TECHNICAL MEMORANDUM

To: Andie Holt, General Manager, Republic Services

From: MSW Consultants

Date: January 11, 2024

Subject: **2023 Montgomery County Consortium Recycling Composition Audit**

Project Overview

MSW Consultants, is pleased to provide the results of the composition of inbound recyclables delivered by the Montgomery County Consortium of Recycling Communities (Consortium) to the Republic Services King of Prussia (KOP) material recovery facility (MRF). The recycling composition audit was performed by MSW Consultants over five days from October 16th to October 20th at the Republic MRF located at 220 Saulin Boulevard, King of Prussia, Pennsylvania 19406. Residential route trucks were sampled from the seven Consortium municipalities, including Abington Township, Cheltenham Township, Hatboro Borough, Plymouth Township, Springfield Township, Upper Dublin Township, and Upper Moreland Township. Routes were primarily single stream loads with the exception of Abington Township and Upper Dublin Township, which collect mixed paper and cardboard separately.

Sample targets for the audit were generally allocated across participating municipalities in proportion to annual tonnage and truck delivery data provided by the Consortium, as well as from guidance by the Consortium board and Republic staff. A total number of 63 samples were collected during the one-week audit (from 59 trucks) out of a possible 67 total trucks delivered by the Consortium municipalities. The sample targets compared to actual number of samples acquired are shown in Table 1. As shown, sample targets were met or exceeded, with one exception (described in the table note).

Table 1 - Audit Sampling Targets vs Acutual Sample Count

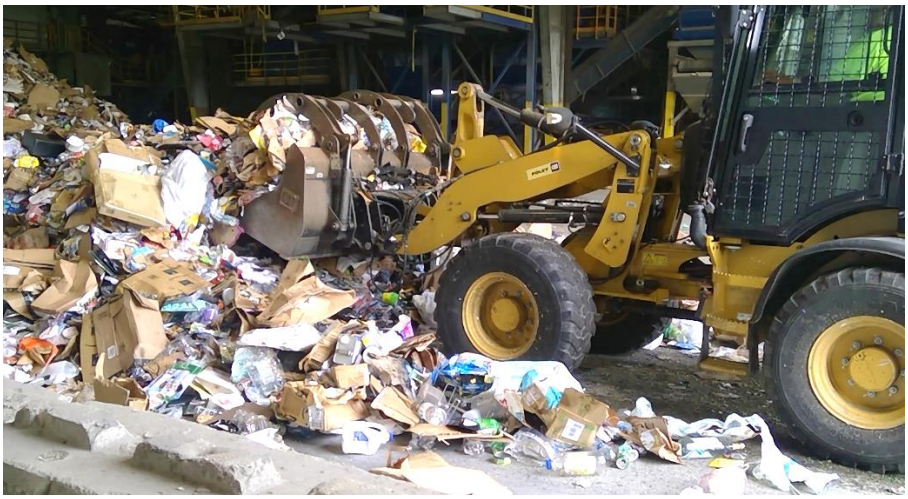
Community	Targeted Samples	Actual Samples
Abington Township Mixed Paper/OCC	3-5	5
Abington Township Commingled	9-10	11
Cheltenham Township Single Stream	9-10	11
Hatboro Borough Single Stream	2-3	4
Plymouth Township Single Stream	4-5	6
Springfield Township Single Stream	7-8	8
Upper Dublin Township OCC*	1	0
Upper Dublin Township Single Stream	8-9	10
Upper Moreland Township Single Stream	7-9	8
Total	**50-60**	**63**

*An Upper Dublin corrugated cardboard route (OCC) was scheduled to be diverted to the KOP MRF during the audit, however, due to a delivery error the truck was not diverted to the correct MRF. Upper Dublin Township remains available to divert this load to the KOP MRF for observation by Republic staff, if desired, in the future.

Note that mixed paper routes from Abington Township, which are typically delivered to an alternate Republic MRF, were diverted to the KOP MRF as part of this effort. These mixed paper routes were sampled, photographed and observed by Republic staff and Abington Township staff onsite to assist in evaluating the loads for future pricing.

Samples were collected as described in the Scope of Services previously provided to Consortium and Republic staff and included taking random "grab" samples from selected loads, as shown in Figure 1.

Figure 1 - Sample Selection



One sample was targeted per truck, although a second sample was sometimes collected from the same truck from Consortium members that deliver a lesser volume of daily trucks, in order to meet the sampling targets for each municipality. Samples were collected with the assistance of the Republic scalehouse staff and loader operator. Selected loads were photographed and from the

grab sample material was weighed in until the targeted minimum 125 pound sample weight was achieved.

Once a sample was collected and uniquely labeled, the MSW team then sorted the samples into 26 material categories, listed in Table 2. The material categories and definitions were finalized with gudiance from Republic and Consortium staff. At the agreement of Republic and Consortium staff, bagged waste and recycling was weighed, but not opened, as is the practice of MRF staff. The exception to this rule would be if a bag was transparent, and clearly-visible recyclables could be quickly shaken loose from the bag, which mimics Republic's manual sort line practices.

Table 2 - Material Categories

Material Group	Material Category
Paper	OCC
	Mixed Paper
	Aseptic/Gable Top Cartons
	Remainder/Composite Paper
Plastic	PET (#1) Plastic Bottles
	PET (#1) Non-Bottle Containers
	Natural HDPE (#2) Plastic Bottles/Jugs
	Colored HDPE (#2) Plastic Bottles/Jugs
	PP (#5) Containers
	#3-#7 Rigid Plastic Containers (exc. 5s)
	Expanded Polystyrene
	Plastic Bags/Film
	Bulk Rigid Plastics
	Remainder/Composite Plastics
Metal	Aluminum Cans
	Tin/Steel Cans
	Aluminum Foil/Trays
	Other Ferrous Metal
	Other Non-Ferrous Metal
Glass	Glass Bottles and Jars
	Mixed Cullet (2" Minus)
HHW	Hazardous/Special Waste
Other	Bagged Waste
	Bagged Recycling
	Other Waste
	Fines (2" Minus Supermix)

Once a sample was sorted in its entirety, each sort bin with material was weighed and data was entered on electronic tablets for upload onto MSW's *WasteInsight*^{TM} cloud-based software, which contains built-in quality control logic to improve accuracy and verify that weigh-outs were completed. The sorted material was then returned to the tip floor for processing by Republic. Figure 2 shows the sort area setup used during the audit.

Figure 2 - Sort Setup



Results

The composition results for the material categories included in the current Republic-Consortium contract are shown in Table 3. This table includes a comparison of the 2021 contract values versus the 2023 audit results. Of note, the 2021 contract data was based on the results of a MRF run test compared to the 2023 audit that was conducted as inbound truck “grab” sampling.

Table 3 – Composition Results for Contract Material Categories

Material Category	2021 Commingled Containers Material Composition	2023 Commingled Containers Material Composition	2021-2023 Comparison	2021 Single Stream Material Composition	2023 Single Stream Material Composition	2021-2023 Comparison
Old Corrugated Cardboad (OCC)	0.00%	2.25%	2.25%	25.41%	25.21%	-0.20%
Mixed Paper	6.46%	1.88%	-4.58%	24.79%	29.17%	4.38%
Aspetic Cartons	0.00%	0.27%	0.27%	0.30%	0.43%	0.13%
PET Plastic	10.03%	15.02%	4.99%	3.78%	4.99%	1.21%
HDPE Natural	0.71%	2.61%	1.90%	0.77%	0.93%	0.16%
HDPE Color	5.57%	3.13%	-2.44%	1.12%	1.18%	0.06%
Commingled (#3-7) Plastic	3.26%	3.98%	0.72%	1.38%	1.29%	-0.09%
Mixed Bulky Rigid Plastic	1.44%	2.17%	0.73%	0.91%	0.46%	-0.45%
Flexible Plastic (inc. Film)	1.72%	2.89%	1.17%	0.40%	0.74%	0.34%
Glass Bottles & Jars	41.04%	33.34%	-7.70%	22.22%	17.74%	-4.48%
Steel Cans	6.12%	4.42%	-1.70%	1.81%	1.72%	-0.09%
Aluminum Cans	2.13%	5.30%	3.17%	0.96%	1.94%	0.98%
Aluminum Foil	0.34%	0.28%	-0.06%	0.11%	0.08%	-0.03%
Other Non Ferrous	0.00%	0.55%	0.55%	0.00%	0.48%	0.48%
Ferrous	N/A	3.20%		N/A	1.29%	
Bulky Metal*	1.64%	0.00%	-1.64%	0.72%	0.00%	-0.72%
Residue (Contamination)	19.55%	18.73%	-0.82%	15.32%	12.34%	-2.98%
Total	100.00%	100.00%		100.00%	100.00%	

*Metal was sorted as Ferrous and Non-Ferrous in the 2023 audit, not all metal was bulky. If Non-Ferrous and Ferrous are combined as Bulky Metal, the 2021-2023 comparison for Commingled is 2.11% and 1.05% for Single Stream.

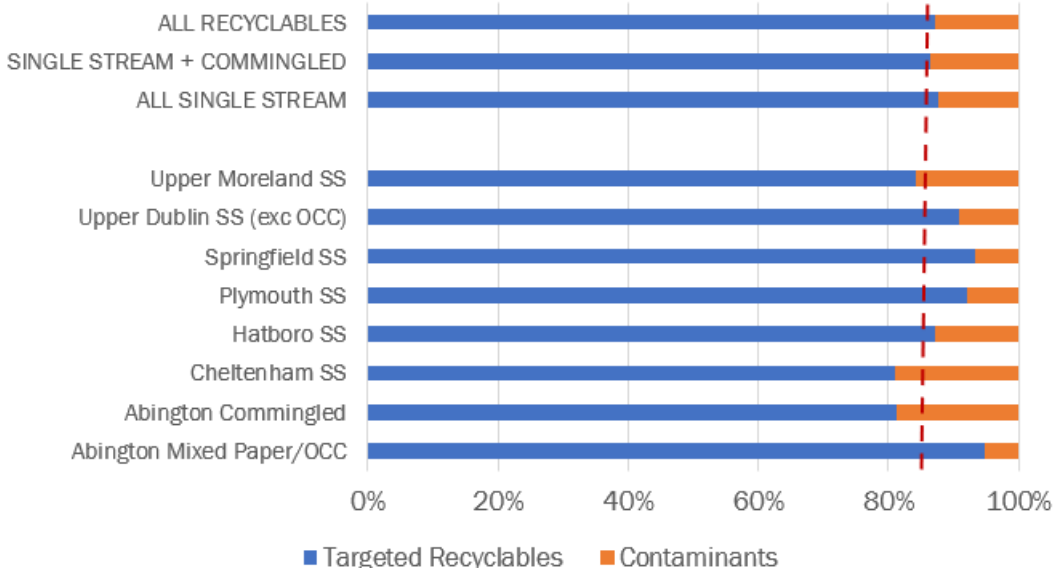
The full composition results by the material categories used in the 2023 audit and by municipality are presented in Exhibit 1. This exhibit also applies the estimated composition to the actual annual recycling tonnage data provided by Republic and the Consortium for 2023 for each municipality.

Exhibit 2 provides selected weighted average composition for various combinations of the different inbound streams:

- All single stream recyclables.
- All single stream recyclables plus the commingled recyclables from Abington Township.
- All recyclables combined, including the commingled and Mixed Paper/OCC materials.

As shown, the aggregate contamination rate is calculated to be 12.9 percent for all streams and municipalities in Exhibit 2. The contamination rate by municipality/stream ranges from 5.3 percent to 18.9 percent, as shown in Exhibit 1. Figure 3 shows the comparison of contamination by inbound stream and municipality.

Figure 3 - Contamination by Stream and Municipality



Raw sample data is provided in Exhibit 3 and will also be provided in electronic format.

Exhibit 1: Results Composition by Municipality

Material Category	Recyclability	Abington Township Mixed Paper/OCC		Abington Township Commingled		Cheltenham Township Single Stream		Hatboro Borough Single Stream		Plymouth Township Single Stream		Springfield Township Single Stream		Upper Dublin Township (excludes OCC route) Single Stream		Upper Moreland Township Single Stream	
		Percent Composition	Tons (2023)	Percent Composition	Tons (2023)	Percent Composition	Tons (2023)	Percent Composition	Tons (2023)	Percent Composition	Tons (2023)	Percent Composition	Tons (2023)	Percent Composition	Tons (2023)	Percent Composition	Tons (2023)
Paper		**94.5%**	**2,740.18**	**5.6%**	**140.01**	**55.3%**	**1,568.05**	**52.7%**	**297.30**	**62.5%**	**686.84**	**59.7%**	**1,198.40**	**58.6%**	**1,371.31**	**53.0%**	**1,103.91**
Corrugated Cardboard (OCC)	Targeted	39.2%	1,138.02	2.2%	56.39	24.5%	693.05	22.9%	129.00	33.1%	363.86	26.2%	524.78	21.4%	502.07	25.2%	525.14
Mixed Paper	Targeted	53.9%	1,563.03	1.9%	47.13	28.6%	811.44	25.2%	141.85	26.4%	289.76	32.0%	642.14	34.8%	813.97	24.2%	503.73
Aseptic/Gable Top Cartons	Targeted	0.2%	6.23	0.3%	6.67	0.5%	13.56	0.5%	2.61	0.3%	3.03	0.4%	8.10	0.5%	12.77	0.4%	7.57
Remainder/Composite Paper	Contaminant	1.1%	32.89	1.2%	29.82	1.8%	50.00	4.2%	23.85	2.7%	30.19	1.2%	23.38	1.8%	42.49	3.2%	67.48
Plastic		**0.6%**	**18.14**	**30.9%**	**773.39**	**8.4%**	**238.51**	**13.6%**	**76.45**	**9.0%**	**98.91**	**9.3%**	**186.49**	**10.2%**	**238.23**	**12.2%**	**254.19**
PET (#1) Plastic Bottles & Jars	Targeted	0.2%	4.84	12.9%	322.21	3.2%	91.08	5.6%	31.34	4.4%	48.25	4.2%	85.18	4.1%	95.84	4.3%	89.62
PET (#1) Non-Bottle Containers	Targeted	0.1%	1.89	2.2%	54.38	0.8%	23.41	0.7%	4.17	0.6%	6.26	1.0%	20.38	1.1%	24.76	0.9%	18.56
Natural HDPE (#2) Plastic Bottles/Jugs	Targeted	0.0%	0.00	2.6%	65.30	0.5%	14.39	1.4%	7.66	1.0%	10.63	1.0%	20.92	1.0%	23.68	1.1%	22.38
Colored HDPE (#2) Plastic Bottles/Jugs	Targeted	0.1%	2.41	3.1%	78.50	1.0%	29.01	2.3%	12.72	0.8%	8.74	1.1%	22.91	1.3%	29.34	1.1%	22.31
PP (#5) Containers	Targeted	0.1%	1.49	3.5%	88.78	0.9%	25.82	1.5%	8.38	1.0%	11.02	0.9%	19.01	1.2%	29.03	1.3%	26.76
#3-#7 Rigids (exc. 5s)	Targeted	0.0%	0.00	0.4%	10.99	0.2%	4.47	0.1%	0.57	0.2%	2.03	0.2%	3.61	0.2%	3.85	0.3%	5.43
Expanded Polystyrene	Contaminant	0.0%	1.24	0.1%	1.98	0.1%	2.60	0.1%	0.42	0.0%	0.37	0.0%	0.40	0.0%	1.15	0.1%	1.50
Plastics Bags/Film	Targeted	0.1%	3.41	2.9%	72.50	0.8%	22.14	0.5%	2.86	0.8%	8.49	0.4%	7.28	0.5%	11.06	1.5%	31.17
Bulky Rigid Plastics	Targeted	0.0%	0.00	2.2%	54.38	0.5%	13.17	0.9%	4.97	0.0%	0.00	0.2%	3.30	0.5%	12.63	0.8%	16.91
Remainder/Composite Plastics	Contaminant	0.1%	2.86	1.0%	24.37	0.4%	12.42	0.6%	3.35	0.3%	3.12	0.2%	3.49	0.3%	6.90	0.9%	19.55
Metal		**0.5%**	**14.35**	**13.7%**	**344.36**	**5.0%**	**142.48**	**5.1%**	**29.03**	**4.4%**	**48.15**	**4.2%**	**84.89**	**5.4%**	**125.36**	**8.6%**	**180.08**
Aluminum Cans	Targeted	0.1%	2.10	5.3%	132.75	1.4%	40.54	2.6%	14.57	2.4%	26.13	2.2%	44.48	1.7%	38.75	2.1%	42.73
Tin/Steel Cans	Targeted	0.0%	0.72	4.4%	110.71	1.5%	42.12	1.9%	10.63	1.6%	17.58	1.6%	32.62	1.7%	40.68	2.1%	43.95
Aluminum Foil and Trays	Targeted	0.0%	0.00	0.3%	6.92	0.2%	5.89	0.0%	0.11	0.1%	0.63	0.0%	0.65	0.0%	1.03	0.0%	0.99
Other Ferrous Metal	Targeted	0.4%	11.35	3.2%	80.19	1.8%	50.04	0.5%	3.04	0.3%	3.80	0.2%	4.22	1.8%	41.50	2.2%	45.50
Other Non-Ferrous Metal	Targeted	0.0%	0.18	0.5%	13.79	0.1%	3.88	0.1%	0.68	0.0%	0.00	0.1%	2.91	0.1%	3.39	2.3%	46.92
Glass		**0.3%**	**9.83**	**33.3%**	**835.77**	**14.6%**	**413.95**	**20.7%**	**116.56**	**19.2%**	**211.36**	**21.3%**	**427.81**	**18.8%**	**441.22**	**14.5%**	**301.89**
Glass Bottles and Jars	Targeted	0.3%	8.84	11.3%	284.38	10.8%	304.69	16.4%	92.63	15.0%	164.75	11.6%	231.78	12.1%	283.57	2.8%	58.41
Mixed Cullet (2" Minus)	Targeted	0.0%	0.98	22.0%	551.40	3.9%	109.27	4.2%	23.93	4.2%	46.61	9.8%	196.03	6.7%	157.65	11.7%	243.48
HHW		**0.0%**	**0.00**	**0.03%**	**0.77**	**0.3%**	**8.26**	**0.0%**	**0.00**	**0.0%**	0.00	**0.03%**	**0.61**	**0.04%**	**0.92**	**0.0%**	**0.00**
Hazardous/Special Waste	Contaminant	0.0%	0.00	0.03%	0.77	0.3%	8.26	0.0%	0.00	0.0%	0.00	0.03%	0.61	0.04%	0.92	0.0%	0.00
Other		**4.1%**	**117.48**	**16.5%**	**412.53**	**16.3%**	**462.89**	**7.9%**	**44.43**	**4.8%**	**53.04**	**5.4%**	**108.35**	**7.0%**	**164.02**	**11.6%**	**242.61**
Bagged Waste	Contaminant	0.0%	0.00	3.9%	97.32	8.8%	249.25	1.4%	7.93	0.2%	2.13	0.7%	14.67	1.4%	32.41	4.3%	88.92
Bagged Recycling	Contaminant	0.0%	0.00	3.2%	81.17	1.9%	54.13	0.7%	4.06	1.4%	15.24	2.1%	41.67	1.8%	42.76	2.7%	55.40
Other Contaminants	Contaminant	3.4%	99.20	4.6%	116.06	3.8%	108.67	3.5%	19.58	2.3%	24.94	1.0%	19.37	2.0%	47.41	2.9%	60.71
Fines	Contaminant	0.6%	18.28	4.7%	117.97	1.8%	50.83	2.3%	12.85	1.0%	10.72	1.6%	32.64	1.8%	41.44	1.8%	37.58
Total		**100.0%**	**2,899.97**	**100.0%**	**2,506.82**	**100.0%**	**2,834.15**	**100.0%**	**563.77**	**100.0%**	**1,098.29**	**100.0%**	**2,006.54**	**100.0%**	**2,341.07**	**100.0%**	**2,082.68**
Sample Count		**5**		**11**		**11**		**4**		**6**		**8**		**10**		**8**	
Targeted		*94.7%*		*81.3%*		*81.1%*		*87.2%*		*92.1%*		*93.2%*		*90.8%*		*84.1%*	
Contamination		*5.3%*		*18.7%*		*18.9%*		*12.8%*		*7.9%*		*6.8%*		*9.2%*		*15.9%*	

Exhibit 2: Selected Weighted Average Composition Estimates

Material Category	Recyclability	Aggregate Single Stream (excludes Abington Commingled/Fiber)	Aggregate Single Stream and Commingled (excludes Abington Mixed Paper/OCC)	Aggregate All Streams (Single Stream, Commingled, OCC/Mixed Paper)
Paper		**57.1%**	**47.3%**	**51.1%**
Corrugated Cardboard (OCC)	Targeted	25.2%	20.9%	22.3%
Mixed Paper	Targeted	29.2%	24.0%	26.4%
Aseptic/Gable Top Cartons	Targeted	0.4%	0.4%	0.4%
Remainder/Composite Paper	Contaminant	2.3%	2.1%	2.0%
Plastic		**10.1%**	**14.0%**	**13.0%**
PET (#1) Plastic Bottles & Jars	Targeted	4.1%	5.8%	5.3%
PET (#1) Non-Bottle Containers	Targeted	0.9%	1.1%	1.0%
Natural HDPE (#2) Plastic Bottles/Jugs	Targeted	0.9%	1.3%	1.2%
Colored HDPE (#2) Plastic Bottles/Jugs	Targeted	1.2%	1.5%	1.4%
PP (#5) Containers	Targeted	1.1%	1.6%	1.5%
#3-#7 Rigids (exc. 5s)	Targeted	0.2%	0.2%	0.2%
Expanded Polystyrene	Contaminant	0.1%	0.1%	0.1%
Plastics Bags/Film	Targeted	0.7%	1.1%	1.1%
Bulky Rigid Plastics	Targeted	0.5%	0.8%	0.7%
Remainder/Composite Plastics	Contaminant	0.4%	0.5%	0.5%
Metal		**5.5%**	**7.1%**	**6.5%**
Aluminum Cans	Targeted	1.9%	2.6%	2.4%
Tin/Steel Cans	Targeted	1.7%	2.2%	2.1%
Aluminum Foil and Trays	Targeted	0.1%	0.1%	0.1%
Other Ferrous Metal	Targeted	1.3%	1.7%	1.6%
Other Non-Ferrous Metal	Targeted	0.5%	0.5%	0.5%
Glass		**17.7%**	**20.7%**	**19.1%**
Glass Bottles and Jars	Targeted	10.9%	10.9%	10.1%
Mixed Cullet (2" Minus)	Targeted	6.9%	9.8%	9.0%
HHW		**0.1%**	**0.1%**	**0.1%**
Hazardous/Special Waste	Contaminant	0.1%	0.1%	0.1%
Other		**9.5%**	**10.8%**	**10.3%**
Bagged Waste	Contaminant	3.3%	3.4%	3.2%
Bagged Recycling	Contaminant	1.9%	2.1%	2.0%
Other Contaminants	Contaminant	2.6%	3.0%	3.0%
Fines	Contaminant	1.7%	2.3%	2.1%
Total		**100.0%**	**100.0%**	**100.0%**
Sample Count		**47**	**58**	**63**
Targeted		*87.7%*	*86.4%*	*87.1%*
Contamination		*12.3%*	*13.6%*	*12.9%*

Exhibit 3: Raw Sample Data

			Location	King of Pruss	King of Pruss	King of Pruss	King of Pruss	King of Pruss	King of Pruss	King of Pruss	King of Pruss	King of Pruss	King of Pruss	King of Pruss	King of Pruss	King of Pruss
			Generator	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
			Stream	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound
			Date	10/16/23	10/16/23	10/16/23	10/16/23	10/17/23	10/17/23	10/17/23	10/17/23	10/17/23	10/17/23	10/17/23	10/17/23	10/17/23
			Truck Type	Box/Dump T	Rear Loader	Rear Loader	Rear Loader	Side Loader	Rear Loader	Side Loader	Rear Loader	Side Loader	Rear Loader	Rear Loader	Rear Loader	Rear Loader
			Hauler	Abington To	Hatboro Bor	Cheltenham	Cheltenham	Upper Dublii	Upper Dublii	Abington To	Plymouth Tc	Abington To	Plymouth Tc	Springfield T	Plymouth Tc	Hatboro Bor
			Load Weight	1.34	2.03	2.86	5.38	4.11	2.12	5.82	1.15	2.89	1.38	7.9	2.48	2.51
			Ticket #	566668	566669	566676	56693	56696	566698	566710	566716	566721	566718	566728	566775	566777
			Truck #	121	20	610	606	53	3	218	S3	217	S5	13	S5	20
			Special Gen.	OCC/Mixed I	Single Strear	Single Strear	Single Strear	Single Strear	Single Strear	Commingled	Single Strear	Commingled	Single Strear	Single Strear	Single Strear	Single Strear
			Field ID	R01	R02	R03	R04	R05	R06	R07	R08	R09	R10	R11	R12	R13
			Sample ID	1016-PKPR-F	1016-PKPR-F	1016-PKPR-F	1016-PKPR-F	1016-PKPR-F	1016-PKPR-F	1016-PKPR-F	1016-PKPR-F	1016-PKPR-F	1016-PKPR-F	1016-PKPR-F	1017-PKPR-F	1017-PKPR-F
Material Group	Recyclability	Material Number	Material Category		1	2	3	4	5	6	7	8	9	10	11	12	13
Paper	Targeted	1	Corrugated Cardboard (OCC)		61.15	20.36	35.69	40.67	38.85	39.61	5.31	36.85	20.12	70.88	55.53	19.51	32.13
Paper	Targeted	2	Mixed Paper		66.80	24.85	31.11	42.27	43.64	35.77	2.77	37.23	6.51	26.51	32.91	54.69	41.75
Paper	Targeted	3	Aseptic/Gable Top Cartons		0.00	0.33	0.25	0.49	0.03	0.15	0.19	0.33	0.45	0.39	0.17	0.29	1.23
Paper	Contaminant	4	Remainder/Composite Paper		0.30	3.16	2.72	2.22	1.14	2.60	0.84	5.04	1.24	1.26	2.68	5.66	3.38
Plastic	Targeted	5	PET (#1) Plastic Bottles & Jars		0.10	3.80	3.68	5.20	3.32	3.56	16.88	3.90	8.04	6.02	5.10	5.62	8.16
Plastic	Targeted	6	PET (#1) Non-Bottle Containers		0.00	0.79	0.83	0.53	1.09	1.25	2.63	0.73	1.51	0.93	0.97	0.33	1.87
Plastic	Targeted	7	Natural HDPE (#2) Plastic Bottles/Jugs		0.00	0.64	0.54	0.96	0.84	0.44	3.68	0.76	1.38	0.94	0.92	0.46	2.00
Plastic	Targeted	8	Colored HDPE (#2) Plastic Bottles/Jugs		0.00	2.58	0.04	1.00	1.40	1.28	6.72	1.32	0.98	1.18	0.56	0.10	3.28
Plastic	Targeted	9	PP (#5) Containers		0.00	1.05	1.13	1.81	0.49	0.67	6.29	2.01	1.83	1.39	1.15	1.39	1.97
Plastic	Targeted	10	#3-#7 Rigids (exc. 5s)		0.00	0.20	0.16	0.72	0.12	0.20	0.28	0.38	0.44	0.52	0.22	0.08	0.16
Plastic	Contaminant	11	Expanded Polystyrene		0.12	0.17	0.03	0.19	0.00	0.01	0.07	0.05	0.05	0.02	0.00	0.03	0.09
Plastic	Targeted	12	Plastics Bags/Film		0.00	0.55	2.23	0.45	0.39	1.11	5.01	2.63	1.97	0.99	0.69	0.79	0.63
Plastic	Targeted	13	Bulky Rigid Plastics		0.00	0.00	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Plastic	Contaminant	14	Remainder/Composite Plastics		0.10	2.03	0.29	0.51	0.17	0.61	1.77	0.85	0.43	0.09	0.07	0.77	0.45
Metals	Targeted	15	Aluminum Cans		0.06	2.65	1.89	3.51	1.05	1.65	12.57	2.79	5.35	1.95	3.47	3.81	2.99
Metals	Targeted	16	Tin/Steel Cans		0.00	2.62	1.02	2.46	2.32	2.10	6.62	1.80	3.24	2.14	1.52	1.72	1.50
Metals	Targeted	17	Aluminum Foil and Trays		0.00	0.00	0.00	0.06	0.00	0.10	0.00	0.18	0.34	0.22	0.10	0.08	0.10
Metals	Targeted	18	Other Ferrous Metal		0.00	2.22	2.68	0.06	9.84	3.88	3.66	0.26	3.32	1.97	0.22	0.36	0.00
Metals	Targeted	19	Other Non-Ferrous Metal		0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.16	0.00	0.00	0.00	0.00
Glass	Targeted	20	Glass Bottles and Jars		0.00	40.31	6.63	10.73	5.97	26.61	2.35	28.19	26.21	14.21	3.35	28.11	11.95
Glass	Targeted	21	Mixed Cullet (2" Minus)		0.00	19.80	1.10	6.80	8.92	5.10	47.40	2.26	24.92	0.74	12.68	18.88	0.36
HHW	Contaminant	22	Hazardous/Special Waste		0.00	0.00	4.33	0.00	0.53	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00
Other	Contaminant	23	Bagged Waste		0.00	0.50	33.90	5.62	4.42	0.00	1.24	0.00	11.24	0.00	3.36	1.74	5.92
Other	Contaminant	24	Bagged Recycling		0.00	0.00	0.00	0.52	6.64	2.48	0.48	0.00	2.82	4.72	0.00	0.00	0.00
Other	Contaminant	25	Other Contaminants		0.40	4.67	2.09	3.83	1.23	3.29	0.91	3.11	5.89	3.97	1.05	1.57	6.37
Other	Contaminant	26	Fines		0.35	8.50	2.80	3.14	1.80	5.40	6.50	0.46	1.46	1.36	0.82	3.36	0.58
				Total	129.38	141.78	135.14	134.64	134.20	137.87	134.25	131.13	129.90	142.40	127.85	149.35	126.87

King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus
Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound
10/17/23	10/17/23	10/17/23	10/17/23	10/17/23	10/17/23	10/18/23	10/18/23	10/18/23	10/18/23	10/18/23	10/18/23	10/18/23	10/18/23	10/18/23	10/18/23	10/18/23	10/18/23	10/18/23
Rear Loader	Side Loader	Rear Loader	Side Loader	Box/Dump T	Rear Loader	Rear Loader	Side Loader	Rear Loader	Side Loader	Side Loader	Rear Loader	Box/Dump T	Rear Loader	Rear Loader	Side Loader	Side Loader	Side Loader	Side Loader
Cheltenham	Upper More	Cheltenham	Upper More	Abington To	Upper Dubli	Cheltenham	Upper Dubli	Springfield T	Upper Dubli	Abington To	Springfield T	Abington To	Cheltenham	Cheltenham	Upper More	Upper More	Abington To	Abington To
3.44	5.82	4.72	4.53	2.01	2.3	5.2	5	5.12	4.07	6.55	3.15	2.23	3.54	4.54	4.37	5.28	5.76	2.87
566781	566784	566783	566786	566789	566790	566794	566799	566805	566806	566809	566818	566858	566860	566868	566876	566878	566888	566895
610	227	607	225	121	52	606	53	9	54	225	13	121	610	607	225	227	218	221
Single Strear	Single Strear	Single Strear	Single Strear	OCC/Mixed I	Single Strear	Single Strear	Single Strear	Single Strear	Single Strear	Commingled	Single Strear	OCC/Mixed I	Single Strear	Single Strear	Single Strear	Single Strear	Commingled	Commingled
R14	R15	R16	R17	R18	R19	R20	R21	R22	R23	R24	R25	R26	R27	R28	R29	R30	R31	R32
1017-PKPR-F	1017-PKPR-F	1017-PKPR-F	1017-PKPR-F	1017-PKPR-F	1017-PKPR-F	1017-PKPR-F	1017-PKPR-F	1017-PKPR-F	1017-PKPR-F	1017-PKPR-F	1017-PKPR-F	1018-PKPR-F	1018-PKPR-F	1018-PKPR-F	1018-PKPR-F	1018-PKPR-F	1018-PKPR-F	1018-PKPR-F
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
35.55	28.85	39.98	39.52	43.56	25.58	30.73	31.20	14.03	19.86	0.00	40.46	42.78	13.00	21.62	49.29	29.73	0.00	0.60
40.39	34.63	36.15	42.24	79.45	42.87	41.03	61.82	29.08	44.82	5.97	34.92	72.37	34.68	54.80	23.95	20.12	4.01	0.65
1.05	1.33	0.81	0.35	0.00	0.93	0.63	1.45	0.23	0.85	0.23	0.47	0.13	0.63	0.63	0.33	0.13	0.57	0.00
0.98	2.60	1.14	2.92	0.36	1.56	2.66	1.44	2.06	0.72	2.76	1.16	1.04	2.78	2.64	6.56	1.74	0.36	0.75
3.80	6.12	5.90	4.16	0.18	4.90	4.46	6.40	6.54	6.02	25.28	9.08	0.22	2.78	2.68	6.00	5.86	21.74	14.05
1.61	1.39	1.21	1.19	0.00	1.33	2.25	1.39	1.11	1.27	2.93	1.31	0.05	0.99	0.93	0.81	1.17	4.11	2.70
0.58	1.42	0.84	1.16	0.00	0.82	1.70	1.60	1.96	2.18	3.08	1.88	0.00	0.34	0.60	1.66	1.30	3.46	3.75
0.72	2.18	2.72	2.30	0.00	0.94	0.70	1.14	0.62	1.32	3.98	2.24	0.54	1.18	1.10	0.64	1.02	7.36	2.20
1.09	1.53	1.37	2.01	0.00	1.73	1.23	1.07	0.89	1.65	5.61	1.33	0.00	1.79	1.11	1.63	2.21	3.83	3.70
0.00	0.86	0.12	0.34	0.00	0.40	0.24	0.12	0.26	0.38	1.02	0.10	0.00	0.14	0.12	0.50	0.12	0.50	0.60
0.00	0.37	0.13	0.01	0.06	0.05	0.09	0.01	0.05	0.07	0.03	0.00	0.00	0.11	0.05	0.07	0.09	0.00	0.30
0.87	1.61	0.81	1.03	0.01	1.89	1.43	0.25	0.73	0.29	4.35	0.39	0.43	0.41	0.85	2.83	2.11	3.43	3.35
0.00	4.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.80
0.21	2.13	0.41	2.73	0.00	0.71	0.49	0.17	0.43	0.21	1.85	0.17	0.49	0.93	0.09	0.15	0.37	1.37	2.55
2.15	4.63	2.19	2.75	0.00	1.99	1.71	3.15	3.89	1.07	5.23	2.97	0.07	1.95	1.71	3.87	1.95	7.31	5.65
1.30	3.28	2.12	1.96	0.02	1.26	2.30	3.56	2.12	1.96	5.12	2.58	0.14	3.06	1.92	3.56	2.44	9.28	5.70
0.44	0.04	0.00	0.20	0.00	0.08	1.86	0.10	0.10	0.02	1.44	0.00	0.00	0.10	0.06	0.08	0.00	0.82	0.10
0.28	0.00	0.00	18.19	2.52	0.10	0.00	0.16	0.18	0.16	1.28	0.20	0.00	0.42	0.18	2.12	0.44	1.00	6.25
0.00	0.00	0.00	0.24	0.00	0.00	0.00	1.86	0.60	0.00	0.00	0.00	0.04	2.20	0.00	0.00	20.80	0.00	7.00
21.43	0.81	8.49	5.91	0.82	26.73	14.61	1.05	22.97	29.33	3.95	17.31	0.27	30.21	27.13	7.95	1.99	0.51	35.15
2.20	19.52	0.48	15.98	0.02	5.62	9.38	7.30	26.10	1.64	13.08	8.26	0.20	16.60	8.60	13.56	28.48	40.36	14.25
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4.98	8.32	18.12	0.00	0.00	0.00	1.94	0.88	2.46	5.58	16.42	1.02	0.00	23.30	0.30	0.00	1.80	3.68	2.35
0.48	0.00	0.90	0.62	0.00	0.00	2.86	0.00	8.68	3.36	3.84	2.92	0.00	1.20	0.58	2.88	2.54	2.28	1.70
6.43	2.63	6.05	1.75	0.63	5.11	8.37	0.45	1.57	1.33	3.61	0.51	9.39	2.29	5.15	5.09	10.73	6.93	7.55
1.96	2.70	1.98	2.86	1.12	2.06	3.10	1.72	4.62	0.68	20.80	1.14	1.54	4.94	1.72	1.62	3.28	3.92	3.65
128.50	131.42	131.92	150.42	128.75	126.66	133.77	128.29	131.28	126.56	131.86	130.42	129.70	146.03	134.57	135.15	140.42	126.83	128.35

King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus
Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound
10/19/23	10/19/23	10/19/23	10/19/23	10/19/23	10/19/23	10/19/23	10/19/23	10/19/23	10/19/23	10/19/23	10/19/23	10/19/23	10/19/23	10/19/23	10/20/23	10/20/23	10/20/23	10/20/23	10/20/23
Side Loader	Rear Loader	Rear Loader	Box/Dump T	Rear Loader	Rear Loader	Rear Loader	Rear Loader	Rear Loader	Rear Loader	Rear Loader	Rear Loader	Side Loader	Side Loader	Rear Loader	Side Loader	Side Loader	Side Loader	Side Loader	Rear Loader
Abington To	Springfield T	Springfield T	Abington To	Upper Dublii	Plymouth Tc	Plymouth Tc	Hatboro Bor	Cheltenham	Cheltenham	Cheltenham	Upper More	Upper More	Cheltenham	Upper Dublii	Abington To	Upper Dublii	Abington To	Springfield T
2.87	6.13	6.13	2.23	1.72	2.8	1.92	2.65	3.48	4.52	4.41	5.51	5.45	3.48	3.86	3.29	4.1	3.05	7.32
566895	566913	566913	566966	566967	566970	566974	566975	566979	566982	566987	566998	567000	566979	567003	567009	567011	567012	567013
221	13	13	121	52	S5	S3	20	610	606	607	225	227	610	53	217	54	221	13
Commingled	Single Strear	Single Strear	OCC/Mixed I	Single Strear	Single Strear	Single Strear	Single Strear	Single Strear	Single Strear	Single Strear	Single Strear	Single Strear	Single Strear	Single Strear	Commingled	Single Strear	Commingled	Single Strear
R33	R34	R35	R36	R37	R38	R39	R40	R41	R42	R43	R44	R45	R46	R47	R48	R49	R50	R51
1018-PKPR-F	1018-PKPR-F	1018-PKPR-F	1019-PKPR-F	1019-PKPR-F	1019-PKPR-F	1019-PKPR-F	1019-PKPR-F	1019-PKPR-F	1019-PKPR-F	1019-PKPR-F	1019-PKPR-F	1019-PKPR-F	1019-PKPR-F	1019-PKPR-F	1019-PKPR-F	1019-PKPR-F	1019-PKPR-F	1019-PKPR-F
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
0.58	39.74	33.47	60.25	12.68	42.30	43.38	30.98	41.94	47.87	24.31	39.64	40.66	28.38	28.79	1.42	34.90	0.00	39.60
1.17	56.68	50.16	58.59	38.82	34.63	32.07	29.91	25.74	32.68	52.85	31.26	33.64	31.60	48.24	0.53	37.50	0.85	51.08
0.11	0.53	1.37	0.75	0.79	0.47	0.63	0.31	0.49	0.75	0.99	0.61	0.51	0.35	0.47	0.51	1.07	0.05	0.63
0.82	0.60	2.12	1.00	2.18	2.56	5.86	1.56	2.92	3.88	0.76	5.66	2.12	3.44	2.20	2.38	8.32	1.60	1.00
18.94	2.24	7.48	0.18	5.64	7.22	6.40	8.74	3.90	5.82	5.24	6.42	6.08	3.98	5.10	17.16	5.34	14.68	2.54
3.85	0.39	2.35	0.29	1.05	1.25	0.75	0.83	1.53	0.81	0.49	0.79	1.39	0.95	2.35	2.47	1.07	1.41	2.03
3.70	0.32	1.62	0.00	1.08	2.00	2.54	2.08	0.00	0.45	0.22	1.66	1.46	1.22	1.92	2.58	0.52	2.46	1.50
2.90	0.74	2.52	0.00	1.72	0.94	1.54	2.08	3.58	1.42	1.12	1.54	1.62	1.44	2.74	2.48	2.50	4.32	1.72
4.71	0.45	1.77	0.25	1.81	1.17	0.97	3.81	0.89	1.03	0.63	0.69	2.63	1.41	3.31	4.77	1.63	3.59	1.73
1.12	0.12	0.72	0.00	0.22	0.18	0.34	0.00	0.25	0.25	0.20	0.06	0.28	0.14	0.22	0.54	0.12	0.22	0.20
0.13	0.03	0.01	0.09	0.00	0.03	0.09	0.13	0.31	0.31	0.07	0.09	0.01	0.07	0.00	0.03	0.07	0.09	0.03
2.57	0.47	0.51	0.05	0.19	0.31	0.55	0.61	0.95	0.93	1.23	1.77	3.83	1.33	0.61	3.27	0.89	3.01	0.13
8.38	0.57	0.00	0.00	0.00	0.00	0.00	4.59	5.55	0.00	0.00	1.31	0.00	0.23	0.85	6.79	3.61	2.81	0.00
1.45	0.00	0.93	0.05	0.55	0.25	0.19	0.17	0.05	0.55	2.81	0.89	0.67	0.25	0.19	0.47	0.33	1.19	0.01
5.63	1.05	3.23	0.11	2.83	4.83	2.65	5.67	1.95	1.25	1.09	2.23	3.21	1.69	3.89	5.75	2.33	7.79	1.73
5.68	0.90	2.04	0.00	3.26	3.80	0.80	4.02	0.94	1.78	1.82	3.12	2.30	3.30	2.26	5.56	0.88	7.10	3.44
0.40	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.06	0.00	0.04	0.00	0.00	0.04	0.26	0.02	0.16	0.04
0.86	0.14	0.82	0.00	8.50	0.14	0.00	0.00	0.36	0.08	9.52	3.12	0.00	12.10	1.28	17.77	0.00	4.36	0.12
0.00	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.10	0.00	0.00	0.00	0.34	0.00	0.00	0.00
26.15	10.09	14.89	0.91	29.57	14.97	21.89	26.11	3.33	8.85	12.05	1.39	1.49	16.37	11.23	18.92	7.55	27.09	17.27
19.40	4.18	15.60	0.00	18.06	2.34	1.98	1.16	3.04	4.12	0.14	12.98	16.26	5.52	7.18	12.88	4.56	33.54	9.56
0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4.76	0.26	0.52	0.00	0.00	0.00	0.00	0.00	17.96	13.87	7.84	2.48	2.56	3.54	0.42	2.90	4.56	1.52	0.00
3.58	2.16	0.00	0.00	0.00	0.88	4.70	0.00	8.09	6.25	4.93	7.48	12.96	2.40	1.88	5.70	4.94	5.68	4.48
7.53	0.21	0.67	11.27	8.33	5.53	3.55	5.97	3.83	4.97	7.03	4.17	2.77	6.27	1.05	8.33	3.27	4.17	1.69
2.86	4.02	2.26	0.12	3.30	0.66	1.12	1.34	1.86	1.94	1.24	2.90	3.48	2.04	1.52	2.76	2.80	3.22	1.52
127.71	126.49	145.06	133.91	140.58	126.46	132.00	130.07	129.92	139.92	136.58	136.40	139.93	128.02	127.74	126.57	128.78	130.91	142.05

King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prus	King of Prussia Recycling Center
Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound	Inbound
10/20/23	10/20/23	10/20/23	10/20/23	10/20/23	10/20/23	10/20/23	10/20/23	10/20/23	10/20/23	10/20/23	10/20/23
Side Loader	Rear Loader	Rear Loader	Side Loader	Side Loader	Box/Dump T	Rear Loader	Side Loader	Side Loader	Rear Loader	Side Loader	Side Loader
Abington To	Springfield T	Hatboro Bor	Upper More	Upper More	Abington To	Plymouth To	Upper Dubli	Upper Dubli	Springfield T	Abington To	Abington Township
6.17	7.32	2.91	4.74	4.91	2.22	4.71	4.59	3.58	6.11	7.38	3.36
567018	567013	567099	567101	567103	567105	567111	567114	567115	567118	567127	567130
225	13	20	227	225	121	S5	54	53	13	218	225
Commingled	Single Strear	Single Strear	Single Strear	Single Strear	OCC/Mixed I	Single Strear	Single Strear	Single Strear	Single Strear	Commingled	Commingled
R52	R53	R54	R55	R56	R57	R58	R59	R60	R61	R62	R63
1019-PKPR-F	1019-PKPR-F	1020-PKPR-F	1020-PKPR-F	1020-PKPR-F	1020-PKPR-F	1020-PKPR-F	1020-PKPR-F	1020-PKPR-F	1020-PKPR-F	1020-PKPR-F	1020-PKPR-RES-63
52	53	54	55	56	57	58	59	60	61	62	63
0.26	29.86	35.97	25.51	27.59	47.52	52.74	27.01	21.90	24.21	3.50	0.40
1.89	50.04	34.93	22.71	62.06	72.42	29.20	55.30	44.40	35.47	1.77	0.95
1.09	0.15	0.53	0.53	0.19	0.53	0.11	0.67	0.65	0.83	0.41	0.27
1.46	1.42	13.90	12.24	2.10	4.62	1.92	2.48	1.10	1.34	3.22	1.66
14.58	4.46	8.22	8.00	5.12	0.40	6.14	5.90	7.10	7.64	16.24	17.20
3.29	1.63	0.37	1.57	1.63	0.09	0.55	1.41	1.55	1.17	2.79	3.55
2.86	0.94	2.32	1.64	1.64	0.00	0.96	1.80	1.90	2.00	6.80	3.60
5.22	0.24	3.88	1.98	0.68	0.00	1.22	0.26	3.00	3.64	5.70	3.32
6.07	1.27	0.93	1.65	2.03	0.09	1.17	2.07	1.67	1.57	5.59	5.19
0.96	0.12	0.18	0.46	0.25	0.00	0.00	0.16	0.20	0.22	0.44	0.20
0.07	0.09	0.01	0.05	0.09	0.01	0.05	0.43	0.00	0.00	0.21	0.15
6.31	0.41	0.87	1.71	1.71	0.27	0.95	0.07	0.45	0.49	4.87	3.77
0.47	0.00	0.00	2.98	0.00	0.00	0.00	0.67	0.00	1.13	0.00	8.82
1.35	0.07	0.59	2.57	1.03	0.00	0.17	0.69	0.25	0.23	1.53	0.00
9.01	2.01	2.25	1.43	2.63	0.23	3.05	2.09	1.57	5.15	6.55	5.75
4.70	2.36	1.82	2.48	4.26	0.00	2.50	3.22	2.00	2.42	5.54	4.84
0.22	0.02	0.00	0.10	0.08	0.00	0.00	0.06	0.15	0.04	0.00	0.22
0.92	0.16	0.76	0.00	1.72	0.00	0.18	0.16	0.10	0.44	3.20	2.78
0.08	0.00	0.62	0.06	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.12
0.79	11.43	10.01	9.59	2.33	0.00	14.33	2.79	18.25	25.79	1.05	19.77
57.92	16.86	2.36	9.88	13.50	0.00	9.18	17.84	12.60	10.64	22.56	34.24
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.94	0.00	0.78	25.80	6.28	0.00	0.00	0.00	2.00	0.00	5.48	3.20
10.44	3.74	3.70	2.46	0.60	0.00	0.96	2.32	2.26	0.00	5.76	4.80
1.83	0.41	1.27	2.61	2.61	0.83	0.45	1.33	1.53	4.15	12.59	6.37
8.34	1.14	2.10	1.72	1.56	0.94	1.18	2.68	1.50	1.68	10.14	4.52
143.07	128.83	128.37	139.73	141.69	127.95	127.01	131.41	126.13	130.59	125.94	135.69