Polyethylene (linear low density and low density) film
- 8. Polystyrene (expanded) foam
- 9. Polystyrene trays, reels and spools
- 10. Steel
- 11. Wood (not including painted, treated, or laminated wood)

The source separation program must include provisions for the collection, handling, and storage of separated waste before it is delivered to a site with the capability and approval to handle source separated waste. In addition, the program must be effectively communicated to all employees, and patrons. Reasonable efforts must be made to ensure separated waste is reused or recycled.

### 1.4 AUDIT CRITERIA: HAULER'S ACCEPTANCE CRITERIA

The current waste collection and handling equipment utilized at the site are outlined in Table 3.

Table 3. The site's waste collection and handling equipment.

EQUIPMENT	STREAM	HAULER
2 x 40-yard bins	Mixed Waste (Energy Recovery)	
1 x 14-yard bin	Sludge (Landfill)	
2 x 40-yard bins	Cardboard Recycling Stream	U-Pak
1 x 20-yard bin	Mixed Recycling Stream	U-Pak
1 x 8-yard bin	Mixed Recycling Stream	
1 x 40-yard bin	Wood Recycling Stream	



2 x 32-gallon totes Organics Composting Stream <sup>1</sup>		
Unknown	Scrap Metal Recycling Stream	Triple M
Cardboard Box	Electronic Waste Recycling Stream	U-Pak
Fibre Drums	Fluorescent Lights Recycling Stream	Ideal Supply
Metal Drums	Batteries Recycling Stream	GFL
Wood Skids	Wood Skids Reuse Stream	Murdock Mackay Ltd.

<sup>&</sup>lt;sup>1</sup> The organics composting stream is currently on hold due to Covid-19 pandemic. F&P Manufacturing plans to resume the program in July 2022.

U-Pak specifies the following criteria for the mixed waste stream:

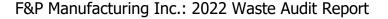
- 1. Mixed waste is collected and stored in compactor located at the site.
- 2. The program accepts the following materials:
  - ✓ Non-hazardous, solid, mixed waste

U-Pak specifies the following criteria for the cardboard recycling stream:

- 1. Cardboard is collected and stored in compactors located at the site.
- 2. The program accepts the following material:
  - ✓ Cardboard

U-Pak specifies the following criteria for the mixed recycling stream:

- 1. Mixed recycling is collected and stored in bins located at the site.
- 2. The program accepts the following materials:
  - ✓ Polyethylene terephthalate (PET #1)
  - ✓ High-density polyethylene (HDPE #2)
  - ✓ Polypropylene (PP #5)
  - ✓ Condensed Polystyrene (PS-C #6)
  - ✓ Aluminum
  - ✓ Steel
  - ✓ Glass
  - ✓ Gable top containers
  - ✓ Tetra Pak containers
  - ✓ Cardboard (OCC)
  - ✓ Boxboard
  - ✓ Mixed paper





U-Pak specifies the following criteria for the composting stream:

- 1. Organic material is collected and stored in totes located at the site.
- 2. The program accepts the following materials:
  - ✓ Solid food waste (Food waste)
  - ✓ Compostable food packaging

Triple M specifies the following criteria for the scrap metal recycling stream:

- 1. Scrap metal waste is collected and stored in bins located at the site.
- 2. The program accepts the following material:
  - ✓ Scrap metal

U-Pak specifies the following criteria for the wood recycling stream:

- 1. Wood waste is collected and stored in bins located at the site.
- 2. The program accepts the following material:
  - ✓ Wood

Murdock Mackay Ltd. specifies the following criteria for the wood skids recycling stream:

- 1. Wood skids are collected and stored at the site.
- 2. The program accepts the following material:
  - ✓ Wood skids

Please contact F&P Manufacturing for the acceptance criteria established by U-Pak, GFL, and Ideal Supply for recycling e-waste, batteries and fluorescent lights respectively.

Please refer to Appendix A: Definitions for further details about these material categories, as well as examples of common, everyday items made from these materials.



### 2.0 SOURCE SEPARATION PROGRAM

Table 4 indicates what materials are currently source separated for diversion at the site. Apart from LDPE #4, F&P Manufacturing Inc. has implemented a source separation program in compliance with Ontario Regulation 103/94.

Table 4. Material categories that are source separated at the site.

DIVERTIBLE MATERIAL CATEGORIES	IS SOURCE SEPARATION REQUIRED BY ONTARIO REGULATION 103/94?	IS THE MATERIAL CURRENTLY SOURCE SEPARATED?
PET #1		✓
HDPE #2	✓	✓
LDPE #4	✓	Х
PP #5		✓
PS-C #6	✓	✓
Aluminum	✓	✓
Steel	✓	✓
Glass	✓	✓
Gable top containers		✓
Tetra Pak containers		✓
OCC	✓	✓
Boxboard		✓
Fine Paper	✓	✓
Newsprint	✓	✓
Food waste		✓
Scrap Metal	✓	✓
Wood	✓	✓
Wood Skids		✓
E-waste		✓
Batteries		✓
Fluorescent Lights		✓



### 3.0 METHODOLOGY





### 3.1 COLLECTION PERIOD

From 7:00 a.m. on May 31 to 7:00 a.m. on June 1, 2022, F&P Manufacturing Inc. staff collected all the non-hazardous, solid waste generated at 1 Nolan Road.

F&P Manufacturing Inc. staff were instructed to label each bag of waste with:

- 1. the collection location (i.e. the area of the building the bag was collected from); and
- 2. the waste stream (i.e. waste to energy recovery).



#### **3.2 SITE REVIEW**

Waste Solutions conducted a site review with F&P Manufacturing Inc. management to gain a better understanding of how waste is generated and managed at 1 Nolan Road.



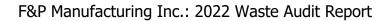
### 3.3 WASTE ANALYSIS

Once on-site, Waste Solutions weighed and analyzed the 24-hour waste sample to determine the amount, nature, and composition of the waste generated at 1 Nolan Road. Waste was classified into the material categories stated in Table 5. The middle column of Table 5, "Colour," indicates the colour used to represent each material category in the graphs within section 4.0 Waste Audit Results.



Table 5. The material categories used to classify waste at the audit.

TYPE OF WASTE	COLOUR	MATERIAL CATEGORY
		Expanded polystyrene (PS-E #6)
		Unlabeled plastic (P #7)
		Black plastic
		Paper towel
		Packaging
		Rubber plugs
		Textile rags
		Disposable food packaging (DFP)
		Coffee cups
		Welding globes
Mixed Waste		Textile gloves
Winca waste		Nitrile gloves
		Personal protective equipment
		Masks
		Labels
		Bubble wrap
		Silica beads
		Floor sweeps
		Cleaning wipes
		Plastic wrap
		Sludge
		Miscellaneous items <sup>1</sup>
		Polyethylene terephthalate (PET #1)
		High-density polyethylene (HDPE #2)
		Low-density polyethylene (LDPE #4)
		Polypropylene (PP #5)
		Condensed polystyrene (PS-C #6)
		Aluminum
		Steel
Doguelahla Matavial		Glass
Recyclable Material		Gable top containers
		Tetra Pak containers
		Mixed recycling materials
		Scrap Metal
		Cardboard (OCC)
		Boxboard
		Paper
		Wood





Organic Material	Solid food waste (Food waste)
Liquid Material	Liquid food waste (Liquid)

<sup>&</sup>lt;sup>1</sup>The "miscellaneous" waste category is comprised of: absorbent pads, hand soap dispensers, hangers, Styrofoam, binders, foam, tape, shoes, salt packs, copper wire, markers, zip ties, thermal mug, textile strap, coffee pods, conduit with cable, paint brush





#### 3.4 ANNUAL EXTRAPOLATION CALCULATIONS

Following the on-site visit, Waste Solutions used U-Paks' report provided by F&P Manufacturing to calculate the annual amount (in kilograms) of waste generated, diverted, and disposed of at 1 Nolan Road.

The data used in the report corresponds to the following streams generated from June 2021 to May 2022:

- Mixed Waste (Energy Recovery)
- Sludge (Landfill)
- Cardboard Recycling Stream
- Mixed Recycling Stream
- Scrap Metal Recycling Stream
- Wood Recycling Stream



### 3.5 CREATION OF RECOMMENDATIONS

Lastly, Waste Solutions created unique recommendations to increase the site's diversion and capture rates; improve on-site waste collection and handling processes; and inspire change within the culture of the organization.

### 3.6 STATEMENT OF SAMPLING LIMITATIONS

Data collected during the on-site audit are based on the samples analyzed and information reviewed. While effort was taken to ensure data was representative of a typical day, it must be noted that the accuracy of all data is limited by these assumptions and cannot be absolute.

Due to the COVID-19 pandemic, the organics composting stream has been put on hold. Once the program resumes, employees will be able to dispose of organic material correctly. Also note that because of the pandemic conditions may not reflect normal operations at the facility.



### 4.0 WASTE AUDIT RESULTS

### **4.1 SUMMARY OF RESULTS – OVERALL**

Table 6 provides a summary of the audit findings.

Table 6. Summary of audit findings.

	PLANT 1		PLANT 2		OVERALL	
	SAMPLE VALUE	ANNUAL VALUE	SAMPLE VALUE	ANNUAL VALUE	SAMPLE VALUE	ANNUAL VALUE
TOTAL WASTE GENERATED	233.95 kg	22,242,740.00 kg	122.44 kg	247,239.00 kg	356.39 kg	22,489,979.00 kg
TOTAL WASTE SENT TO ENERGY RECOVERY	233.95 kg	109,050.00 kg	122.44 kg	29,680.00 kg	356.39 kg	138,730.00 kg
TOTAL WASTE SENT TO LANDFILL	N/A	16,920.00 kg	N/A	N/A	N/A	16,920.00 kg
TOTAL WASTE DIVERTED THROUGH RECYCLING STREAMS	0.00 kg	22,116,770.00 kg	0.00 kg	217,559.00 kg	0.00 kg	22,334,329.00 kg
OVERALL DIVERSION RATE	99.43%		88.00%		99.31%	
OVERALL CAPTURE RATE		99.97%	99.57%		99.97%	

### General Observations

- The diversion rate at F&P Manufacturing is 99.31%. In total, 22,334,329.00 kg of waste is diverted annually, with 98.64% of the total diverted waste being scrap metal.
- Without scrap metal accounted for, the total diversion rate is 66.13%. Therefore, staff
  education, continuous monitoring, and the implementation of the 3R programs will
  increase this diversion rate.
- A total of 42,284.57 kg textile gloves were disposed of onsite, accounting for 30.48% of the total waste sent to energy recovery. Implementing a laundry service for these gloves would greatly decrease this number.
- In total, 12,792.26 kg of LDPE (#4) was produced on site. However, due to the lack of haulers in this area providing a recycling program for this material, it is sent to the waste to energy stream.



#### **4.1.1 TOTAL WASTE GENERATED**

The total amount of waste generated at 1 Nolan Road between June 2021 and May 2022 was 22,489.979.00 kg. This weight includes:

- 1. the total annual amount of waste sent to energy recovery;
- 2. the total annual amount of waste sent to landfill;
- 3. the total annual amount of waste diverted through the mixed recycling stream;
- 4. the total annual amount of waste diverted through the cardboard recycling stream;
- 5. the total annual amount of waste diverted through the wood recycling stream;
- 6. the total annual amount of waste diverted through the scrap metal recycling stream

Figure 1 provides a breakdown of how the waste generated at 1 Nolan Road was source separated on-site, including what percentage of generated waste was sent to energy recovery and landfill, and what percentage of generated waste was diverted and what diversion streams were utilized.

Figure 2 displays the total amount of waste generated by material category.

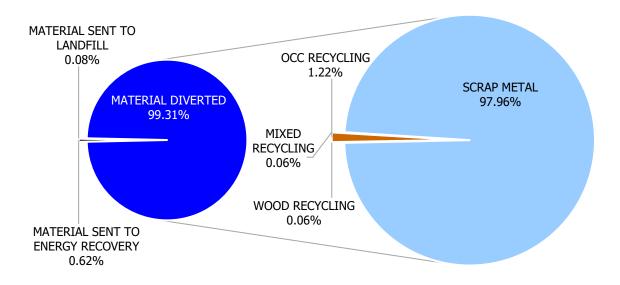
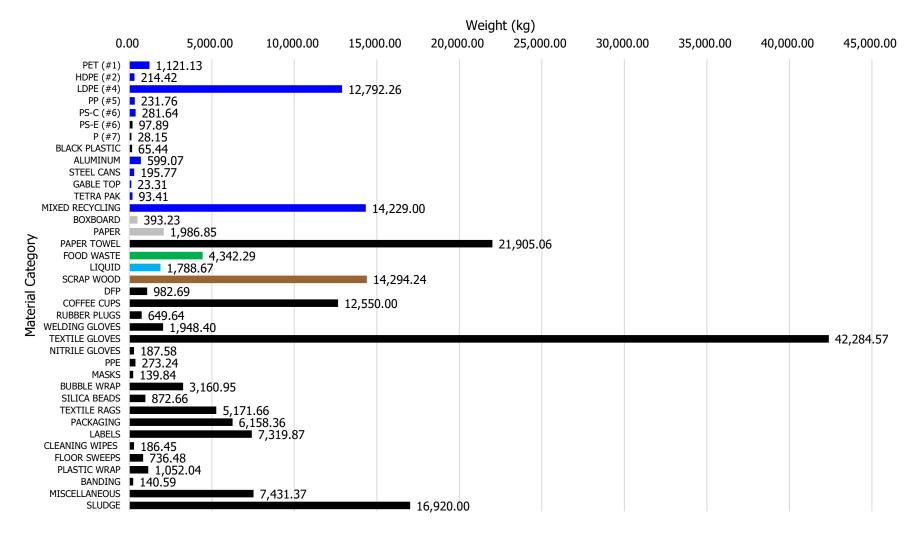


Figure 1. A breakdown of how waste was source separated at the site.





Scrap metal accounted for 22,030,460.00 kg and OCC accounted for 276,669.01 kg and were not included in the graph due to the limitations in scale.

Figure 2. Waste generated by material category, shown in kilograms.



#### **4.1.2 TOTAL WASTE SENT TO ENERGY RECOVERY**

The total amount of waste sent to energy recovery at 1 Nolan Road between June 2021 and May 2022 was 138,730.00 kg. Figure 3 displays the total amount of waste by material category.

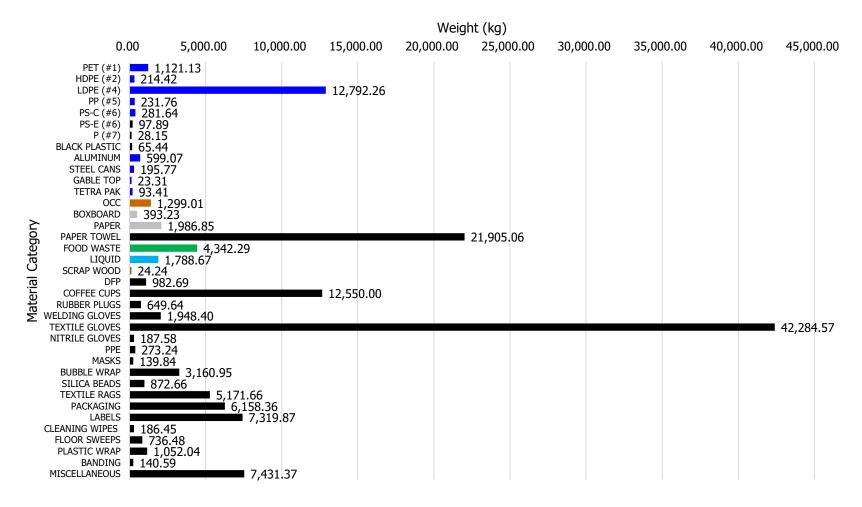


Figure 3. Waste sent to energy recovery by material category, shown in kilograms.



### 4.1.2.1 Waste Sent to Energy Recovery: Breakdown by Plant

Figure 4 illustrates how much waste each plant is contributing to the overall disposal of waste to energy recovery, providing that they generated waste during the 24-hour sample period and their waste bags were correctly labelled.

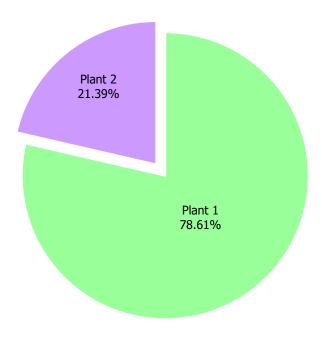


Figure 4. Plant contribution to the waste to energy recovery stream, shown in percent.



### 4.1.2.2 Divertible Materials Found in the Waste to Energy Recovery

23,598.39 kg or 17.01% of the material found in the waste to energy recovery stream had the potential to be diverted through the currently recycling programs in place. The percentage of recyclable materials and compostable (organic) materials sent to energy recovery can be seen in Figure 5.

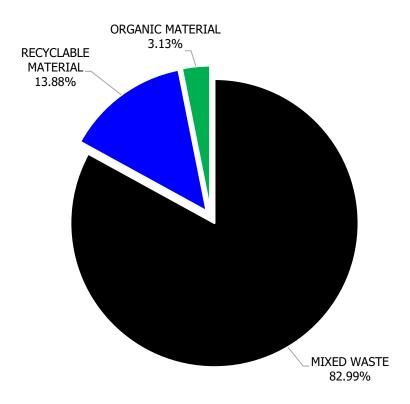


Figure 5. The composition of the waste to energy recovery stream, shown in percent.

Photographs of recyclable materials and compostable materials found in the waste to energy recovery stream during the waste audit can be found in Appendix B & C: Photo Log.



19,256.10 kg or 13.88% of the material found in the waste to energy recovery stream was recyclable. If disposed of correctly, this material could have been diverted through the recycling streams. Notably, LDPE (#4) is currently not being diverted due to absence in recycling market. A breakdown of the recyclable material found in the waste to energy recovery stream is shown in Figure 6.

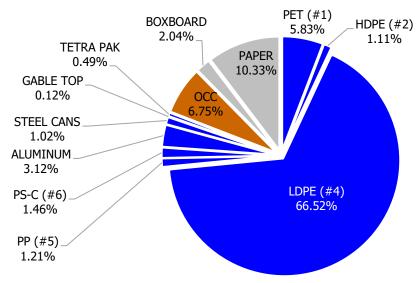


Figure 6. Recyclable materials found in the waste to energy recovery stream, shown in percent.

4,342.29 kg or 3.13% of the material found in the waste to energy recovery stream was compostable. Due to the COVID-19 pandemic, the organic's composting stream was put on hold. Once the program has resumed in July, employees will be able to dispose of organic material correctly. A breakdown of the organic material found in the waste to energy recovery stream is shown in Figure 7.



Figure 7. Organic materials found in the waste to energy recovery stream, shown in percent.



### **4.1.3 TOTAL WASTE SENT TO LANDFILL**

The total amount of waste sent to landfill at 1 Nolan Road between June 2021 and May 2022 was 16,920.00 kg. Figure 8 displays the total amount of waste sent to landfill by material category.

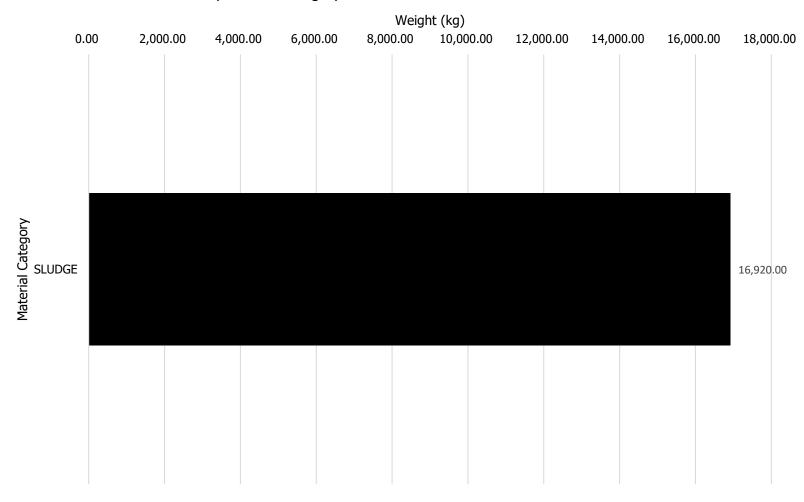


Figure 8. Waste sent to landfill by material category, shown in kilograms.



### 4.1.4 TOTAL WASTE DIVERTED THROUGH RECYCLING STREAMS

The total amount of waste diverted through recycling stream at 1 Nolan Road between June 2021 and May 2022 was 22,334,329.00 kg. Figure 9 displays the total amount of waste diverted by material category.

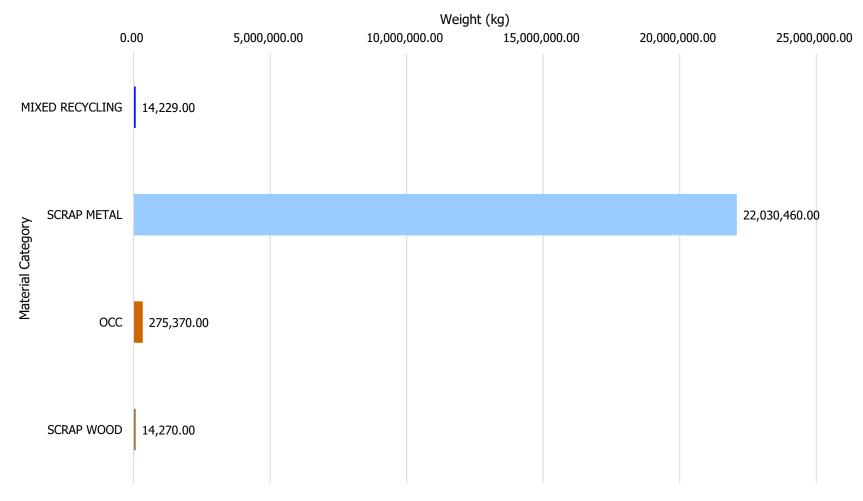


Figure 9. Waste diverted by material category, shown in kilograms.

### **4.1.5 CAPTURE RATES**

Capture rate provides an indication of how well a site's diversion streams are operating. The overall capture rate at 1 Nolan Road was 99.97%, meaning that 99.97% of all the divertible materials generated on-site were correctly source separated and diverted from energy recovery stream. The remaining 0.03 % of divertible materials were incorrectly source separated and sent to energy recovery, even though they could have been diverted through one of the diversion streams currently operating at the site. Figures 10 identifies the capture rates for each divertible material category of waste.

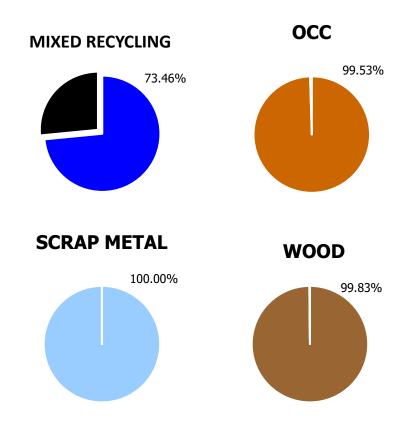
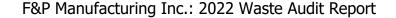


Figure 10. The capture rates for each divertible material category, shown in percent.





#### 4.1.6 CONCLUSION

In total, 42,284.57 kg of textile gloves were sent to an energy recovery facility. In comparison to the last waste audit done at F&P by Waste Solutions in 2021, the number of textile gloves disposed has decreased by 30.62%. Majority of the gloves were generated by Plant 1, accounting for 99.57% of the total.

Furthermore, 15.79% of the overall total waste sent to energy recovery was paper towel. Between the two plants, 21,905.06 kg of paper towel was produced, with 19,922.19 kg of this total weight coming from Plant 1.

Overall, 99.31% of recyclable material was correctly source separated in the recycling streams (mixed recycling, cardboard, wood, and scrap metal streams). The remaining 0.03% was incorrectly source separated and sent to energy recovery. In total, 12,792,29 kg of LDPE 4 was produced between sites, accounting for 9.22% of the total waste sent to energy recovery. Therefore, by implementing a recycling program for LDPE 4, the site's diversion and capture rate should increase.

Between both the samples, 10.77 kg of food waste was observed. When the composting program resumes in July this waste will be able to be diverted from energy recovery.

Please refer to section 5.0 Recommendations for a list of initiatives that could be implemented at 1 Nolan Road to improve the site's diversion from energy recovery performance.



#### 4.2 SUMMARY OF RESULTS - PLANT 1

Table 7 provides a summary of the audit findings.

Table 7. Summary of audit findings at Plant 1.

	SAMPLE VALUE	ANNUAL VALUE	
TOTAL WASTE GENERATED	233.95 kg	22,242,740.00 kg	
TOTAL WASTE SENT TO ENERGY RECOVERY	233.95 kg	109,050.00 kg	
TOTAL WASTE SENT TO LANDFILL	N/A	16,920.00 kg	
TOTAL WASTE DIVERTED THROUGH RECYCLING STREAMS	0.00 kg	22,116,770.00 kg	
OVERALL DIVERSION RATE	99.43%		
OVERALL CAPTURE RATE	99.97%		

### General Observations

- At Plant 1 the diversion rate is 99.43%. A large contributor to this diversion rate is the scrap metal recycling stream, which accounts for 99.61% of the materials diverted.
- Without scrap metal accounted for, the total diversion rate is 40.66%. Therefore, staff
  education, continuous monitoring, and the implementation of the 3R programs will
  increase this diversion rate.
- A total of 42,102.76 kg textile gloves were disposed of onsite, accounting for 38.61% of the total waste sent to energy recovery. Implementing a laundry service for these gloves would greatly decrease this number.
- In total, 3,251.22 kg of LDPE (#4) was produced on site. However, due to the lack of haulers in this area providing a recycling program for this material, it is sent to the energy recovery stream.
- 19,922.19 kg of paper towel was produced on site. The hand wash station was the highest contributor of paper towel to the energy recovery stream, accounting for 21.41% of all paper towel produced at Plant 1.



### **4.2.1 TOTAL WASTE GENERATED**

The total amount of waste generated at Plant 1 between June 2021 and May 2022 was 22,242,740.00 kg. This weight includes:

- 1. the total annual amount of waste sent to energy recovery;
- 2. the total annual amount of waste sent to landfill;
- 3. the total annual amount of waste diverted through the mixed recycling stream;
- 4. the total annual amount of waste diverted through the cardboard recycling stream;
- 5. the total annual amount of waste diverted through the wood recycling stream;
- 6. the total annual amount of waste diverted through the scrap metal recycling stream; and

Figure 11 provides a breakdown of how the waste generated at Plant 1 was source separated onsite, including what percentage of generated waste was sent to energy recovery and landfill, and what percentage of generated waste was diverted and what diversion streams were utilized.

Figure 12 displays the total amount of waste generated by material category.

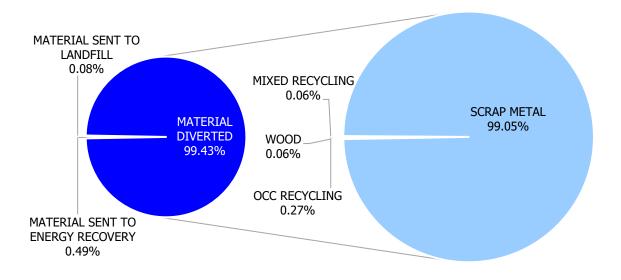
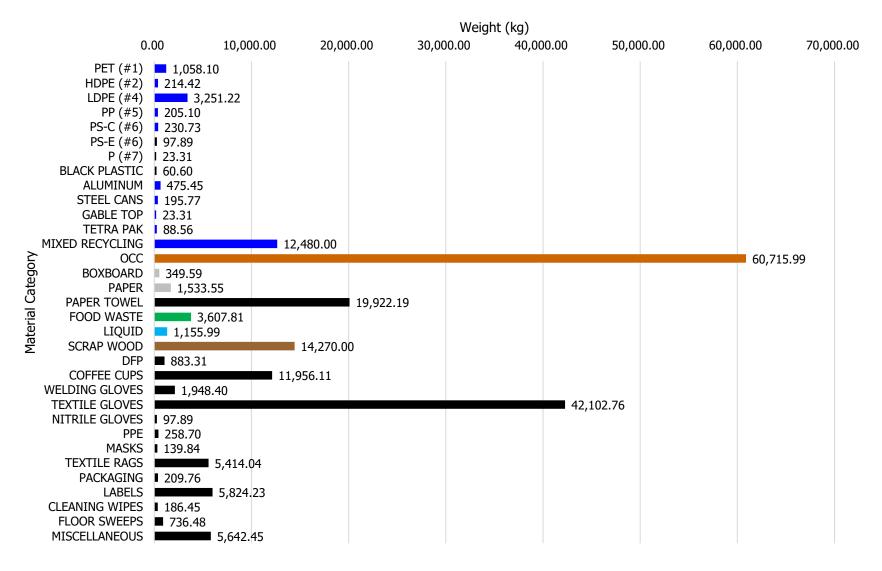


Figure 11. A breakdown of how waste was source separated at the site.





Scrap metal accounted for 22,030,460.00 kg and was not included in the graph due to the limitations in scale.

Figure 12. Waste generated by material category, shown in kilograms.



#### **4.2.2 TOTAL WASTE SENT TO ENERGY RECOVERY**

The total amount of waste sent to energy recovery at Plant 1 between June 2021 and May 2022 was 109,050.00 kg. Figure 13 displays the total amount of waste by material category.

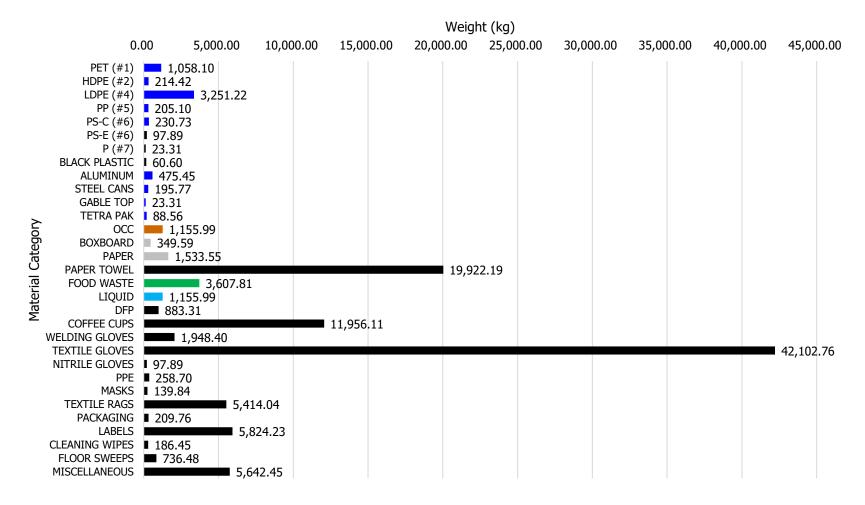


Figure 13. Waste sent to energy recovery by material category, shown in kilograms.



### 4.2.2.1 Waste Sent to Energy Recovery: Breakdown by Area

Table 8 lists how much waste each area is contributing to the overall disposal of waste to energy recovery, providing that they generated waste during the 24-hour sample period and their waste bags were correctly labelled. Please note that if a portion of the waste sample was not labelled with area information, that waste has been grouped together and identified as "Unlabelled."

Table 8. Total waste sent to energy recovery by area at Plant 1.

Area	Annual Value (kg)	Sample Value (kg)	%
B - Janitors Room	1,929.76	4.14	1.77%
A- Beam Line	671.22	1.44	0.62%
B - Café	10,944.62	23.48	10.04%
A&B - WCBP/WCBL Small Parts	3,495.94	7.5	3.21%
A-WDAVA	456.80	0.98	0.42%
B - Store Room	233.06	0.5	0.21%
B - Beam Line	1,384.39	2.97	1.27%
B - Cadillac E Line	689.87	1.48	0.63%
B - Camaro	1,160.65	2.49	1.06%
B – CRUFR	2,279.35	4.89	2.09%
B - CRV Welding RR SUD L/D/K Lines	4,115.89	8.83	3.77%
B - Front Entrance	1,729.32	3.71	1.59%
B - Washrooms/locker rooms	349.59	0.75	0.32%
B - Production Office	843.69	1.81	0.77%
B - Quality Lab ISD	1,486.94	3.19	1.36%
B - Shipping Receiving	130.52	0.28	0.12%
C - Water	344.93	0.74	0.32%
C - WCSR B	1,482.28	3.18	1.36%
C - WCSF 2	1,086.07	2.33	1.00%
C – CRV	11,182.34	23.99	10.25%
C- Beamline	1,356.42	2.91	1.24%
C- Café	5,052.80	10.84	4.63%
Café Washrooms	1,589.49	3.41	1.46%
T2S	2,242.06	4.81	2.06%
Dye Maintenance	2,055.61	4.41	1.89%
HR Office/Accounting	494.09	1.06	0.45%
Lobby Security	191.11	0.41	0.18%
Men's Locker rooms/Washrooms	5,765.97	12.37	5.29%
Metal Forming Office	419.51	0.9	0.38%
New Mode Office	750.46	1.61	0.69%
Paint Washrooms	1,300.49	2.79	1.19%
Quality	927.59	1.99	0.85%



Area	Annual Value (kg)	Sample Value (kg)	%
Satellite/Stamping Office	2,638.27	5.66	2.42%
Welding	10,133.56	21.74	9.29%
Women's Locker rooms/washrooms	3,733.66	8.01	3.42%
Hand Wash Station	5,640.12	12.1	5.17%
Unlabeled	3,551.87	7.62	3.26%
H&S Office Washroom	37.29	0.08	0.03%
WCUA - All Shifts	181.79	0.39	0.17%
Satellite Café	5,705.37	12.24	5.23%
Front Lower Arm	1,957.73	4.2	1.80%
Small Parts	7,108.41	15.25	6.52%
Delivery Washroom	219.08	0.47	0.20%
Total	109,050.00	233.95	

Considering the large number of areas, the composition of each individual area's waste to energy recovery stream can be found in Appendix D. Please note that material categories that contributed less than 1.00% of an area's total disposal of waste to recovery energy were not labelled in these figures.



### 4.2.2.2 Divertible Materials Found in the Waste to Energy Recovery

12,389.61 kg or 11.36% of the material found in the waste to energy recovery stream had the potential to be diverted through the currently recycling programs in place. The percentage of recyclable materials and compostable (organic) materials sent to energy recovery stream can be seen in Figure 14.

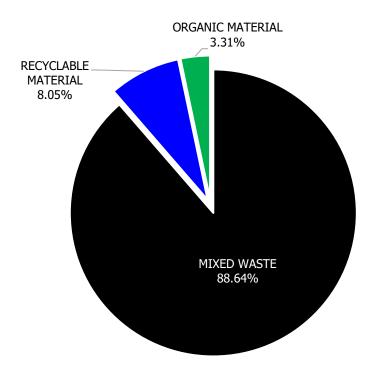


Figure 14. The composition of the waste to energy recovery stream, shown in percent.

Photographs of recyclable materials and compostable materials found in the waste to energy recovery stream during the waste audit can be found in Appendix B: Photo Log – Plant 1.



8,781.80 kg or 8.05% of the material found in the waste to energy recovery stream was recyclable. If disposed of correctly, this material could have been diverted through the recycling streams. Notably, LDPE (#4) is currently not being diverted due to absence in recycling market. A breakdown of the recyclable material found in the waste to energy recovery stream is shown in Figure 15.

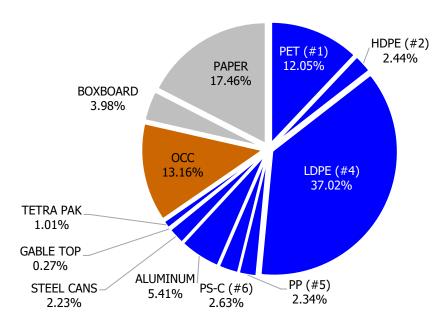


Figure 15. Recyclable materials found in the waste to energy recovery stream, shown in percent.

3,607.81 kg or 3.31% of the material found in the waste to energy recovery stream was compostable. Due to the COVID-19 pandemic, the organic's composting stream was put on hold. Once the program has resumed in July, employees will be able to dispose of organic material correctly. A breakdown of the organic material found in the waste to energy recovery stream is shown in Figure 16.



Figure 16. Organic materials found in the waste to energy recovery stream, shown in percent.



#### **4.2.3 TOTAL WASTE SENT TO LANDFILL**

The total amount of waste sent to landfill at Plant 1 between June 2021 and May 2022 was 16,920.00 kg. Figure 17 displays the total amount of waste sent to landfill by material category.

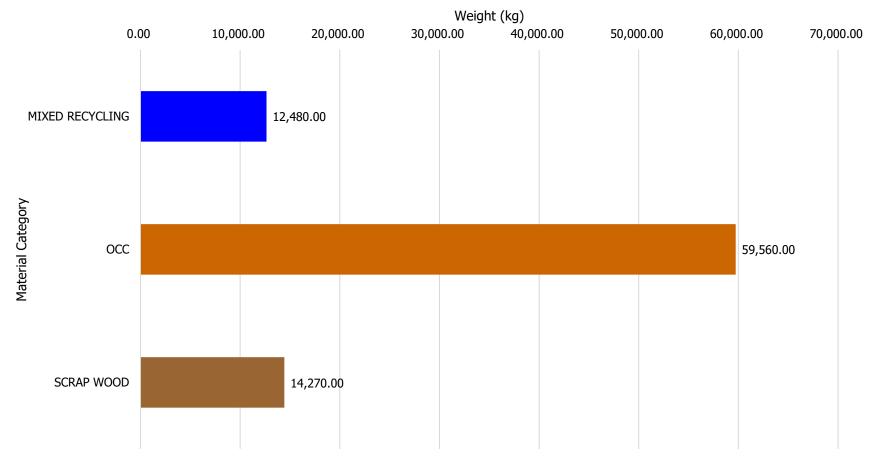


Figure 17. Waste sent to landfill by material category, shown in kilograms.



#### 4.2.4 TOTAL WASTE DIVERTED THROUGH RECYCLING STREAMS

The total amount of waste diverted through recycling streams at Plant 1 between June 2021 and May 2022 was 22,116,770.00 kg. Figure 18 displays the total amount of waste diverted by material category.



Scrap metal accounted for 22.030,460.00 kg and was not included in the graph due to the limitations in scale.

Figure 18. Waste diverted by material category, shown in kilograms.

#### **4.2.5 CAPTURE RATES**

Capture rate provides an indication of how well a site's diversion streams are operating. The overall capture rate at Plant 1 was 99.97%, meaning that 99.96% of all the divertible materials generated on-site were correctly source separated and diverted from energy recovery stream. The remaining 0.03% of divertible materials were incorrectly source separated and sent to energy recovery, even though they could have been diverted through one of the diversion streams currently operating at the site. Figures 19 identifies the capture rates for each divertible material category of waste.

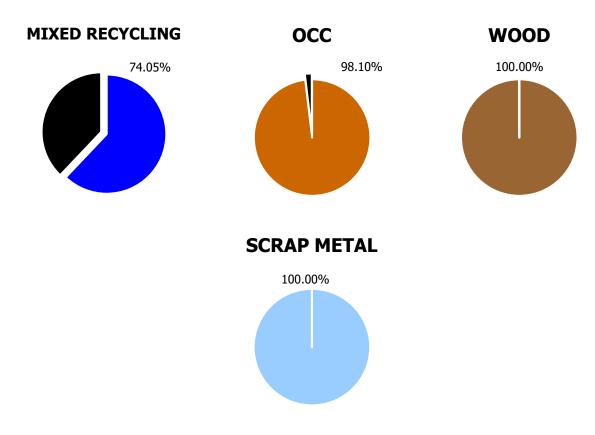
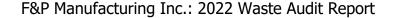


Figure 19. The capture rates for each divertible material category, shown in percent.





#### 4.2.6 CONCLUSION

In total, 42,102.76 kg of textile gloves were sent to energy recovery in Plant 1. This represents 38.61% of the total weight of materials sent to energy recovery.

In addition, 42.74 kg of paper towel was observed within the sample, accounting for 18.27% of the total sample weight at Plant 1.

Further, 99.96 % of recyclable material was correctly source separated in the recycling streams. With the use of a recycling program that properly disposes of LDPE 4, this number could be even higher.

Within the sample, 7.74 kg of food waste was observed, accounting for 3.31% of the total sample weight. When the composting program resumes in July, food waste will be able to be diverted from energy recovery stream.

Please refer to section 5.0 Recommendations for a list of initiatives that could be implemented at 1 Nolan Road to improve the site's diversion from energy recovery performance.



#### 4.3 SUMMARY OF RESULTS – PLANT 2

Table 9 provides a summary of the audit findings.

Table 9. Summary of audit findings at Plant 2.

	SAMPLE VALUE	ANNUAL VALUE
TOTAL WASTE GENERATED	122.44 kg	247,239.00 kg
TOTAL WASTE SENT TO ENERGY RECOVERY	122.44 kg	29,680.00 kg
TOTAL WASTE DIVERTED THROUGH RECYCLING STREAMS	0.00 kg 217,559.00 kg	
OVERALL DIVERSION RATE	88.00%	
OVERALL CAPTURE RATE	99.57%	

#### General Observations

- At Plant 2 the diversion rate is 88%. A large contributor to this diversion rate is the cardboard recycling stream, which accounts for 99.20% of the materials diverted.
- In total, 9,541.04 kg of LDPE (#4) was produced on site. Overall, Plant 2 accounts for 74.58% of the total LDPE (#4) produced at F&P Manufacturing. However, due to the lack of haulers in this area providing a recycling program for this material, it is sent to the energy recovery stream.
- 1,982.87 kg of paper towel was produced on site. B Cafe was the highest contributor of paper towel to the energy recovery stream, accounting for 44.74% of all paper towel produced at Plant 2.



#### **4.3.1 TOTAL WASTE GENERATED**

The total amount of waste generated at Plant 2 between June 2021 and May 2022 was 247,239.00 kg. This weight includes:

- 1. the total annual amount of waste sent to energy recovery;
- 2. the total annual amount of waste diverted through the mixed recycling stream, and;
- 3. the total annual amount of waste diverted through the cardboard recycling.

Figure 20 provides a breakdown of how the waste generated at Plant 2 was source separated onsite, including what percentage of generated waste was sent to energy recovery, and what percentage of generated waste was diverted and what diversion streams were utilized.

Figure 21 displays the total amount of waste generated by material category.

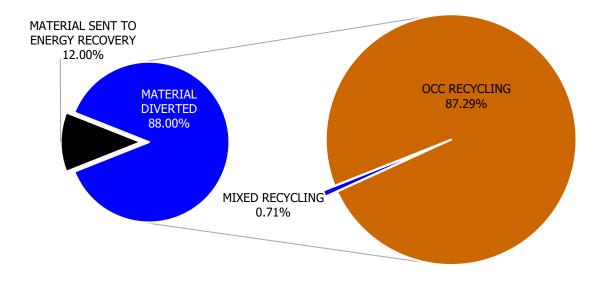


Figure 20. A breakdown of how waste was source separated at the site.



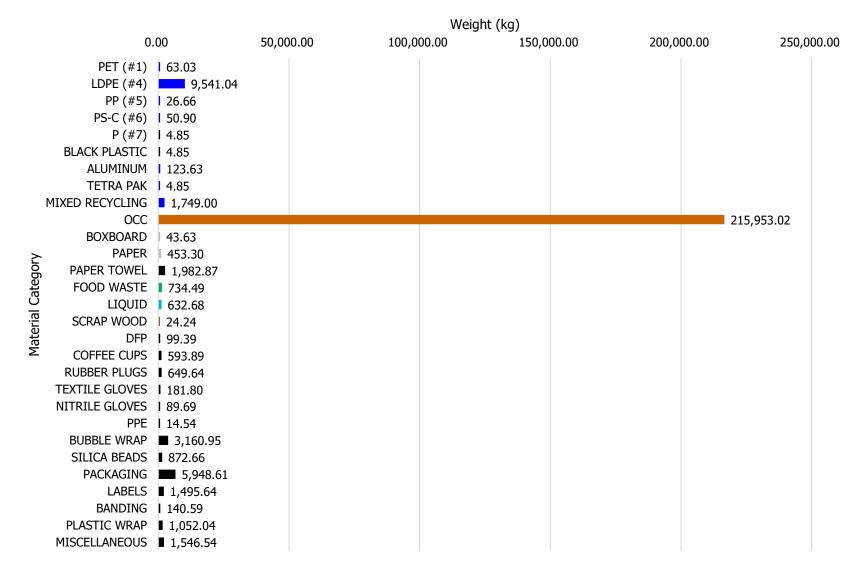


Figure 21. Waste generated by material category, shown in kilograms.



#### 4.3.2 TOTAL WASTE SENT TO ENERGY RECOVERY

The total amount of waste sent to energy recovery at Plant 2 between June 2021 and May 2022 was 29,680.00 kg. Figure 22 displays the total amount of waste by material category.

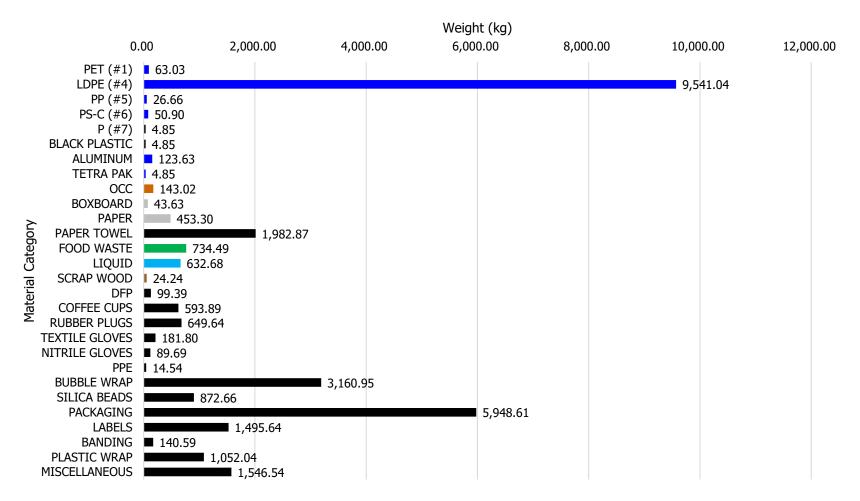


Figure 22. Waste sent to energy recovery by material category, shown in kilograms.



#### 4.3.2.1 Waste Sent to Energy Recovery: Breakdown by Area

Table 10 lists how much waste each area is contributing to the overall disposal of waste to energy recovery, providing that they generated waste during the 24-hour sample period and their waste bags were correctly labelled. Please note that if a portion of the waste sample was not labelled with area information, that waste has been grouped together and identified as "Unlabelled."

Table 10. Total waste sent to energy recovery by area at Plant 2.

Area	Annual Value (kg)	Sample Value (kg)	%
A - ACRM	290.89	1.20	0.98%
A - Civic AOTA	1,311.41	5.41	4.42%
A - MS Office	48.48	0.20	0.16%
A - MS Washrooms	104.23	0.43	0.35%
A - Security Office	63.03	0.26	0.21%
A -Civic ACUA	652.07	2.69	2.20%
A- ASRK	2,285.87	9.43	7.70%
A- Hand Wash Station	341.79	1.41	1.15%
A-CRV-AVFL	1,020.52	4.21	3.44%
A-CRV-AVLA	770.85	3.18	2.60%
A-CRV-AVUP/FS	787.81	3.25	2.65%
B - Café	1,338.07	5.52	4.51%
B - Office	87.27	0.36	0.29%
B - Washrooms/Locker rooms	550.26	2.27	1.85%
B- ACFL	1,124.76	4.64	3.79%
C-Café	1,902.87	7.85	6.41%
Front Office	174.53	0.72	0.59%
Linens Locker Room	60.60	0.25	0.20%
Office Washroom	53.33	0.22	0.18%
Unlabelled	12,680.18	52.31	42.72%
ACCB	1,975.60	8.15	6.66%
ACRK	1,459.27	6.02	4.92%
AVRS	501.78	2.07	1.69%
Women's Locker Room	94.54	0.39	0.32%
Total	29,680.00	122.44	

Considering the large number of areas, the composition of each individual area's waste to energy recovery stream can be found in Appendix E. Please note that material categories that contributed less than 1.00% of a tenant/ area's total disposal of waste to landfill were not labelled in these figures.



#### 4.3.2.2 Divertible Materials Found in the Waste to Energy Recovery

11,208.78 kg or 37.77% of the material found in the waste to energy recovery stream had the potential to be diverted through the currently recycling programs in place. The percentage of recyclable materials and compostable (organic) materials sent to energy recovery stream can be seen in Figure 23.

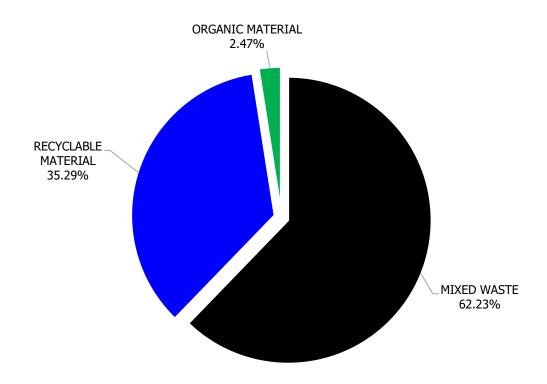


Figure 23. The composition of the waste to energy recovery stream, shown in percent.

Photographs of recyclable materials and compostable materials found in the waste to energy recovery stream during the waste audit can be found in Appendix C: Photo Log – Plant 2.



10,474.30 kg or 35.29% of the material found in the waste to energy recovery stream was recyclable. If disposed of correctly, this material could have been diverted through the recycling streams. Notably, LDPE (#4) is currently not being diverted due to absence in recycling market. A breakdown of the recyclable material found in the waste to energy recovery stream is shown in Figure 24.

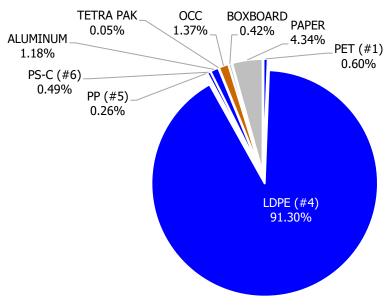


Figure 24. Recyclable materials found in the waste to energy recovery stream, shown in percent.

734.49 kg or 2.47% of the material found in the waste to energy recovery stream was compostable. Due to the COVID-19 pandemic, the organic's composting stream was put on hold. Once the program has resumed in July, employees will be able to dispose of organic material correctly. Once the program resumes, employees will be able to dispose of organic material correctly. A breakdown of the organic material found in the waste to energy recovery stream is shown in Figure 25.



Figure 25. Organic materials found in the waste to energy recovery stream, shown in percent.



#### 4.3.3 TOTAL WASTE DIVERTED FROM ENERGY RECOVERY

The total amount of waste diverted through recycling streams at Plant 2 between June 2021 and May 2022 was 217,559.00 kg. Figure 26 displays the total amount of waste diverted by material category.

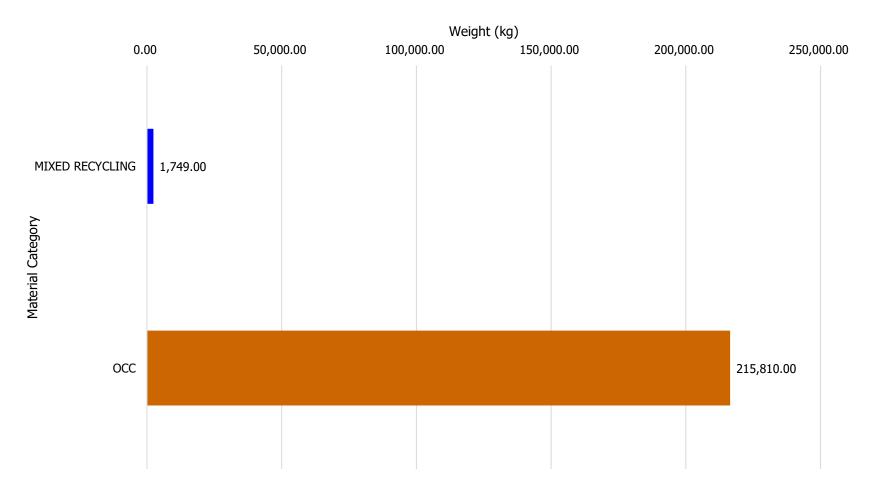


Figure 26. Waste diverted by material category, shown in kilograms.



#### **4.3.4 CAPTURE RATES**

Capture rate provides an indication of how well a site's diversion streams are operating. The overall capture rate at Plant 2 was 99.57% meaning that 99.57% of all the divertible materials generated on-site were correctly source separated and diverted from energy recovery stream. The remaining 0.43% of divertible materials were incorrectly source separated and sent to energy recovery, even though they could have been diverted through one of the diversion streams currently operating at the site. Figures 27 identifies the capture rates for each divertible material category of waste.

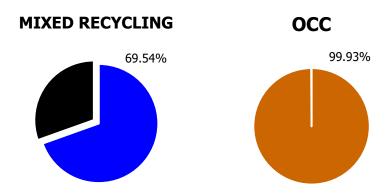
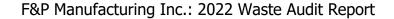


Figure 27. The capture rates for each divertible material category, shown in percent.





#### 4.3.5 CONCLUSION

In total, 9,541.04 kg of LDPE 4 was sent to the energy recovery stream in Plant 2. This accounts for 32.15% of the total weight of materials sent to the energy recovery stream.

Further, 99.57% of recyclable material was correctly source separated in the recycling streams, with the remaining 0.43% being sent to energy recovery.

Within the audit sample, 3.03 kg of food waste was observed onsite, accounting for 2.47% of the total sample weight. When the composting program resumes in July this waste will be able to be diverted from energy recovery.

Please refer to section 5.0 Recommendations for a list of initiatives that could be implemented at 1 Nolan Road to improve the site's diversion from energy recovery performance.



### **5.0 RECOMMENDATIONS**

#### 5.1 THE 3 R's RECOMMENDATION: REDUCE, REUSE, RECYCLE

Waste Solutions recommends that F&P Manufacturing Inc. implement programs that align with the 3 R's: reduce, reuse, and recycle. Waste Solutions believes that the following programs would make a positive impact at your site.

#### 5.1.1 REUSE: LAUNDRY SERVICE

Implement a laundry program for textile gloves worn by the employees at your site so that these materials can be repeatedly cleaned and reused. Currently the site annually disposes of **42,284.57 kg of textile gloves** and these materials could have been washed and reused. Additionally, a laundry program would likely result in cost savings, as new PPE would not have to be purchased as frequently.

Specifically, Plant 1 contributes to 99.57% of the textile gloves, with 42,102.76 kg being sent to the energy recovery facility. Plant 1's sites with the highest textile glove disposal can be seen below in Table 11.

Table 11. Highest Generation areas for textile gloves in Plant 1

GENERATION AREA	ANNUAL VALUE (KG)	PERCENTAGE OF TOTAL (%)
A&B - WCBP/WCBL Small Parts	3,290.84 kg	7.82%
B - CRUFR	2,256.05 kg	5.36%
B - CRV Welding RR SUD L/D/K Lines	4,101.90 kg	9.74%
C - CRV	7,597.84 kg	18.05%
Welding	8,220.12 kg	19.52%



#### 5.1.2 REDUSE: PAPER TOWEL

Currently the site generates **21,905.06 kg** of paper towel, with Plant 1 contributing to 90.94% of the total paper towel generated, as shown in figure 28.

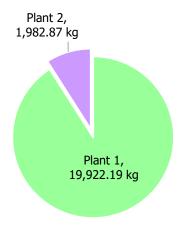


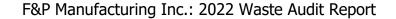
Figure 28. The total amount of paper towel generated per Plant.

Most of the paper towel in Plant 1 is being generated by the handwash station (21.41%) followed by the women's locker rooms and washrooms (17.48%) as shown in table 12.

Table 12. Highest Generation areas for paper towel in Plant 1

GENERATION AREA	ANNUAL VALUE (KG)	PERCENTAGE OF TOTAL (%)
B - Janitors Room	1,519.57 kg	7.63%
Café Washrooms	1,556.86 kg	7.81%
Men's Locker rooms/Washrooms	2,829.38 kg	14.20%
Paint Washrooms	1,263.20 kg	6.34%
Satellite/Stamping Office	1,472.96 kg	7.39%
Women's Locker rooms/washrooms	3,481.96 kg	17.48%
Hand Wash Station	4,265.05 kg	21.41%

Waste Solutions recommends that F&P Manufacturing encourages employees to reduce the use of paper towel. Additionally, F&P Manufacturing could consider replacing the washroom and handwash station paper towel dispensers and with automatic hand dryers. You can determine potential cost savings from switching from paper towel to hand dryers by reviewing your current purchasing records and conducting a cost benefit analysis.





#### **5.2 EDUCATION AND TRAINING**

Waste Solutions recommends that F&P Manufacturing Inc. provides further waste management education and training to the employees of 1 Nolan Road.

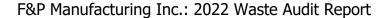
Waste Solutions can help to inspire change within the culture of your organization through education and training opportunities. For waste reduction and diversion efforts at 1 Nolan Road to improve, the behaviour and attitude of your employees needs to change. To stimulate behavioural change, sustainability needs to be embedded into the culture of your organization. Education is the first step in encouraging your employees to change the way they think about waste. Once the building's culture shifts, improvements will start to become noticeable and sustainable waste management practices will become routine.

#### 5.2.1 WASTE MANAGEMENT TRAINING WORKSHOP

Waste Solutions has the knowledge, skills, and resources to develop and deliver an effective waste management training workshop for your employees. Waste Solutions can design an educational experience that is unique to 1 Nolan Road, by integrating best practices with audit results, and by tailoring workshops to address the specific `s for improvement at your site.

#### 5.2.2 EMPLOYEE EDUCATION PACKAGE

Alternatively, or in addition to, a Waste Management Training Workshop, Waste Solutions can design an education package that can be distributed to your employees. An education package would ensure that all current and future employees at 1 Nolan Road are provided with relevant waste management information, including instructions on how to properly use the diversion programs operating at the site.





A change in employee behaviours and attitude towards waste can result in:



A future increase in the site's diversion and capture rates



Increased opportunities for the site to be recognized for its sustainability efforts



Cost savings and avoidance of new fines and penalties applied for improperly source separating materials



Increased job satisfaction and employee morale



Improved business performance

Please contact Waste Solutions if you are interested in learning more about these additional education and training services.



#### **5.3 CONTINUOUS MONITORING**

Waste Solutions recommends that F&P Manufacturing Inc. implement an action plan to regularly monitor the site's waste management practices and waste generation.

You can gain a better understanding of how waste is generated and managed at 1 Nolan Road if the site's waste management practices are regularly monitored.

#### 5.3.1 SPOT AUDITS

Waste Solutions can provide support to the continuous monitoring of the waste generation and management at 1 Nolan Road by conducting on-site spot audits. A spot audit is smaller in scope than the annual waste audit Waste Solutions conducts at your site, but can provide you with similar information, including: contamination rates and missed opportunities for diversion. Please contact Waste Solutions if you are interested in learning more about this additional service.

#### 5.3.2 WASTE REDUCTION TEAM

Implement a Waste Reduction Team to monitor and address waste management issues at your building. The team should be comprised of members from a representative distribution of stakeholders at the site to ensure that all staff are aware of and participating in waste reduction and diversion initiatives. A team approach allows for work to be distributed among several employees and provides an opportunity for various departments and staff to bring their concerns and ideas to the table.

Continuous and regular monitoring can result in:



Opportunity to immediately address any issues or concerns that arise



Opportunity to monitor actions taken to make improvements at the site to determine if the implemented strategy is making a positive impact



A building community that is engaged, passionate about sustainability, and eager to participate in waste reduction and diversion efforts



## **APPENDIX A: DEFINITIONS**

Acceptance Criteria: Specifications set by the process for materials management that when met, facilitate optimum processing results as planned, such as commingling and contamination thresholds.

**Annualize:** To calculate the mass of materials generated for an entire year based on any sample size.

**Black Plastics:** Plastic that has been dyed black. This material can be difficult to recycle, as many Material Recovery Facilities use optical sensors in their processes, and these sensors cannot easily detect materials that have been dyed black.

**Capture Rate:** The proportion of a divertible waste, expressed as a percentage, which is successfully diverted from disposal.

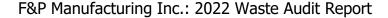
**Compostable Food Packaging (CFP):** Single-use, biodegradable, packaging material often originating from fast food restaurants, takeout restaurants, and catering establishments. This material is made from biodegradable, plant-based material that can easily breakdown in a composting process.

**Condensed polystyrene (PS-C #6):** A type of plastic commonly used to make compact disc cases, coffee cup lids, yogurt cups, coffee pods, and disposable plastic plates and cups.

Containers Recycling Stream: A diversion program where containers are source separated onsite, placed in designated bins, and collected by a waste hauler to be recycled and diverted from landfill disposal. This program can also be referred to as a "cans and bottles" recycling stream. Although the acceptance criteria for these programs can change from region to region, a container recycling stream typically accepts the following materials: PET #1, HDPE #2, LDPE #4, PP #5, PS-C #6, aluminum, steel, glass, gable top containers, and Tetra Pak containers. Sites that have a container recycling program, often also have a paper recycling program, which together is called a two-stream recycling program.

**Contamination:** Material found in a diversion stream that is not considered divertible as it does not meet the acceptance criteria outlined by the site's waste hauler. This material reduces the efficiency and effectiveness of the diversion process and ultimately is disposed of in a landfill.

**Disposable Food Packaging (DFP):** Single-use, disposable, packaging material often originating from fast food restaurants, takeout restaurants, and catering establishments. The disposable food packing material category is typically comprised of: poly coated paper plates and bowls; wax coated fountain drink cups; cardboard and boxboard packaging soiled with food waste or grease (i.e. soiled pizza box, French fry holders, etc.); chip bags; and assorted wrappers from burgers, sandwiches, granola bars, and candy bars.





**Diversion:** The following activities are considered diversion actions: actions to prevent waste materials from being generated, actions to reduce material generation, reuse (internal or external), source-separated recycling, composting (on-site or off-site). Post-collection sorting, such as recyclable material removed from a commingled waste bin at the transfer station, does not qualify as a source-separated diversion activity for the original generator of the waste even though the hauler or processor may ultimately diver the discarded material from disposal.

**Diversion Rate:** The proportion by weight of all material diverted from disposal to the total weight of all waste material generated, expressed as a percentage.

**Expanded polystyrene (PS-E #6):** A type of plastic commonly referred to as "Styrofoam," that is used to make take-out food containers, packing peanuts, and other foam packaging inserts used to protect product during shipping and handling processes.

**High-density polyethylene (HDPE #2):** A type of plastic commonly used to make milk jugs, household cleaner containers, meal-replacement bottles, protein powder containers, shampoo bottles, detergent bottles, and toiletries bottles.

Low-density polyethylene (LDPE #4): A type of plastic commonly used to make squeezable bottles, shopping bags, shrink wrap, bread bags, and food wraps. Also referred to as "soft plastics."

Mixed Recycling Stream: A diversion program where recyclable materials are source separated on-site, placed in designated bins, and collected by a waste hauler to be recycled and diverted from landfill disposal. Mixed recycling programs accept both containers and fibre-based materials in a single stream. Although the acceptance criteria for these programs can change from region to region, a mixed recycling stream typically accepts the following materials: PET #1, HDPE #2, LDPE #4, PP #5, PS-C #6, aluminum, steel, glass, gable top containers, Tetra Pak containers, cardboard, boxboard, and mixed paper.

**Mixed Waste:** The category of waste comprised of materials that are not typically considered to be recyclable, and therefore are usually disposed of in a waste to landfill or waste-to-energy (incineration) stream.

Organic Composting Stream: A diversion program where organic materials are source separated on-site, placed in designated bins, and collected by a waste hauler to be composted and diverted from landfill disposal. Although the acceptance criteria for these programs can change from region to region, an organic composting stream typically accepts the following material: food waste, yard waste, paper towel, compostable food packaging, and small quantities of wood (i.e. wooden stir sticks and chop sticks).

Paper Recycling Stream: A diversion program where fibre-based materials are source separated on-site, placed in designated bins, and collected by a waste hauler to be recycled and diverted from landfill disposal. Although the acceptance criteria for these programs can change from





region to region, a paper recycling stream typically accepts the following materials: cardboard, boxboard, and mixed paper. Sites that have a paper recycling program, often also have a containers recycling program, which together is called a two-stream recycling program.

Polyethylene terephthalate (PET #1): A type of plastic commonly used to make water bottles, soda bottles, salad dressing containers, mouthwash bottles, clamshell food packaging, and peanut butter containers.

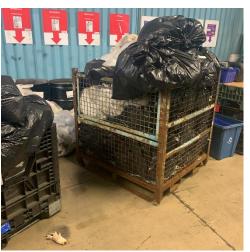
Polypropylene (PP #5): A type of plastic commonly used to make yogurt containers, ketchup bottles, syrup bottles, iced coffee cups, and medicine bottles.

**Unlabeled plastic (P #7):** The generic name for other plastic material usually comprised of a variety of other types of plastics. This material is commonly used to make blister packaging, sunglasses, toys, and single-use plastic items like straws, cutlery, and single pots that hold milk, cream, and butter.



# APPENDIX B: PHOTO LOG - PLANT 1



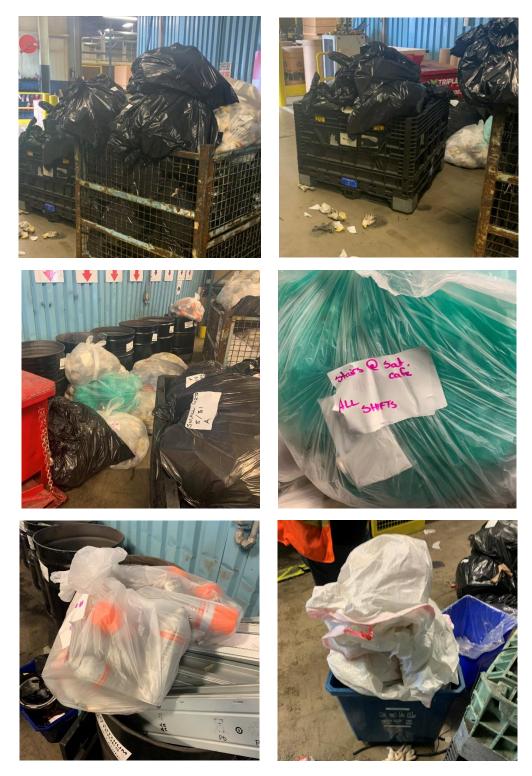






Images 1-4. On-site methods to handle, collect, and store waste.





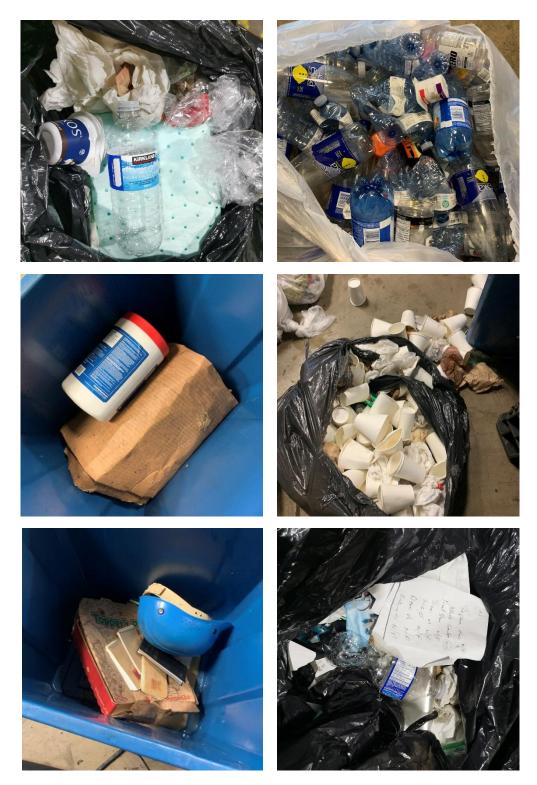
Images 5-10. The staged waste sample representing 24-hours of waste generation.





Images 11-14. Organic materials found in the waste to energy recovery stream that could have been diverted if the composting stream was operating.





Images 15-20. Recyclable materials found in the waste to energy recovery stream that could have been diverted through the recycling streams in place.











Images 21-28. Mixed waste found in the waste to energy recovery stream.



# **APPENDIX C: PHOTO LOG – PLANT 2**









Images 29-32. The staged waste sample representing 24-hours of waste generation.





Images 33-36. Mixed waste found in the waste to energy recovery stream.





Images 37-40. Recyclable materials found in the waste to energy recovery stream that could have been diverted through the mixed recycling stream in place.







Images 41-42. Organic materials found in the waste to energy recovery stream that could have been diverted if the composting stream was operating.



# APPENDIX D: WASTE SENT TO ENERGY RECOVERY BY AREA - PLANT 1

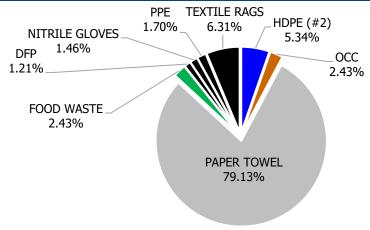


Figure 1. B - Janitors Room's waste to energy recovery, shown in percent.

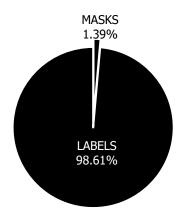


Figure 2. A- Beam Line's waste to energy recovery, shown in percent.

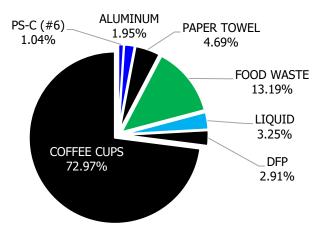


Figure 3. B – Café's waste to energy recovery, shown in percent.



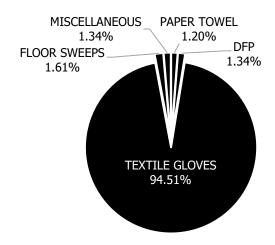


Figure 4. A&B - WCBP/WCBL Small Part's waste to energy recovery, shown in percent.

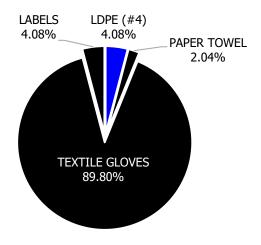


Figure 5. A-WDAVA's waste to energy recovery, shown in percent.

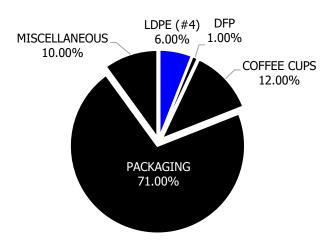


Figure 6. B - Store Room's waste to energy recovery, shown in percent.



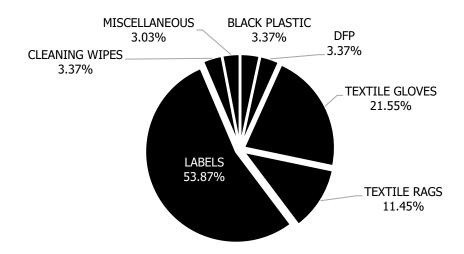


Figure 7. B - Beam Line's waste to energy recovery, shown in percent.

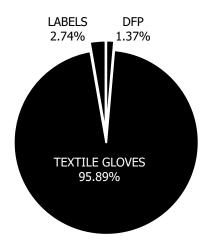


Figure 8. B - Cadillac E Line's waste to energy recovery, shown in percent.

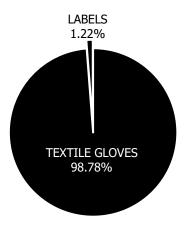


Figure 9. B – Camaro's waste to energy recovery, shown in percent.





Figure 10. B – CRUFR's waste to energy recovery, shown in percent.



Figure 11. B - CRV Welding RR SUD L/D/K Line's waste to energy recovery, shown in percent.

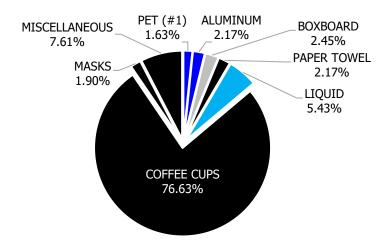


Figure 12. B - Front Entrance's waste to energy recovery, shown in percent.



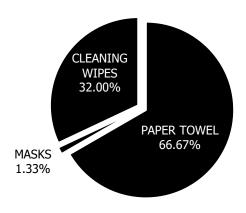


Figure 13. B - Washrooms/locker room's waste to energy recovery, shown in percent.

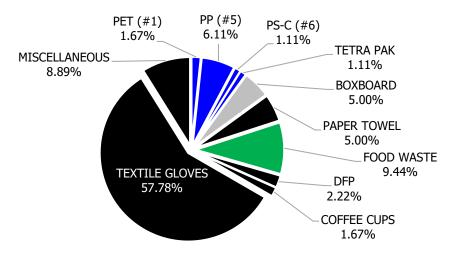


Figure 14. B - Production Office's waste to energy recovery, shown in percent.

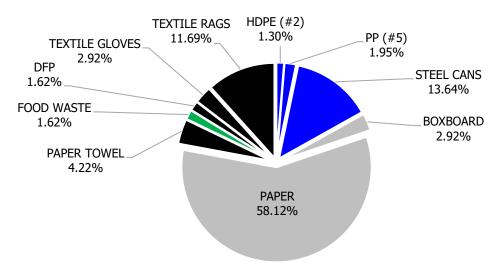


Figure 15. B - Quality Lab ISD's waste to energy recovery, shown in percent.



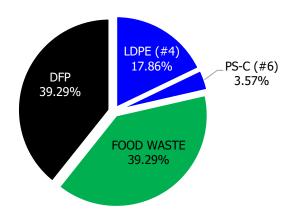


Figure 16. B - Shipping Receiving's waste to energy recovery, shown in percent.

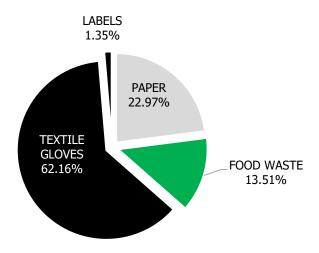


Figure 17. C - Water's waste to energy recovery, shown in percent.

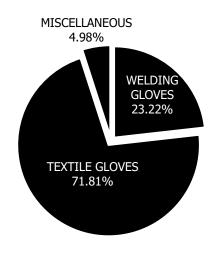


Figure 18. C - WCSR B's waste to energy recovery, shown in percent.



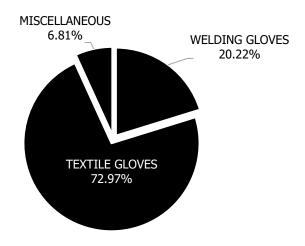


Figure 19. C - WCSF 2's waste to energy recovery, shown in percent.

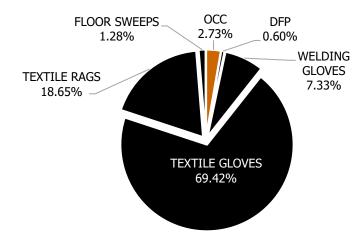


Figure 20. C – CRV's waste to energy recovery, shown in percent.



Figure 21. C- Beamline's waste to energy recovery, shown in percent.



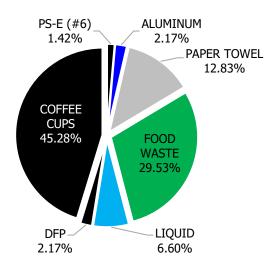


Figure 22. C- Café's waste to energy recovery, shown in percent.

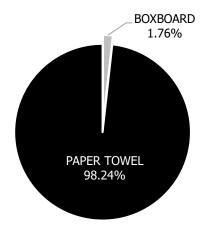


Figure 23. Café Washroom's waste to energy recovery, shown in percent.

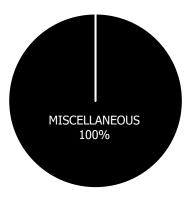


Figure 24. T2S's waste to energy recovery, shown in percent.



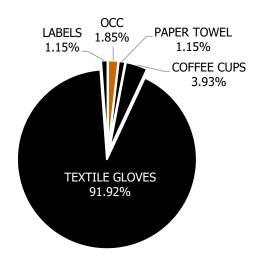


Figure 25. Dye Maintenance's waste to energy recovery, shown in percent.

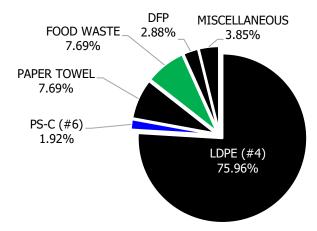


Figure 26. HR Office/Accounting's waste to energy recovery, shown in percent.

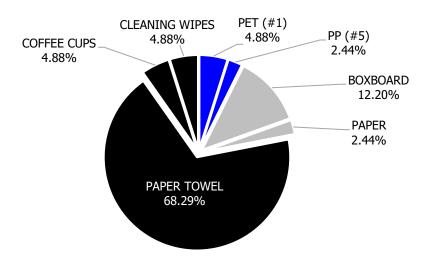


Figure 27. Lobby Security's waste to energy recovery, shown in percent.



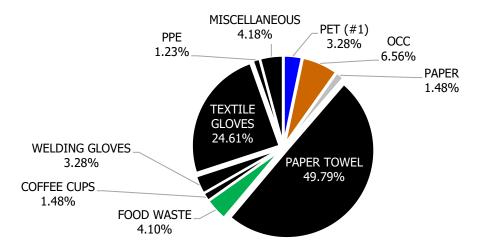


Figure 28. Men's Locker rooms/Washroom's waste to energy recovery, shown in percent.

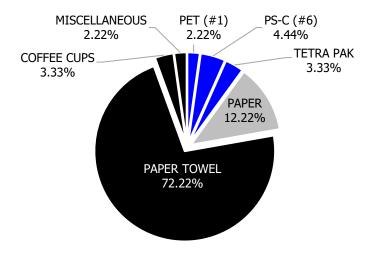


Figure 29. Metal Forming Office's waste to energy recovery, shown in percent.

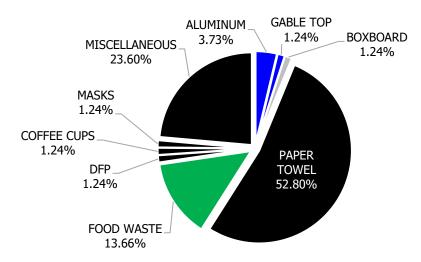


Figure 30. New Mode Office's waste to energy recovery, shown in percent.



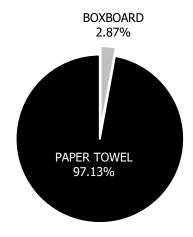


Figure 31. Paint Washroom's waste to energy recovery, shown in percent.

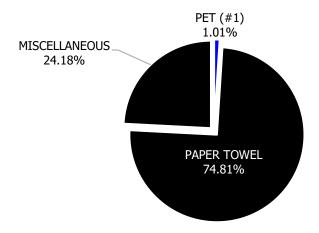


Figure 32. Quality's waste to energy recovery, shown in percent.

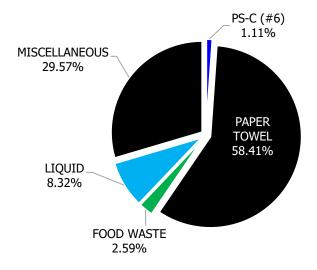


Figure 33. Satellite/Stamping Office's waste to energy recovery, shown in percent.



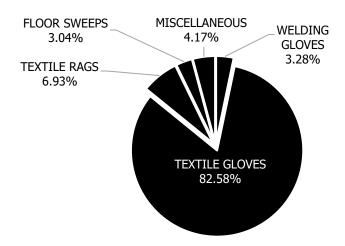


Figure 34. Welding's waste to energy recovery, shown in percent.

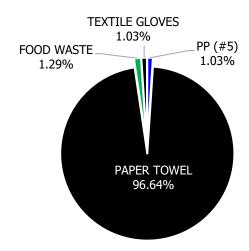


Figure 35. Women's Locker rooms/washrooms waste to energy recovery, shown in percent.

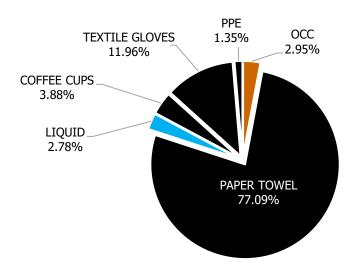


Figure 36. Hand Wash Station's waste to energy recovery, shown in percent.



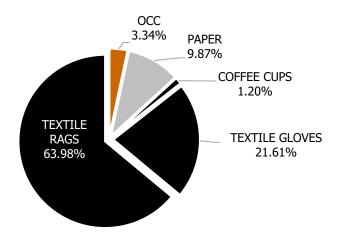


Figure 37. Unlabelled waste to energy recovery, shown in percent.

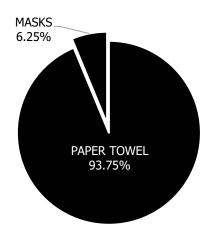


Figure 38. H&S Office Washroom's waste to energy recovery, shown in percent.

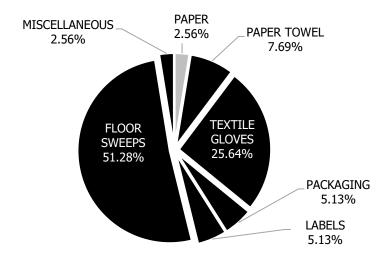


Figure 39. WCUA - All Shift's waste to energy recovery, shown in percent.



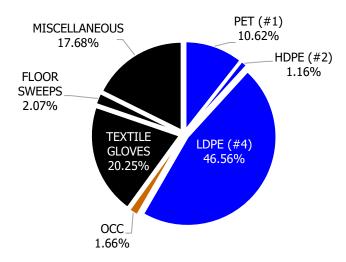


Figure 40. Satellite Café's waste to energy recovery, shown in percent.

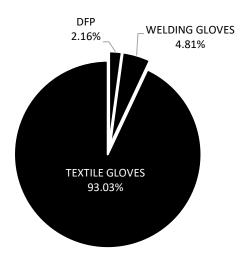


Figure 41. Front Lower Arm's waste to energy recovery, shown in percent.

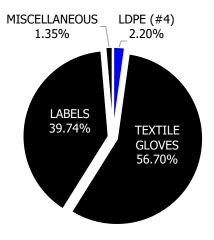


Figure 42. Small Parts - All Shifts waste to energy recovery, shown in percent.





Figure 43. Delivery Washroom's waste to energy recovery, shown in percent.



# APPENDIX E: WASTE SENT TO ENERGY RECOVERY BY AREA - PLANT 2

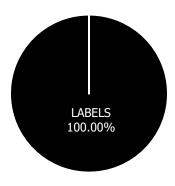


Figure 1. A – ACRM's waste to energy recovery, shown in percent.

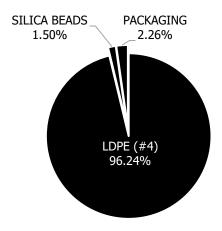


Figure 2. A - Civic AOTA's waste to energy recovery, shown in percent.

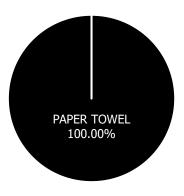


Figure 3. A - MS Office's waste to energy recovery, shown in percent.



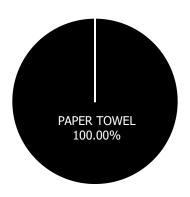


Figure 4. A - MS Washroom's waste to energy recovery, shown in percent.

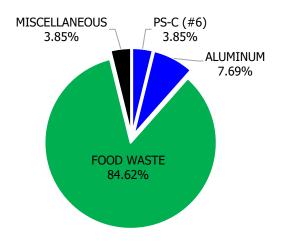


Figure 5. A - Security Office's waste to energy recovery, shown in percent.

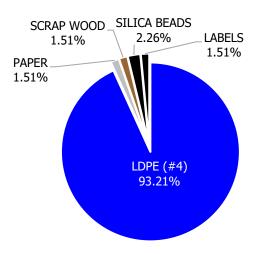


Figure 6. A - Civic ACUA's waste to energy recovery, shown in percent.



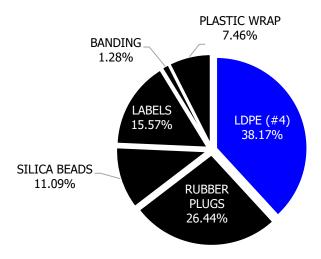


Figure 7. A- ASRK's waste to energy recovery, shown in percent.

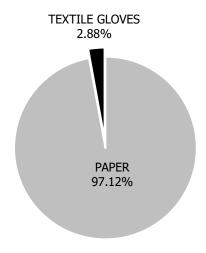


Figure 8. A- Hand Wash Station's waste to energy recovery, shown in percent.

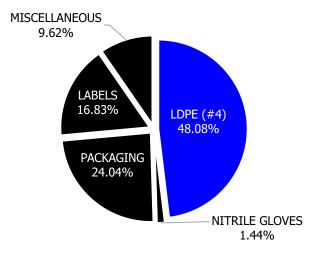


Figure 9. A-CRV-AVFL's waste to energy recovery, shown in percent.





Figure 10. A-CRV-AVLA's waste to energy recovery, shown in percent.

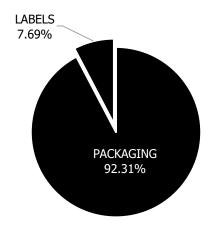


Figure 11. A-CRV-AVUP/FS's waste to energy recovery, shown in percent.

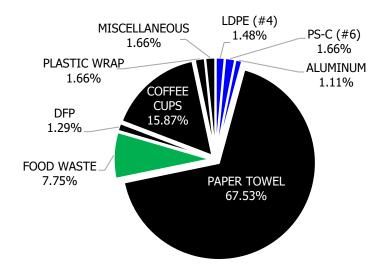


Figure 12. B – Café's waste to energy recovery, shown in percent.



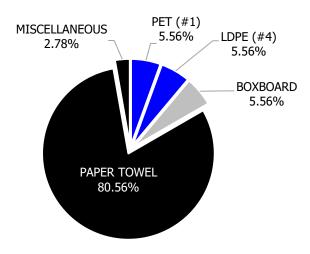


Figure 13. B – Office's waste to energy recovery, shown in percent.

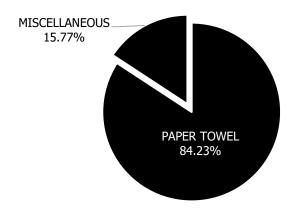


Figure 14. B - Washrooms/Locker room's waste to energy recovery, shown in percent.

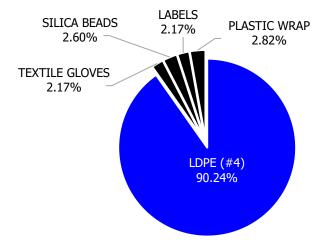


Figure 15. B- ACFL 's waste to energy recovery, shown in percent.



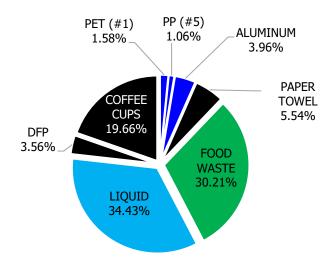


Figure 16. C-Café's waste to energy recovery, shown in percent.

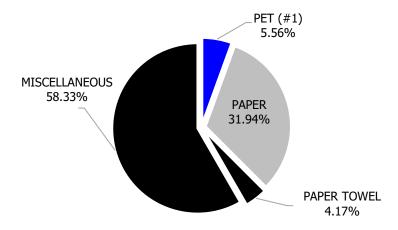


Figure 17. Front Office's waste to energy recovery, shown in percent.

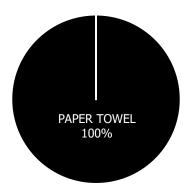


Figure 18. Linens Locker Room's waste to energy recovery, shown in percent.



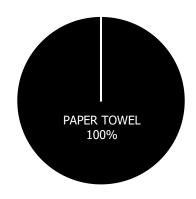


Figure 19. Office Washroom's waste to energy recovery, shown in percent.

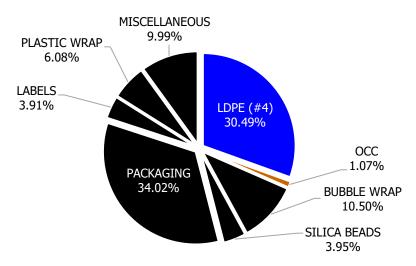


Figure 20. Unlabelled waste to energy recovery, shown in percent.

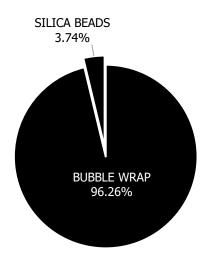


Figure 21. ACCB's waste to energy recovery, shown in percent.



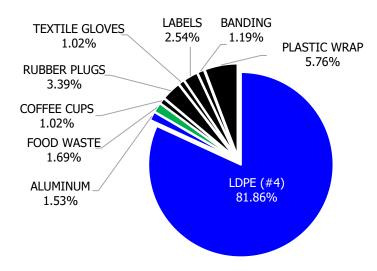


Figure 22. ACRK's waste to energy recovery, shown in percent.

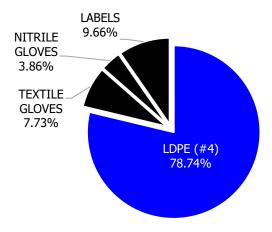


Figure 23. AVRS's waste to energy recovery, shown in percent.

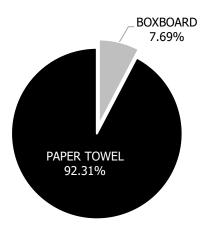


Figure 24. Women's Locker Room's waste to energy recovery, shown in percent.



## APPENDIX F: REPORT OF A WASTE AUDIT FORM

Ministry of the Environment, Conservation and Parks
Report of a Waste Audit
Industrial, Commercial and Institutional Establishments
As required by Ontario Regulation 102/94

#### I. General Information

Name of Owner and/or Operator of Entity(ies) and Company Name:								
1 Nolan Road. care of F&P Manufacturing Inc								
Name of Contact Person:	Name of Contact Person: Telephone Number: Email Address:							
Terry Diemert	(905) 936-3435 Ext. 459	terry.diemert@fandpmfg.com						
Street Address of Entity(ies):	:							
	1 Nolan Road							
Municipality:								
	Tottenham, Ontario							
Type of Entity:								
	Manufacturing Establishments							

#### **II. Description of Entity**

#### Provide a brief overview of the entity(ies):

F&P Manufacturing Inc. is a subsidiary of Ftech Inc. in Japan, and it is a leading Tier 1 Automotive Parts Manufacturer located in Tottenham, Ontario. The site covers an area of 441,000 ft<sup>2</sup> and produces annually over 58 million automotive component parts.

#### III. How Waste is Produced and Decisions Affecting the Production of Waste

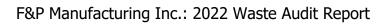
Categories of Waste:	How is the Waste Produced and What Management Decisions/Policies Affect Its Production?
Polyethylene Terephthalate (PET #1)	Waste is generated when materials are brought to the site by employees; when materials are purchased for daily operations; and from the packaging associated with the purchasing of materials.
High-Density Polyethylene (HDPE #2)	Waste is generated when materials are brought to the site by employees; when materials are purchased for daily operations; and from the packaging associated with the purchasing of materials.
Low-Density Polyethylene (LDPE #4)	Waste is generated when materials are brought to the site by employees; when materials are purchased for daily operations; and from the packaging associated with the purchasing of materials.



Polypropylene (PP #5)	Waste is generated when materials are brought to the site by employees; when materials are purchased for daily operations; and from the packaging associated with the purchasing of materials.
Condensed Polystyrene (PS-C #6)	Waste is generated when materials are brought to the site by employees; when materials are purchased for daily operations; and from the packaging associated with the purchasing of materials.
Expanded Polystyrene (PS-E #6)	Waste is generated when materials are brought to the site by employees; when materials are purchased for daily operations; and from the packaging associated with the purchasing of materials.
Other Plastic (#7)	Waste is generated when materials are brought to the site by employees; when materials are purchased for daily operations; and from the packaging associated with the purchasing of materials.
Black Plastic	Waste is generated when materials are brought to the site by employees; when materials are purchased for daily operations; and from the packaging associated with the purchasing of materials.
Aluminum Food and Beverage Cans	Waste is generated when materials are brought to the site by employees; and when materials are purchased for daily operations.
Steel Food and Beverage Cans	Waste is generated when materials are brought to the site by employees; and when materials are purchased for daily operations.
Glass Bottles & Jars for Food & Beverage	Waste is generated when materials are brought to the site by employees; and when materials are purchased for daily operations.
Gable Top Containers	Waste is generated when materials are brought to the site by employees; and when materials are purchased for daily operations.
Tetra Pak Containers	Waste is generated when materials are brought to the site by employees; when materials are purchased for daily operations; and from the packaging associated with the purchasing of these materials.
Scrap Metal	Waste is generated through the manufacturing process.
Cardboard (Corrugated)	Waste is generated when materials are brought to the site by employees; when materials are purchased for daily operations; and from the packaging associated with the purchasing of materials.
Boxboard	Waste is generated when materials are brought to the site by employees; when materials are purchased for daily operations; and from the packaging associated with the purchasing of these materials.
Mixed Paper (Fine Paper & Newsprint)	Waste is generated when materials are brought to the site by employees; when materials are purchased for daily operations; and from the packaging associated with the purchasing of materials.
Paper Towel	Waste is generated when materials are brought to the site by employees and when materials are purchased for daily operations.



Solid Food Waste	Waste is generated when materials are brought to the site by employees.				
Liquid Food Waste	Waste is generated when materials are brought to the site by employees and when materials are purchased for daily operations.				
Wood	Waste is generated when materials are purchased for daily operations; and from the packaging associated with the purchasing of materials.				
Disposable Food Packaging	Waste is generated when solid food waste is brought to the site by employees, and when materials are purchased by staff for consumption.				
Coffee Cups	Waste is generated when coffee is brought to the site by employees, and when materials are purchased by staff for coffee consumption.				
Rubber Plugs	Waste is generated when materials are purchased for daily operations.				
Welding Gloves	Waste is generated when materials are purchased for daily operations.				
Textile Gloves	Waste is generated when materials are purchased for daily operations.				
Nitrile Gloves	Waste is generated when materials are purchased for daily operations.				
Personal Protective Equipment	Waste is generated when materials are purchased for daily operations.				
Masks	Waste is generated when materials are brought to the site by employees; and when materials are purchased for daily operations.				
Bubble Wrap	Waste is generated when materials are purchased for daily operations; and from the packaging associated with the purchasing of materials.				
Silica Beads	Waste is generated through the production process.				
Textile Rags	Waste is generated when materials are purchased for daily operations.				
Packaging	Waste is generated when materials are purchased for daily operations; and from the packaging associated with the purchasing of these materials.				
Plastic Banding	Waste is generated when materials are purchased for daily operations; and from the packaging associated with the purchasing of these materials.				
Floor Sweeps	Waste is generated through the production process.				
Labels	Waste is generated when materials are purchased for daily operations; and from the packaging associated with the purchasing of these materials.				
Cleaning Wipes	Waste is generated when materials are brought to the site by employees; and when materials are purchased for daily operations.				
Plastic Wrap	Waste is generated when materials are purchased for daily operations; and from the packaging associated with the purchasing of materials.				
Miscellaneous Items	Waste is generated when materials are brought to the site by employees; when materials are purchased for daily operations;				





	and from the packaging associated with the purchasing of materials.
Sludge	Waste is generated through the production process.



### IV. Management of Waste

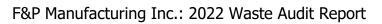
Category:	Waste to be Disposed:	Reused or Recycled Waste:	
	Material is occasionally		
	disposed of as waste by	Employees place this material	
Polyethylene Terephthalate (PET #1)	employees due to non-	in the recycling bins to be	
	compliance with the current	recycled.	
	recycling program.	•	
	Material is occasionally		
	disposed of as waste by	Employees place this material	
High-Density Polyethylene (HDPE #2)	employees due to non-	in the recycling bins to be	
	compliance with the current	recycled.	
	recycling program.	,	
	This material is handled as		
Low-Density Polyethylene (LDPE #4)	mixed waste and is placed in a	Not applicable.	
, , , , , , , , , , , , , , , , , , , ,	bin for disposal.	1111	
	Material is occasionally		
	disposed of as waste by	Employees place this material	
Polypropylene (PP #5)	employees due to non-	in the recycling bins to be	
	compliance with the current	recycled.	
	recycling program.	, , , , , ,	
	Material is occasionally		
	disposed of as waste by	Employees place this material	
Condensed Polystyrene (PS-C #6)	employees due to non-	in the recycling bins to be	
condensed i orystyrene (i o e no)	compliance with the current	recycled.	
	recycling program.	recyclesi	
	This material is handled as		
Expanded Polystyrene (PS-E #6)	mixed waste and is placed in a	Not applicable.	
	bin for disposal.		
	This material is handled as		
Other Plastic (#7)	mixed waste and is placed in a	Not applicable.	
0	bin for disposal.		
	This material is handled as		
Black Plastic	mixed waste and is placed in a	Not applicable.	
2.03	bin for disposal.	not applicable.	
	Material is occasionally		
	disposed of as waste by	Employees place this material	
Aluminum Food and Beverage Cans	employees due to non-	in the recycling bins to be	
	compliance with the current	recycled.	
	recycling program.	,	
	Material is occasionally		
	disposed of as waste by	Employees place this material	
Steel Food and Beverage Cans	employees due to non-	in the recycling bins to be	
201011200000000000000000000000000000000	compliance with the current	recycled.	
	recycling program.	. 55, 5.53.	
	Material is occasionally		
	disposed of as waste by	Employees place this material	
Glass Bottles & Jars for Food & Beverage	employees due to non-	in the recycling bins to be	
	compliance with the current	recycled.	
	recycling program.	i coyolcu.	
	recycling program.		



Material is occasionally	
	Employees place this material
	in the recycling bins to be
-	recycled.
•	
	Employees place this material
	in the recycling bins to be
-	recycled.
•	
•	Employees place this material
	in the recycling bins to be
-	recycled.
,	
disposed of as waste by	Employees place this material
	in the recycling bins to be
compliance with the current	recycled.
recycling program.	
Material is occasionally	
disposed of as waste by	Employees place this material
employees due to non-	in the recycling bins to be
compliance with the current	recycled.
recycling program.	
Material is occasionally	
disposed of as waste by	Employees place this material
employees due to non-	in the recycling bins to be
compliance with the current	recycled.
recycling program.	
This material is handled as	
mixed waste and is placed in a	Not applicable.
bin for disposal.	
Currently, due to Covid-19	
pandemic, the organics	Once the program resumes,
program has been put on	employees will be able to
hold, and therefore, solid food	place this material in the bins
waste is being handled as	to be composted.
mixed waste.	
The material is handled as	
liquid waste and should not be	Not applicable.
handled as mixed waste.	
ivialerial is occasionally	
disposed of as waste by	Employees place this material
· · · · · · · · · · · · · · · · · · ·	Employees place this material in the recycling bins to be
disposed of as waste by	
disposed of as waste by employees due to non-compliance with the current	in the recycling bins to be
disposed of as waste by employees due to non-	in the recycling bins to be
disposed of as waste by employees due to non-compliance with the current recycling program.	in the recycling bins to be
	disposed of as waste by employees due to non-compliance with the current recycling program.  Material is occasionally disposed of as waste by employees due to non-compliance with the current recycling program.  Material is occasionally disposed of as waste by employees due to non-compliance with the current recycling program.  Material is occasionally disposed of as waste by employees due to non-compliance with the current recycling program.  Material is occasionally disposed of as waste by employees due to non-compliance with the current recycling program.  Material is occasionally disposed of as waste by employees due to non-compliance with the current recycling program.  Material is occasionally disposed of as waste by employees due to non-compliance with the current recycling program.  This material is handled as mixed waste and is placed in a bin for disposal.  Currently, due to Covid-19 pandemic, the organics program has been put on hold, and therefore, solid food waste is being handled as mixed waste.  The material is handled as liquid waste and should not be

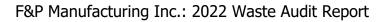


	This material is handled as	
Coffee Cups	mixed waste and is placed in a	Not applicable.
	bin for disposal.	
	This material is handled as	
Rubber Plugs	mixed waste and is placed in a	Not applicable.
	bin for disposal.	
	This material is handled as	
Welding Gloves	mixed waste and is placed in a	Not applicable.
	bin for disposal.	
	This material is handled as	
Textile Gloves	mixed waste and is placed in a	Not applicable.
	bin for disposal.	
	This material is handled as	
Nitrile Gloves	mixed waste and is placed in a	Not applicable.
	bin for disposal.	
	This material is handled as	
Personal Protective Equipment	mixed waste and is placed in a	Not applicable.
	bin for disposal.	
	This material is handled as	
Masks	mixed waste and is placed in a	Not applicable.
	bin for disposal.	
	This material is handled as	
Bubble Wrap	mixed waste and is placed in a	Not applicable.
	bin for disposal.	
	This material is handled as	
Silica Beads	mixed waste and is placed in a	Not applicable.
	bin for disposal.	• •
	This material is handled as	
Textile Rags	mixed waste and is placed in a	Not applicable.
- 0-	bin for disposal.	
	This material is handled as	
Packaging	mixed waste and is placed in a	Not applicable.
	bin for disposal.	1-1-1
	This material is handled as	
Labels	mixed waste and is placed in a	Not applicable.
240010	bin for disposal.	riot applicable.
	This material is handled as	
Cleaning Wipes	mixed waste and is placed in a	Not applicable.
Cicaling wipes	bin for disposal.	ivot applicable.
	This material is handled as	
Floor Sweeps	mixed waste and is placed in a	Not applicable.
11001 Sweeps	bin for disposal.	Not applicable.
	This material is handled as	
Plactic Wran		Not applicable
Plastic Wrap	mixed waste and is placed in a	Not applicable.
	bin for disposal.	
DI E DE L	This material is handled as	Niet P. L.
Plastic Banding	mixed waste and is placed in a	Not applicable.
	bin for disposal.	
	This material is handled as	
Miscellaneous Items	mixed waste and is placed in a	Not applicable.
	bin for disposal.	





	This material is handled as	
Sludge	mixed waste and it is disposed	Not applicable.
	of in the landfill.	





Part V					Estimated	Amount of	of Waste Produce	d in Kilograms (kg	;)			
Part V		Generated		Reused Recycled						Disposed		
Waste Categories:	"A" Base Year	"B" Current Year	"C" Change (B-A)	"A" Base Year	"B" Current Year	"C" Change (B-A)	"A" Base Year	"B" Current Year	"C" Change (B-A)	"A" Base Year	"B" Current Year	"C" Change (B-A)
Polyethylene												
Terephthalate (PET #1)		1,121.13						0.00			1,121.13	
High-Density												
Polyethylene (HDPE #2)		214.42						0.00			214.42	
Low-Density Polyethylene (LDPE #4)		12,792.26						0.00			12,792.26	
Polypropylene (PP #5)		231.76						0.00			231.76	
Condensed Polystyrene (PS-C #6)		281.64						0.00			281.64	
Expanded Polystyrene (PS-E #6)		97.89						0.00			97.89	
Other Plastic (#7)		28.15						0.00			28.15	
Black Plastic		65.44						0.00			65.44	
Aluminum Food and Beverage Cans		599.07						0.00			599.07	
Steel Food and Beverage Cans		195.77						0.00			195.77	
Gable Top Containers		23.31						0.00			23.31	
Tetra Pak Containers		93.41						0.00			93.41	
Mixed Recycling		14,229.00						14,229.00			0.00	
Scrap Metal		22,030,460.00						22,030,460.00			0.00	
Cardboard (Corrugated)		276,669.01						275,370.00			1,299.01	
Boxboard		393.23						0.00			393.23	
Mixed Paper (Fine Paper & Newsprint)		1,986.85						0.00			1,986.85	



Dout V		Estimated Amount of Waste Produced in Kilograms (kg)										
Part V	Generated				,				Disposed	Disposed		
Waste Categories:	"A" Base Year	"B" Current Year	"C" Change (B-A)	"A" Base Year	"B" Current Year	"C" Change (B-A)	"A" Base Year	"B" Current Year	"C" Change (B-A)	"A" Base Year	"B" Current Year	"C" Change (B-A)
Paper Towel		21,905.06						0.00			21,905.06	
Solid Food Waste		4,342.29						0.00			4,342.29	
Liquid Food Waste		1,788.67						0.00			1,788.67	
Scrap Wood		14,294.24						14,270.00			24.24	
Disposable Food Packaging		982.69						0.00			982.69	
Coffee Cups		12,550.00						0.00			12,550.00	
Rubber Plugs		649.64						0.00			649.64	
Welding Gloves		1,948.40						0.00			1,948.40	
Textile Gloves		42,284.57						0.00			42,284.57	
Nitrile Gloves		187.58						0.00			187.58	
PPE		273.24						0.00			273.24	
Masks		139.84						0.00			139.84	
Bubble Wrap		3,160.95						0.00			3,160.95	
Silica Beads		872.66						0.00			872.66	
Textile Rags		5,171.66						0.00			5,171.66	
Packaging		6,158.36						0.00			6,158.36	
Labels		7,319.87						0.00			7,319.87	
Cleaning Wipes		186.45						0.00			186.45	
Floor Sweeps		736.48						0.00			736.48	
Plastic Wrap		1,052.04						0.00			1,052.04	
Plastic Banding		140.59						0.00			140.59	
Miscellaneous		7,431.37						0.00			7,431.37	
Sludge		16,920.00						0.00			16,920.00	
Total:	23,651,875.00	22,463,512.07	1,188362.93				23,463375.00	22,463,512.07	1,129,046.00	188,500.00	129,183.07	59,316.93
Percent Change (total C/total A x 100)			5.02%						4.81%			31.47%

<sup>&</sup>lt;sup>1</sup>Please note that plastics (PET #1, HDPE #2, PP #5, PS-C #6), aluminum, steel, gable top, Tetra Pak containers, paper and boxboard do not have recycled weights because the currently program is mixed recycling, which means, paper and plastics are collected together. The data was provided by the hauler and total recycled weights were recorded as "Mixed Recycling Materials".

Please note that the values reported as base year correspond to the values retrieved from the 2021 waste audit report.



## VI. Extent to which Materials or Products used or sold by the Entity Consist of Recycled or Reused Materials or Products.

	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.
1.	Yes. As part of its ISO 14001 certification, F&P Manufacturing Inc. has developed an environmental management system and the Green Purchasing Guideline.
	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.
2.	Yes. F&P Manufacturing plans to develop initiatives to increase the use of recycled materials as well as to reuse materials, such as gloves through a washing program. Please contact F&P Manufacturing Inc. for more details.

<sup>\*</sup>Information regarding materials or products "sold" that consist of recycled or reused materials or products is only required from owners of retail shopping establishments and the owner(s) or operator(s) of large manufacturing establishments.

I hereby certify that the information provided in this Report of a Waste Audit is complete and correct.						
Signature of Authorized Official: Title: Date:						



## APPENDIX G: REPORT OF A WASTE REDUCTION WORK PLAN

Ministry of the Environment, Conservation and Parks Report of a Waste Reduction Work Plan Industrial, Commercial and Institutional Establishments As required by Ontario Regulation 102/94

#### I. General Information

Name of Owner and/or Oper	rator of Entit	y(ies) and Company	Name:		
	1 Nolan	Road. care of F&P M	anufacturing Inc		
Name of Contact Person:	Telephor	e Number:	Email Address:		
Terry Diemert	(905)	936-3435 Ext. 459	terry.diemert@fandpmf	g.com	
Street Address of Entity(ies):					
		1 Nolan Road			
Municipality:					
		Tottenham, Ont	ario		
Type of Entity:					
Retail Shopping Establishmen	Retail Shopping Establishment Hotel and Motel				
Retail Shopping Complex	ing Complex Hospital				
Office Building		Educ	Educational Institution		
Restaurant Large Manufacturing Establishment X			Х		

#### **II. Description of Entity**

#### Provide a brief overview of the entity(ies):

F&P Manufacturing Inc. is a subsidiary of Ftech Inc. in Japan, and it is a leading Tier 1 Automotive Parts Manufacturer located in Tottenham, Ontario. The site covers an area of 441,000 ft<sup>2</sup> and produces annually over 58 million automotive component parts.

#### III. Plans to Reduce, Reuse and Recycle Waste

For each category of waste described in Part V of "Report of a Waste Audit" (on which this plan is based), explain what your plans are to reduce, reuse, and recycle the waste, including: 1) how the waste will be source separated at the establishment, and 2) the programs to reduce, reuse, and recycle all source separated waste.

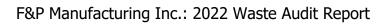
Waste Category	Source Separation and 3R's Program		
	Reduce: No plans		
	Reuse: No plans		
Delivethides Toronbiboleta (DET #1)	Recycle: Mixed recycling stream		
Polyethylene Terephthalate (PET #1)	Employees will be encouraged to use recycling bins to source		
	separate PET (#1). Bins have been provided in offices and staff		
	areas for employees.		
High Density Delyethylene (HDDF #2)	Reduce: No plans		
High-Density Polyethylene (HDPE #2)	Reuse: No plans		



	Recycle: Mixed recycling stream Employees will be encouraged to use recycling bins to source separate HDPE (#2). Bins have been provided in offices and staff
	areas for employees.
	Reduce: No plans
Low-Density Polyethylene (LDPE #4)	Reuse: No plans
Low-Defisity Polyethylene (LDPE #4)	Recycle: F&P Manufacturing will consider searching for a
	market to recycle LDPE #4.
	Reduce: No plans
	Reuse: No plans
Polypropylene (PP #5)	Recycle: Mixed recycling stream
Polypropyletie (FF #3)	Employees will be encouraged to use recycling bins to source
	separate PP (#5). Bins have been provided in offices and staff
	areas for employees.
	Reduce: No plans
	Reuse: No plans
Condensed Religiturens (RS C #6)	Recycle: Mixed recycling stream
Condensed Polystyrene (PS-C #6)	Employees will be encouraged to use recycling bins to source
	separate PS-C (#6). Bins have been provided in offices and staff
	areas for employees.
Expanded Polystyrene (PS-E #6)	No plans to reduce, reuse, or recycle PS-E (#6).
Other Plastic (P #7)	No plans to reduce, reuse, or recycle P (#7).
Black Plastic	No plans to reduce, reuse, or recycle black plastic.
	Reduce: No plans
	Reuse: No plans
AL : 5 L LD 6	Recycle: Mixed recycling stream
Aluminum Food and Beverage Cans	Employees will be encouraged to use recycling bins to source
	separate aluminum. Bins have been provided in offices and staff
	areas for employees.
	Reduce: No plans
	Reuse: No plans
Charl Ford and Bournes Cons	Recycle: Mixed recycling stream
Steel Food and Beverage Cans	Employees will be encouraged to use recycling bins to source
	separate steel. Bins have been provided in offices and staff
	areas for employees.
	Reduce: No plans
	Reuse: No plans
Coble Ten Containers	Recycle: Mixed recycling stream
Gable Top Containers	Employees will be encouraged to use recycling bins to source
	separate gable top containers. Bins have been provided in
	offices and staff areas for employees.
	Reduce: No plans
	Reuse: No plans
Tetra Pak Containers	Recycle: Mixed recycling stream
Tetra Pak Containers	Employees will be encouraged to use recycling bins to source
	separate Tetra Pak containers. Bins have been provided in
	offices and staff areas for employees.
	Reduce: No plans
	Reuse: No plans
Scrap Metal	Recycle: Scrap metal recycling stream
	Employees will be encouraged to use recycling bins to source
	separate scrap metal.
	<u> </u>



	Reduce: No plans
	Reuse: No plans
Cardboard (Corrugated)	Recycle: Cardboard recycling stream
Caruboaru (Corrugateu)	Employees will be encouraged to use recycling bins to source
	separate cardboard. Bins have been provided in staff areas for
	employees.
	Reduce: No plans
	Reuse: No plans
Davidaand	Recycle: Mixed recycling stream
Boxboard	Employees will be encouraged to use recycling bins to source
	separate boxboard. Bins have been provided in offices and staff
	areas for employees.
	Reduce: No plans
	Reuse: No plans
	Recycle: Mixed recycling stream
Mixed Paper (Fine Paper & Newsprint)	Employees will be encouraged to use recycling bins to source
	separate paper. Bins have been provided in offices and staff
	areas for employees.
	Reduce: F&P Manufacturing will consider implementing a paper
	towel reduction program to reduce the amount of paper towel
Paper Towel	being sent to the energy recovery facility.
. apaa.a.	Reuse: No plans
	Recycle: No plans.
	Reduce: No plans
	Reuse: No plans
	Recycle: Composting stream
	Currently there are 2x32-gallon totes placed in the cafeteria but
Solid Food Waste	due to Covid-19 pandemic, the program was put on hold. F&P
	Manufacturing is planning on resume the organics program in
	the July of 2022. Employees will be then encouraged to use bins
	to source separate food waste.
Liquid Food Waste	No plans to reduce, reuse, or recycle liquid food waste.
Liquid i ood waste	Reduce: No plans
	Reuse: No plans
	Recycle: Wood recycling stream
Wood	Employees will be encouraged to use recycling bins to source
	separate scrap wood. Bins have been provided in staff areas for
Disposable Food Packaging	employees.
Disposable Food Packaging	No plans to reduce, reuse, or recycle disposable food packaging.
Coffee Cups	No plans to reduce, reuse, or recycle coffee cups.
Rubber Plugs	No plans to reduce, reuse, or recycle rubber plugs.
Welding Gloves	No plans to reduce, reuse, or recycle welding gloves.
	Reduce & Reuse: F&P Manufacturing will consider
Textile Gloves	implementing a glove wash program to reduce the amount of
23 3.003	textile gloves currently being sent to an energy recovery facility.
	Recycle: No plans
Nitrile Gloves	No plans to reduce, reuse, or recycle nitrile gloves.
Personal Protective Equipment	No plans to reduce, reuse, or recycle personal protective
reisonal Flotective Equipment	equipment
Masks	No plans to reduce, reuse, or recycle masks.
Bubble Wrap	No plans to reduce, reuse, or recycle bubble wrap.





Silica Beads	No plans to reduce, reuse, or recycle silica beads.
Textile Rags	No plans to reduce, reuse, or recycle textile rags.
Packaging	No plans to reduce, reuse, or recycle packaging.
Labels	No plans to reduce, reuse, or recycle labels.
Floor Sweeps	No plans to reduce, reuse, or recycle floor sweeps.
Cleaning Wipes	No plans to reduce, reuse, or recycle cleaning wipes.
Plastic Wrap	No plans to reduce, reuse, or recycle plastic wrap.
Plastic Banding	No plans to reduce, reuse, or recycle plastic banding.
Miscellaneous Items	No plans to reduce, reuse, or recycle miscellaneous items.
Sludge	No plans to reduce, reuse, or recycle sludge.



#### 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 Number:
Terry Diemert	3R Programs	(905) 936-3435 Ext. 459

#### V. Timetable for Implementing Waste Reduction Work Plan

Provide a timetable indicating when each source separation and 3Rs program of the Waste Reduction Work Plan will be implemented.			
Source Separation and 3Rs Program:	Schedule for Completion:		
Paper Towel – Consider reducing the amount of paper towel by implementing hand dryers and encouraging staff to reduce the use of paper towel.			
<b>Textile Gloves</b> - Consider reducing the amount of textile gloves by implementing a washing program.	2022 – Provide education and training to staff to increase efficiency of recycling programs. Consider implementing waste reduction methods.		
Mixed recyclable materials (PET #1, HDPE #2, PP #5, PS-C #6, aluminum/steel can, paper, boxboard: Consider increasing capture rate of the mixed recycling stream by encouraging staff to participate in the program.			

#### VI. Communication to Staff, Customers, Guests, and Visitors

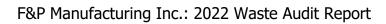
Explain how the Waste Reduction Work Plan will be communicated to employees, customers, tenants, guests/visitors and students:

The waste reduction work plan will be posted for staff to review. Staff will be briefed on new changes to diversion programs.



## VII. Estimated Waste Produced by Material Type and the Projected Amount

Material Categories (as stated in Part III)	Estimated Annual Waste Produced*	Name of Proposed 3Rs Program (as stated in Part III)	_	ons to Redu ecycle Wast	ce, Reuse or e (kgs)	Estimated Annual Amount to be
	(kgs)	stated in raise in,	Reduce	Reuse	Recycle	Diverted** (%)
Polyethylene Terephthalate (PET #1)	1121.13	Mixed Recycling Stream			0.00	NA
High-Density Polyethylene (HDPE #2)	214.42	Mixed Recycling Stream			0.00	NA
Low-Density Polyethylene (LDPE #4)	12792.26	Mixed Waste Stream (Energy Recovery)			0.00	NA
Polypropylene (PP #5)	231.76	Mixed Recycling Stream			0.00	NA
Condensed Polystyrene (PS-C #6)	281.64	Mixed Recycling Stream			0.00	NA
Expanded Polystyrene (PS-E #6)	97.89	Mixed Waste Stream (Energy Recovery)			0.00	NA
Other Plastic (#7)	28.15	Mixed Waste Stream (Energy Recovery)			0.00	NA
Black Plastic	65.44	Mixed Waste Stream (Energy Recovery)			0.00	NA
Aluminum Food and Beverage Cans	599.07	Mixed Recycling Stream			0.00	NA
Steel Food and Beverage Cans	195.77	Mixed Recycling Stream			0.00	NA
Gable Top Containers	23.31	Mixed Recycling Stream			0.00	NA
Tetra Pak Containers	93.41	Mixed Recycling Stream			0.00	NA
Mixed Recycling <sup>1</sup>	14,229.00	Mixed Recycling Stream			14,229.00	100.00%
Scrap Metal	22,030,460.00	Scrap Metal Recycling Stream			22,030,460.0 0	100.00%
Cardboard (Corrugated)	276,669.01	Mixed Recycling Stream			275,370.00	99.53%
Boxboard	393.23	Mixed Recycling Stream			0.00	NA
Mixed Paper (Fine Paper & Newsprint)	1,986.85	Mixed Recycling Stream			0.00	NA
Paper Towel	21,905.06	Mixed Waste Stream (Energy Recovery)			0.00	NA





		Mixed Waste		
Solid Food Waste	4 242 20		0.00	NA
Solid Food Waste	4,342.29	Stream (Energy Recovery)	0.00	INA
		Mixed Waste		
Lieurial Food Maste	1 700 67		0.00	NIA
Liquid Food Waste	1,788.67	Stream (Energy	0.00	NA
		Recovery)		
Scrap Wood	14,294.24	Wood Recycling	14,270.00	99.83%
	,	Stream	,	
Disposable Food		Mixed Waste		
Packaging	982.69	Stream (Energy	0.00	NA
		Recovery)		
		Mixed Waste		
Coffee Cups	12,550.00	Stream (Energy	0.00	NA
		Recovery)		
		Mixed Waste		
Rubber Plugs	649.64	Stream (Energy	0.00	NA
		Recovery)		
		Mixed Waste		
Welding Gloves	1,948.40	Stream (Energy	0.00	NA
		Recovery)		
		Mixed Waste		
Textile Gloves	42,284.57	Stream (Energy	0.00	NA
		Recovery)		
		Mixed Waste		
Nitrile Gloves	187.58	Stream (Energy	0.00	NA
		Recovery)		
		Mixed Waste		
PPE	273.24	Stream (Energy	0.00	NA
		Recovery)		
		Mixed Waste		
Masks	139.84	Stream (Energy	0.00	NA
IVIOSIO	133.04	Recovery)	0.00	147
		Mixed Waste		
Bubble Wrap	3,160.95	Stream (Energy	0.00	NA
bubble wrap	3,100.55	Recovery)	0.00	INA
		Mixed Waste		
Cilian Donda	872.66		0.00	NIA
Silica Beads	8/2.00	Stream (Energy	0.00	NA
		Recovery)		
Tautila Daga	F171.CC	Mixed Waste	0.00	NI A
Textile Rags	5171.66	Stream (Energy	0.00	NA
		Recovery)		
5 I ·	6.450.05	Mixed Waste		
Packaging	6,158.36	Stream (Energy	0.00	NA
		Recovery)		
		Mixed Waste		
Labels	7,319.87	Stream (Energy	0.00	NA
		Recovery)		
		Mixed Waste		
Cleaning Wipes	· · · · · · · · · · · · · · · · · · ·	0.00	NA	
		Recovery)		



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		Mixed Waste			
Floor Sweeps	736.48	Stream (Energy		0.00	NA
		Recovery)			
		Mixed Waste			
Plastic Wrap	1,052.04	Stream (Energy		0.00	NA
		Recovery)			
		Mixed Waste			
Plastic Banding	140.59	Stream (Energy		0.00	NA
		Recovery)			
		Mixed Waste			
Miscellaneous	7,431.37	Stream (Energy		0.00	NA
		Recovery)			
Cludes	16 020 00	Mixed Waste			1
Sludge	16,920.00	Stream (Landfill)		0.00	NA

<sup>\*</sup> Estimated Waste Produced = Waste Diverted (3Rs) + Waste Disposed

<sup>1</sup>Taking into consideration that plastics (PET #1, HDPE #2, PP #5, PS-C #6), aluminum, steel, gable top, Tetra Pak containers, paper and boxboard are collected through the mixed recycling stream, it is not possible to calculate a diversion rate for each category. Therefore, a "N/A was applied to these materials and an overall rate was calculated under "Mixed Recycling Materials".

I hereby certify that the information provided in this Waste Reduction Work Plan is complete and correct.					
Signature of Authorized Official: Title: Date:					

<sup>\*\*</sup> Estimated Waste Diversion Rate = Amount of Waste Diverted (3Rs) / Estimated Waste Produced x 100%