Appendix A
PWCS Operational Plan

DEPARTMENT OF SANITATION OF NEW YORK CITY
PRELIMINARY WASTE CHARACTERIZATION STUDY

PWCS Operations Plan

Introduction

The Department of Sanitation of New York City ("DSNY") has asked the R. W. Beck Project Team ("R. W. Beck") to develop an estimate of the composition of New York City's (the "City") refuse and recyclables. By "composition", we mean the percentage, by weight, of paper, plastic, metals, glass, yard waste, and other materials in the City's waste. R.W. Beck proposes to develop this estimate of composition by sorting samples of the City's refuse and recyclables.

The first part of this estimate is a Preliminary Waste Characterization Study ("PWCS") which is designed to provide a "snapshot" of the residential curbside refuse and recyclables. The plan presented below describes how the PWCS will be developed and carried out.

Sampling Plan

The first step in the PWCS is to develop a sampling plan which will be the basis for an accurate estimate of the City's refuse and recyclables composition. The accuracy of this estimate (i.e., how close the composition from the samples matches the composition of the entire City) will depend on a number of factors, including how carefully the Study is done, the size of the samples being sorted, the number of samples that are sorted, and the method for selecting the samples.

Refuse Sampling

The Refuse Sampling Plan ("RSP") is divided into four parts.

Sample Weight

The weight of each sample of refuse will be between 200 pounds and 250 pounds, based on current industry practice and studies by the USEPA and academic studies (e.g., Klee).

Sample Number

In a waste characterization study, the number of samples that are sorted affects the accuracy of the estimate. For example, if only one 200-pound sample of the City's refuse were sorted, it is very unlikely that the estimate resulting from sorting that single sample would match the composition of the City's entire curbside refuse. On the other hand, if hundreds of thousands of 200–pound samples were sorted – enough samples so that every ounce of the City refuse and recyclables were sorted – the resulting estimate would be very accurate indeed. In fact, it would be perfectly accurate. So, how many samples should be sorted?

Before we answer the question about the number of samples, we should understand the nature of the material that will be sorted. If the material being sorted (i.e., the refuse) were consistently and homogeneously discarded by households, it would be relatively easy to arrive at an estimate. It would take very few samples to develop an estimate if there were only two materials in the refuse stream and they were always found in the same proportion in every sample. Of course this is not the case. Refuse, and to a lesser degree, recyclables are extremely variable. The percentage of each type of waste material can vary considerably among samples. Even from the same household, the type of waste can vary depending on when the sample is collected. For example, during the autumn, one would expect to find large amounts of leaves, but in the winter there will be few leaves or none. On the other hand, food waste will be found throughout the year. Because of the potential for variability between samples, a different number of samples may be required to obtain an accurate estimate for different types of waste. Continuing the example, since food waste is likely to be found more consistently than leaves, fewer samples would be required to obtain an accurate estimate of the food waste percentage in the refuse stream.

Typically, an estimate of the composition of waste is presented as three numbers: (1) the Sample Mean; (2) the Confidence Level; and (2) the Confidence Interval. The Sample Mean is the average percentage of a given material found in the samples sorted. For example, after sorting thirty samples of refuse, we will have a list of thirty percentages of paper waste. If the average of the thirty percentages of paper is 35 percent, then the Sample Mean of paper is 35 percent.

The Confidence Level and the Confidence Interval are intertwined concepts. Together, they allow statements to be made about the entire population from the sample taken. The Sample Mean is, after all, simply the average value of the samples; it is unlikely that the percentage of a given type of waste for the entire population matches the Sample Mean exactly. The Confidence Level and the Confidence Interval provide a way to convey how much the Sample Mean tell us about the entire population.

The Confidence Level indicates the degree of certainty that the Confidence Interval contains the population's mean value. The higher the Confidence Level, the greater our certainty that the mean of the entire population is contained within the Confidence Interval. For example, if the Confidence Interval around the Sample Mean – 33 percent to 37 percent for paper – is based on a Confidence Level of 90 percent, we can be 90 percent confident that the population's percentage of paper waste is contained in that interval. The purpose of the Confidence Level is to provide an indication of the accuracy of the sampling results. In waste characterization studies, a 90 percent Confidence Level is a widely accepted standard.

The third number used in describing the composition of the refuse is the Confidence Interval. This is an expression of the uncertainty regarding the population Mean. For example, our Sample Mean of 35 percent for paper waste may have a Confidence Interval of ±7 percent, at a 90 percent Confidence Level. That is, based on our number of samples and results obtained, we would expect that 90 percent of the time, the amount of paper waste in the refuse of the entire population would be between 28 percent and 42 percent. Or, put another way, if we could

actually go out and determine the exact percentage of paper waste in our population, we are 90 percent certain that the value would be between 28 percent and 42 percent. If we wanted a more accurate estimate, we would have to sort more samples.

In recommending the number of samples of refuse and recyclables to sort, R. W. Beck considered not only the level of accuracy of the estimate, but the cost of providing this estimate and the variability of materials being sorted. As noted above, the variability of some material in the refuse is greater than other materials. Yard Waste is much more variable than food waste. Therefore, for a given number of samples, the estimate of some materials will be more accurate than the estimate for others. Sorting a few hundred samples of refuse may provide a Confidence Interval of ±8 percent for paper, but a ±30 percent for yard waste. To achieve a ±8 percent for yard waste would require significantly more samples and be prohibitively expensive.

In practical terms, "variability" simply means the variation we are likely to find between samples. If we sort through 10 samples and each sample has between 28 percent to 32 percent of a given waste type, we can be pretty certain that the percentage of this waste type for the population as a whole lies in this general range. But if we sort through these same 10 samples and find results of 1 percent, 80 percent, 20 percent, 65 percent, and so forth, you can see that we are much less certain about the percentage of this waste type in the entire population.

There is a point of diminishing returns for waste sampling. After that point, the cost of achieving small increases in accuracy is high. Below that point, significant increases in accuracy can be achieved with relatively little cost.

R. W. Beck is recommending that at least 200 samples of refuse be sorted in the PWCS. The tables in Attachment 1 show the Confidence Level and Confidence Intervals from seven recent studies for seven categories of materials. It should be emphasized that the seven studies were not identical. There were differences among the seven waste streams and the goals of each of the clients. However, the general pattern is clear: the more samples that were sorted, the greater the accuracy of the estimate.

Because recyclables are a smaller, more homogeneous stream of materials, R. W. Beck is recommending that at least 100 samples of recyclable paper and 100 samples of recyclable metal, glass, and plastic ("MGP") be sorted. The type of information shown in Table 1 for refuse is not available for recyclables because very few of R. W. Beck's clients have requested a recyclables sort. Our recommendation is based on our experience in sorting refuse and our knowledge of the difference between the refuse and recyclables.

Sample Selection

In selecting samples from the City's curbside refuse for the PWCS, R. W. Beck and the DSNY agreed to use two criteria. First, the samples selected from each of the City's five boroughs would reflect the contribution of that borough to the City's waste stream as a whole. Second, the DSNY and R. W. Beck agreed that refuse collected early in the week might be both quantitatively and qualitatively different from refuse collected late in the week. The first day of

collection in the week will include refuse generated during the weekend and any weekdays before the collection day. To test this, it was decided to make a distinction between early week ("EW") samples and late week ("LW") samples.

That is, for sections of the City that receive 3-day a week collection (i.e., Monday-Wednesday-Friday or Tuesday-Thursday-Saturday), the EW samples would be taken from the Monday and Tuesday routes and the LW samples would be taken from the Wednesday, Thursday, Friday, and Saturday routes. For sections of the City that receive 2-day a week collection (i.e., Monday-Wednesday, Tuesday-Thursday, or Wednesday-Saturday), the EW samples would be taken from the Monday,Tuesday and Wednesday routes and the LW samples would be taken from the Thursday, Friday, and Saturday routes.

To estimate the number of samples from each borough, the average amount of refuse collected from each borough each week in the City between July, 2004 and February, 2004 was used. These averages are shown in Table 1.

Table 1
Refuse Collected – July 2003 to February 2004

	Avg. Tons Collected (1)	% of Avg. Refuse Collected	Number of Samples
Bronx	9,032	16%	31
Brooklyn	18,100	31%	63
Manhattan	10,431	18%	37
Queens	16,021	28%	54
Staten Island	4,328	7%	15
Total	57,912	100%	200

(1) Source: DSNY

The Sampling Plan calls for the total number of samples from each borough to be those shown in Table 1.

To determine how many EW sample and how many LW samples would be acquired for the PSCS involved a three-step process. First, the average weekly tonnages collected for each day of the week in each borough was obtained from by the DSNY. Second, the percentage of waste from the first days of the week were determined.

For example, Manhattan has three-day a week refuse collection. The Manhattan routes are either Monday-Wednesday-Friday or Tuesday-Thursday-Saturday. Therefore, the first collection days in Manhattan are Monday and Tuesday. Based on data provided by the DSNY, it is estimated that 42 percent of Manhattan's refuse is collected on Monday and Tuesday (EW) and 58 percent is collected on the other four days of the week (LW).

On the other hand, Staten Island has two-day a week refuse collection and the first collection days on Staten Island are Monday, Tuesday, and Wednesday. DSNY data shows that EW collection represents 58 percent of the average collected per week and the LW collection represents 42 percent. Because both the Bronx and Brooklyn have a combination of 2-day a week and 3-day a week collection, the estimates had to be adjusted accordingly. The EW and LW percentages were then applied to the total number of samples from each borough, as shown in Table 1, to determine the number of EW and LW samples to be acquired for the PWCS. Table 2 shows the EW and LW percentages for each borough and the resulting number of EW and LW samples.

Table 2
Early Week and Late Week Percentages(1)

	EW Percent	LW Percent	EW Samples	LW Samples
Bronx	43%	55%	13	18
Brooklyn	41%	59%	26	37
Manhattan	42%	58%	16	21
Queens	57%	43%	31	23
Staten Island	58%	42%	9	6
Total			95	105

(1) Based on the average weekly tonnages from March 15 to April 11, 2004. Source: DSNY

To be sure that every pound of waste in the City has an equal opportunity to be sampled, R. W. Beck determined that only one sample per collection vehicle will be used.

To select the EW and LW samples from each borough, R. W. Beck obtained a list of the total number of routes on each day in each borough from the DSNY. From each list of routes, the appropriate number of samples was randomly selected. For example, to obtain the 21 LW routes for Manhattan, 21 routes were randomly selected from the 110 refuse collection routes on Friday in Manhattan. An identical process was used to determine the selected routes/samples for each borough.

Sample Collection

The samples will be acquired at one of two private transfers stations owned by Waste Management, Inc. ("WMI") and under contract with the DSNY to receive residential curbside refuse. The two transfer stations are WMI's Varick Road transfer station and Harlem River Yard transfer station. The DSNY has agreed to divert the trucks that have been selected for sampling to one of these two transfer stations. The drivers of these trucks as well as the scale-house operator at the transfer station will have been notified ahead of time that the truck is to be sampled.

When a selected truck arrives at the transfer station, an R. W. Beck Sample Manager will be notified. When the truck has tipped its load a front-end loader ("FEL") from the transfer station will take a randomly selected portion of the tipped load dump into two or three 96-gallon toters. The random selection of the portion of the tipped load to be sampled will be made by the Sample Manager before the FEL begins to grab the sample.

The FEL will dump the selected portion of the load into toters that have been positioned by the Sample Manager and Assistant in an area designated by WMI. Once the refuse has been dumped into the toters, the FEL will manage the remainder of the tipped load as it normally would.

The Sample Manager and assistant will then weigh each toter to be sure that the sample of refuse weighs 200 pounds to 250 pounds. In a test conducted on May 7, 2004, it was found that a single 96-gallon toter held approximately 150 pounds of refuse. Therefore, we estimate that, typically, two toters of refuse should contain one sample of waste. After the toters have been weighed, each toter will be marked with the date, Sample number, a Sample Code, the truck number. In addition, each sample will have a Sample Management Form which will be taped to the toters.

After the samples are weighed and labeled, they will be loaded on an R. W. Beck truck and transported to the Greenpoint Marine Transfer Station where they will be unloaded and positioned for sorting.

It is likely that some samples will contain bulky items that do not fit into 96-gallon toters. When this occurs, the bulky items will be manually set aside. The Sample Manager will weigh the item and record the weight and a description of the item on the Sample Management Form. This information will be included when the remainder of the sample is sorted and weighed at the sorting site.

Recyclables Sampling

It is anticipated that the sampling of recyclables will be similar to the sampling of refuse, but this protocol has not been fully developed at this time. A Recyclable Sampling Plan will be completed and submitted to the DSNY before any sorting of recyclables takes place.

Material Categories

Refuse Categories

The list of material categories to be used in the refuse sorting will be available on the first day of sorting.

Recyclables Categories

The list of material categories to be used in the recyclable sorting has not been completed at this time. It will be included with the Recyclables Sampling Plan before any sorting of recyclables takes place.

Field Procedures

Health and Safety Plan

R. W. Beck's current Health and Safety Plan ("HASP") is attached to this document as Attachment 2.

Sorting Procedures

Once the samples of refuse have been transported by the Sample Manager from private transfer stations to the Sorting Site (the Greenpoint Marine Transfer Station), the Site Supervisor will check in each of the samples, being sure that the Sample Management Forms and Sample labels are consistent.

After the Samples have been checked in, each Crew Chief and crew will begin sorting samples. The refuse will be sorted into 87 material categories. When all material has been sorted, the material falling through the ½" screen on the sorting table, called "fines", will be swept up and included as one of the material categories. All sorted materials will then be weighed. All weights will be recorded by the R. W. Beck Crew Chief. The tare weight of the containers will be put into the scale so that only the net weight of the sorted material is recorded. When the weighing of all material in the sample has been completed, the sorted refuse will be placed in a roll-off container and disposed.

The Crew Chief and crew will then begin sorting the next sample. Each crew is expected to sort and weigh an average of 10 samples per day. This average is based on our experience in previous waste characterization studies.

Staffing

The professional staff for the Refuse Sorting of the PWCS will include:

- Tom Jones – Project Manager: Mr. Jones has been with R. W. Beck for the past 16 years and is currently a Senior Director of the firm. His work has included waste characterization studies, solid waste facility financings, and planning/implementation work.
- Tanya Tarnecki – Site Supervisor: Ms. Tarnecki manages several waste management projects for Cascadia Consulting, including data collection and reporting waste characterization projects in King County, Washington, San Bernadino and Orange County, California.
- Brian Scott, E.I.T. – Sample Manager: Mr. Scott, a Project Engineer, applies his engineering knowledge to both mechanical and civil engineering-based projects, with

emphasis on solid waste projects. Mr. Scott has conducted environmental compliance assessments and technical reviews and received waste characterization training in R. W. Beck Georgia Waste Characterization Study.

- John Buri – Sample Manager: Mr. Buri's areas of specialty include rural economic and policy initiatives, human resource management and government information systems. He received waste characterization training in R. W. Beck Georgia Waste Characterization Study.
- Sean Perera, E.I.T. - Crew Chief: Mr. Perera, a Civil/Environmental Engineer, joined R. W. Beck's National Water/Waste Practice in 2000 as a Consulting Engineer. His primary responsibilities include solid waste system design, solid waste management planning, management and consulting services for procurement and construction activities. He has participated in several waste characterization studies as both a Crew Chief and Field Supervisor.
- Rory Tipton, E.I.T.– Crew Chief: Mr. Tipton has more than two years of civil engineering experience working as a project engineer on solid waste projects. He has been responsible for engineering design, documentation, cost estimating, and production coordination for projects of varying size and complexity. He received waste characterization training in R. W. Beck Georgia Waste Characterization Study.
- John Culbertson – Technical Advisor: Mr. Culbertson is a Project Manager in the Environmental Services Group with 11 years of experience in environmental and information management consulting. His specific areas of expertise include solid waste and recycling collection efficiency; waste composition and generation; and solid waste system financial and strategic analysis.
- Deborah McDonough, E.I.T. – Data Manager: Ms. McDonough, an Engineer with R. W. Beck since 2001, is responsible for conducting transmission analyses and specializes in designing software programs, data management applications, and interactive graphical tools for use in projects associated with solid waste composition studies, locational marginal pricing, transmission power flow studies, transmission constraint analysis, and rate analyses. She is also Project Manager of the Georgia State Waste Characterization Study.

The professional staff for the Recyclables Sorting of the PWCS will include:

- Tom Jones – Project Manager: (see above)
- Sean Perera – Site Supervisor (see above)
- Timothy Buwalda – Sample Manager: Mr. Buwalda is a Senior Engineer with more than 13 years of experience, specializing in waste reduction and materials recovery. His background includes comprehensive solid waste management and recycling experience in both municipal and private settings.
- Michael Giampetro, P.E. – Crew Chief: Mr. Giampetro, a Senior Engineer, has been responsible for on-site assignments for both domestic and international projects. His

experience includes workflow planning, material planning, finite element analysis ("FEA"), and combustion turbine performance testing. He received waste characterization training in R. W. Beck Georgia Waste Characterization Study.

- Whitney Rusert – Crew Chief: Ms. Rusert, an Analyst with R. W. Beck, has had recent training on crew chiefing techniques at the Georgia Waste Characterization Study. She has past work experience in specialty plastics. Ms. Rusert is also assisting in several solid waste projects which are currently underway.
- Jon Hoyle – Crew Chief: Mr. Hoyle, an Analyst/Project Manager, has an acute knowledge of accounting, finance, and operations as they pertain to the utility industry. Mr. Hoyle also has a background in information technology and is proficient in data management and manipulation, computer modeling, and information systems management.
- John Culbertson – Technical Advisor: (see above)
- Deborah McDonough – Data Manager: (see above)

Staff Training

The first day of each sorting period will be devoted to staff training. The training for the Refuse Sort will be conducted by John Culbertson, the Technical Advisor and Charlie Scott of Cascadia Consulting. The individuals in charge of training for the recyclables sort have not yet been determined.

Training will include an introduction to the Study, a discussion of health and safety policies and practices, and an explanation of sorting and weighing procedures. The first couple of samples to be sorted will be used as means of teaching material categories, proper sorting technique, and safe practices.

Equipment

The safety equipment for each sorter is described in the HASP. Other equipment being used include:

- Sample acquisition: 96-gallon toters, a battery-operated H&V scale, brooms, shovels, rakes, and trucks with lift gates;
- Sample sorting: A sorting table, bins for sorted materials, a battery-operated H&V scale, hand rakes and small brooms;
- Post-Sort Disposal and Recycling;
- Post-Sort Disposal of Refuse; and
- The DSNY has agreed to provide roll-off containers for disposing of the sorted refuse and to remove the containers when they are full.

Post-Sort Recycling

The DSNY has agreed to provide roll-off containers for disposing of the sorted recyclables and to remove the containers when they are full.

Data Recording and QA/QC

Three types of data developed during the PWCS. The first type will be the Sample Management Form. As each sample is acquired, as described in the Sampling Plan above, information on the borough of origin, route, and truck number, will be recorded on a Sample Management Form filled out by the Sample Manager. The Sample Management Form will include the following information:

- The date on which the sample was acquired;
- The name of the transfer station from which the sample was acquired;
- The name of the Sample Manager and assistant;
- The Sample Number, which is the number of the sample acquired on that day;
- The count of the toters (i.e., 1 of 3);
- The Sample Code, which shows the borough , district, section and route of the truck from which the sample was taken. For example, Manhattan 1, Sec. 12, Rt. 3 indicates that the truck route from which this sample was taken was in Manhattan District 1, Section 1, Route 3;
- The truck number, which will be provided by DSNY when they assign a truck to the selected route;
- The weight of each toter in the sample; and
- The weight and description of any bulky waste items that are part of the sample. These will not be transported to the Sorting Site.

A copy of the Sample Management Form will be affixed to the sample when it is transported from the private transfer station to the Sorting Site. It will remain with the documentation for that sample.

The second type of data will be the material weight data recorded by the Crew Chief when the sorting of each sample is completed. This form, called the Sample Sort Form, will include the net weight of each category of waste that has been sorted and, in the case of some materials, a count of the items in the category (e.g., shoes).

When the sample has been sorted the Crew Chief and the Site Supervisor will review the forms for completeness and accuracy and sign them. At the end of the day, the Crew Chiefs, Site Supervisor, and Project Manager will review all the forms again and note any unusual samples or circumstances that may have affected the data.

The forms will then be faxed to the Data Manager who will have the data entered into an Access database. The Data Manager will check the data for completeness and accuracy. Once this procedure has been completed, the Data Manager will confer with the Project Manager and if they are satisfied that the data for that day of sampling is complete, it will be posted on the project website where the DSNY Project Manager can view the data.

The third type of data will be the results of the moisture and contamination testing that will be conducted by the Woods End Laboratory ("Woods End"). This data will be sent directly from Woods End to the Project Manager and Data Manager. The Data Manager will enter it into the database as it is received. The QA/QC procedure for this data is still being worked out with Woods End. When the procedure is completely defined, a copy of the procedure will be provided to the DSNY Project Manager.

This procedure for recording and checking the data will be reviewed during the PWCS and, if R. W. Beck believes that changes will make the procedures more efficient, without compromising completeness and accuracy, or more accurate and complete, we will recommend these changes to the DSNY.

Appendix B
Refuse Truck Deliveries

Department of Sanitation of New York City
PRELIMINARY WASTE CHARACTERIZATION STUDY
Delivery Schedule: Saturday, May 15th

Date Refuse is Collected	Friday, May 14th
Transfer Station Delivery	Harlem River Yards
Delivery Date	Saturday, May 15th
Delivery Hours	12am to 6am
Borough of Origin	Manhattan
Number of Samples	21

Sample Number	Selected Routes	Truck Number
1	Manhattan 1, Sec. 13, Rt. 1	25CW 542
2	Manhattan 2, Sec. 22, Rt. 1	25CW 143
3	Manhattan 2, Sec. 22, Rt. 2	25CF 258
4	Manhattan 4, Sec. 43, Rt. 1	25CW 169
5	Manhattan 5, Sec. 51, Rt. 1	25CF 161
6	Manhattan 6, Sec. 62, Rt. 1	25CN 565
7	Manhattan 7, Sec. 72, Rt. 1	25CU 128
8	Manhattan 7, Sec. 72, Rt. 3	25CW 175
9	Manhattan 8, Sec. 82, Rt. 4	25CW 162
10	Manhattan 8, Sec. 83, Rt. 1	25CF 038
11	Manhattan 8, Sec. 83, Rt. 3	25CU 097
12	Manhattan 8, Sec. 84, Rt. 2	25CU 152
13	Manhattan 8, Sec. 85, Rt. 1	25CN 823
14	Manhattan 8, Sec. 85, Rt. 2	25CN 085
15	Manhattan 9, Sec. 93, Rt. 1	25CU 095
16	Manhattan 9, Sec. 93, Rt. 2	25CF 092
17	Manhattan 10, Sec. 101, Rt. 2	25CU 130
18	Manhattan 11, Sec. 111, Rt. 4	25CN 052
19	Manhattan 12, Sec. 122, Rt. 1	25CW 041
20	Manhattan 12, Sec. 123, Rt. 1	25CU 166
21	Manhattan 12, Sec. 124, Rt. 4	25CW 312

5/15/2004

Department of Sanitation of New York City
PRELIMINARY WASTE CHARACTERIZATION STUDY
Delivery Schedule: Monday, May 17th

Date Refuse is Collected	Saturday, May 15th
Transfer Station Delivery	Varick Street
Delivery Date	Monday, May 17th
Delivery Hours	12am to 6am
Borough of Origin	Brooklyn
Number of Samples	21

Sample Number	Selected Routes	Truck Number
1	Brooklyn 1, Sec. 11, Rt. 2	25CF-104
2	Brooklyn 1, Sec. 12, Rt. 3	25CW-193
3	Brooklyn 2, Sec. 22, Rt. 1	25CN-712
4	Brooklyn 3, Sec. 31, Rt. 3	25CF-174
5	Brooklyn 3, Sec. 31, Rt. 4	25CW-017
6	Brooklyn 3, Sec. 34, Rt. 1	25CN-649
7	Brooklyn 3, Sec. 35, Rt. 2	25CF-201
8	Brooklyn 4, Sec. 41, Rt. 2	25CN-509
9	Brooklyn 5, Sec. 51, Rt. 1	25CN-309
10	Brooklyn 5, Sec. 54, Rt. 5	25CF-270
11	Brooklyn 7, Sec. 72, Rt. 2	25CN-688
12	Brooklyn 9, Sec. 91, Rt. 1	25CW-074
13	Brooklyn 11, Sec. 111, Rt. 1	25CN-748
14	Brooklyn 11, Sec. 113, Rt. 3	25CU-011
15	Brooklyn 12, Sec. 121, Rt. 2	25CN-403
16	Brooklyn 12, Sec. 122, Rt. 4	25CN-466
17	Brooklyn 13, Sec. 132, Rt. 2	25CN-193
18	Brooklyn 17, Sec. 171, Rt. 2	25CU-107
19	Brooklyn 17, Sec. 172, Rt. 1	25CN-523
20	Brooklyn 18, Sec. 184, Rt. 3	25CW-108
21	Brooklyn 18, Sec. 186, Rt. 4	25CW-065

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Department of Sanitation of New York City
PRELIMINARY WASTE CHARACTERIZATION STUDY
Delivery Schedule: Wednesday, May 19th

Date Refuse is Collected	Tuesday, May 18th
Transfer Station Delivery	Varick Street
Delivery Date	Wednesday, May 19th
Delivery Hours	12am to 6am
Borough of Origin	Brooklyn
Number of Samples	5

Sample Number	Selected Routes	Truck Number
1	Brooklyn 1, Sec. 13, Rt. 5	25 CF 116
2	Brooklyn 6, Sec. 61, Rt. 1	25 CF 114
3	Brooklyn 10, Sec. 102, Rt. 1	25 CU 010
4	Brooklyn 17, Sec. 175, Rt. 2	25 CU 127
5	Brooklyn 18, Sec. 187, Rt. 3	25 CW 022

Department of Sanitation of New York City
PRELIMINARY WASTE CHARACTERIZATION STUDY
Delivery Schedule: Wednesday, May 19th

Date Refuse is Collected	Tuesday, May 18th
Transfer Station Delivery	Harlem River Yards
Delivery Date	Wednesday, May 19th
Delivery Hours	12am to 6am
Borough of Origin	Manhattan
Number of Samples	16

Sample Number	Selected Routes	Truck Number
1	Manhattan 2, Sec. 21, Rt. 2	25 CU 317
2	Manhattan 3, Sec. 33, Rt. 1	25 CW 167
3	Manhattan 3, Sec. 34 Rt. 1	25 CW 160
4	Manhattan 4, Sec. 41, Rt. 1	25 CN 485
5	Manhattan 7, Sec. 73, Rt. 2	25 CW 179
6	Manhattan 7, Sec. 73, Rt. 3	25 CF 135
7	Manhattan 7, Sec. 74, Rt. 1	25 CN 080
8	Manhattan 8, Sec. 81, Rt. 1	25 CN 814
9	Manhattan 8, Sec. 82, Rt. 3	25 CN 415
10	Manhattan 8, Sec. 84, Rt. 2	25 CN 519
11	Manhattan 9, Sec. 91, Rt. 1	25 CU 164
12	Manhattan 10, Sec. 101, Rt. 1	25 CW 098
13	Manhattan 11, Sec. 113, Rt. 2	25 CF 079
14	Manhattan 12, Sec. 121, Rt. 4	25 CU 211
15	Manhattan 12, Sec. 122, Rt. 2	25 CU 080
16	Manhattan 12, Sec. 124, Rt. 1	25 CF 281

Department of Sanitation of New York City
PRELIMINARY WASTE CHARACTERIZATION STUDY
Delivery Schedule: Tuesday, May 18th

Date Refuse is Collected	Tuesday, May 18th
Transfer Station Delivery	Harlem River Yard
Delivery Date	Tuesday, May 18th
Delivery Hours	10am to 6pm
Borough of Origin	Bronx
Number of Samples	13

Sample Number	Selected Routes	Truck Number
1	Bronx 2 Sec. 21, Rt. 1	25 CN 636
2	Bronx 4 Sec. 43, Rt. 2	25 CW 015
3	Bronx 4 Sec. 43, Rt. 3	25 CW 021
4	Bronx 5 Sec. 53, Rt. 2	25 CW 012
5	Bronx 6 Sec. 61, Rt. 3	25 CU 193
6	Bronx 9 Sec. 92, Rt. 1	25 CU 298
7	Bronx 9 Sec. 92, Rt. 2	25 CU 186
8	Bronx 9 Sec. 94, Rt. 3	25 CU 025
9	Bronx 10 Sec. 103, Rt. 1	25 CN 435
10	Bronx 11Sec. 112, Rt. 3	25 CU 291
11	Bronx 11Sec. 113, Rt. 2	25 CU 314
12	Bronx 11Sec. 113, Rt. 3	25 CW 322
13	Bronx 12Sec. 123, Rt. 2	25 CN 746

Department of Sanitation of New York City
PRELIMINARY WASTE CHARACTERIZATION STUDY
Delivery Schedule: Tuesday, May 18th

Date Refuse is Collected	Monday, May 17th
Transfer Station Delivery	Varick Street
Delivery Date	Tuesday, May 18th
Delivery Hours	12am to 6am
Borough of Origin	Brooklyn
Number of Samples	8

Sample Number	Selected Routes	Truck Number
1	Brooklyn 2, Sec. 21, Rt. 2	25 CW 087
2	Brooklyn 2, Sec. 22, Rt. 3	25 CW 128
3	Brooklyn 4, Sec. 41, Rt. 1	25 CN 439
4	Brooklyn 5, Sec. 52, Rt. 5	25 CN 773
5	Brooklyn 8, Sec. 81, Rt. 5	25 CN 714
6	Brooklyn 10, Sec. 104, Rt. 1	25 CU 053
7	Brooklyn 10, Sec. 104, Rt. 2	25 CU 048
8	Brooklyn 11 Sec. 115, Rt. 1	25 CW 215

Department of Sanitation of New York City
PRELIMINARY WASTE CHARACTERIZATION STUDY
Delivery Schedule: Thursday, May 20th

Date Refuse is Collected	Thursday, May 20th
Transfer Station Delivery	Harlem River Yards
Delivery Date	Thursday, May 20th
Delivery Hours	10am to 6pm
Borough of Origin	Bronx
Number of Samples	8

Sample Number	Selected Routes	Truck Number
1	Bronx 1, Sec. 12, Rt. 1	25 CW 025
2	Bronx 1, Sec. 12, Rt. 2	25 CN 725
3	Bronx 5, Sec. 51, Rt. 1	25 CW 023
4	Bronx 6, Sec. 61, Rt. 1	25 CW 006
5	Bronx 6, Sec. 61, Rt. 3	25 CU 193
6	Bronx 7, Sec. 72, Rt. 2	25 CW 325
7	Bronx 8, Sec. 83, Rt. 3	25 CN 742
8	Bronx 12, Sec. 125, Rt. 2	25 CW 139

Department of Sanitation of New York City
PRELIMINARY WASTE CHARACTERIZATION STUDY
Delivery Schedule: Friday, May 21st

Date Refuse is Collected	Thursday, May 20th
Transfer Station Delivery	Varick Street
Delivery Date	Friday, May 21st
Delivery Hours	12am to 6am
Borough of Origin	Brooklyn
Number of Samples	11

Sample Number	Selected Routes	Truck Number
1	Brooklyn 2, Sec. 23, Rt. 2	25 CW 069
2	Brooklyn 4, Sec. 42, Rt. 1	25 CN 592
3	Brooklyn 9, Sec. 91, Rt. 2	25 CU 055
4	Brooklyn 9, Sec. 92 Rt. 3	25 CW 057
5	Brooklyn 11, Sec. 111, Rt. 2	25 CU 264
6	Brooklyn 11, Sec. 113, Rt. 1	25 CN 763
7	Brooklyn 11, Sec. 116, Rt. 2	25 CN 759
8	Brooklyn 12, Sec. 122, Rt. 4	25 CN 533
9	Brooklyn 12, Sec. 123, Rt. 3	25 CU 260
10	Brooklyn 12, Sec. 124, Rt. 3	25 CW 001
11	Brooklyn 16, Sec. 162, Rt. 4	25 CW 053

Department of Sanitation of New York City
PRELIMINARY WASTE CHARACTERIZATION STUDY
Delivery Schedule: Thursday, May 20th

Date Refuse is Collected	Wednesday, May 19th
Transfer Station Delivery	Varick Street
Delivery Date	Thursday, May 20th
Delivery Hours	12am to 6am
Borough of Origin	Brooklyn
Number of Samples	13

Sample Number	Selected Routes	Truck Number
1	Brooklyn 14, Sec. 142, Rt. 3	25 CU 094
2	Brooklyn 14, Sec. 143, Rt. 3	25 CF 248
3	Brooklyn 14, Sec. 144, Rt. 1	25 CN 590
4	Brooklyn 15, Sec. 151 Rt. 2	25 CU 013
5	Brooklyn 15, Sec. 155, Rt. 1	25 CU 005
6	Brooklyn 17, Sec. 173, Rt. 1	25 CN 589
7	Brooklyn 17, Sec. 175, Rt. 1	25 CU 121
8	Brooklyn 18, Sec. 181, Rt. 2	25 CW 050
9	Brooklyn 18, Sec. 181, Rt. 3	25 CN 740
10	Brooklyn 18, Sec. 184, Rt. 1	25 CW 048
11	Brooklyn 18, Sec. 185, Rt. 1	25 CW 096
12	Brooklyn 18, Sec. 186, Rt. 3	25 CW 035
13	Brooklyn 18, Sec. 186, Rt. 4	25 CW 033

Department of Sanitation of New York City
PRELIMINARY WASTE CHARACTERIZATION STUDY
Delivery Schedule: Saturday, May 22nd

Date Refuse is Collected	Friday, May 21st
Transfer Station Delivery	Varick Street
Delivery Date	Saturday, May 22nd
Delivery Hours	12am to 6am
Borough of Origin	Staten Island
Number of Samples	7

Sample Number	Selected Routes	Truck Number
1	Staten Island 1, Sec. 12, Rt. 3	25 CW 131
2	Staten Island 1, Sec. 14, Rt. 2	25 CU 042
3	Staten Island 2, Sec. 23, Rt. 2	25 CN 056
4	Staten Island 2, Sec. 23, Rt. 3	25 CU 096
5	Staten Island 3, Sec. 33, Rt. 2	25 CF 093
6	Staten Island 3, Sec. 38, Rt. 1	25 CW 126
7	Staten Island 3, Sec. 38, Rt. 2	25 CW 142

Department of Sanitation of New York City
PRELIMINARY WASTE CHARACTERIZATION STUDY
Delivery Schedule: Saturday, May 22nd

Date Refuse is Collected	Friday, May 21st
Transfer Station Delivery	Harlem River Yards
Delivery Date	Saturday, May 22nd
Delivery Hours	12am to 6am
Borough of Origin	Queens
Number of Samples	15

Sample Number	Selected Routes	Truck Number
1	Queens 2 Sec. 22, Rt. 2	25 CU 208
2	Queens 6 Sec. 62, Rt. 3	25 CF 055
3	Queens 7 Sec. 72, Rt. 1	25 CW 527
4	Queens 8 Sec. 82, Rt. 5	25 CN 117
5	Queens 8 Sec. 84, Rt. 2	25 CU 133
6	Queens 10 Sec. 102, Rt. 1	25 CW 526
7	Queens 10 Sec. 103, Rt. 4	25 CW 563
8	Queens 12 Sec. 122, Rt. 3	25 CN 121
9	Queens 13 Sec. 132, Rt. 2	25 CU 209
10	Queens 13 Sec. 132, Rt. 4	25 CN 233
11	Queens 13 Sec. 136, Rt. 2	25 CW 517
12	Queens 13 Sec. 138, Rt. 3	25 CW 508
13	Queens 14 Sec. 141, Rt. 4	25 CN 124
14	Queens 14 Sec. 143, Rt. 2	25 CU 304
15	Queens 14 Sec. 143, Rt. 3	25 CU 303

Department of Sanitation of New York City
PRELIMINARY WASTE CHARACTERIZATION STUDY
Delivery Schedule: Friday, May 21st

Date Refuse is Collected	Friday, May 21st
Transfer Station Delivery	Harlem River Yards
Delivery Date	Friday, May 21st
Delivery Hours	10am to 6pm
Borough of Origin	Bronx
Number of Samples	10

Sample Number	Selected Routes	Truck Number
1	Bronx 1, Sec. 11, Rt. 2	25 CN 703
2	Bronx 1, Sec. 11, Rt. 3	25 CN 725
3	Bronx 3, Sec. 31, Rt. 4	25 CN 766
4	Bronx 5, Sec. 52, Rt. 1	25 CW 023
5	Bronx 6, Sec. 62, Rt. 2	25 CU 294
6	Bronx 6, Sec. 62, Rt. 3	25 CU 198
7	Bronx 8, Sec. 82, Rt. 1	25 CN 771
8	Bronx 8, Sec. 83, Rt. 3	25 CN 742
9	Bronx 10, Sec. 101, Rt. 1	25 CW 054
10	Bronx 10, Sec. 102, Rt. 2	25 CW 056

Department of Sanitation of New York City
PRELIMINARY WASTE CHARACTERIZATION STUDY
Delivery Schedule: Monday, May 24th

Date Refuse is Collected	Saturday, May 22nd
Transfer Station Delivery	Varick Street
Delivery Date	Monday, May 24
Delivery Hours	12am to 6am
Borough of Origin	Brooklyn
Number of Samples	7

Sample Number	Selected Routes	Truck Number
1	Brooklyn 1, Sec. 12, Rt. 3	25 CU 078
2	Brooklyn 1, Sec. 14, Rt. 2	25 CW 144
3	Brooklyn 1, Sec. 15, Rt. 4	25 CN 367
4	Brooklyn 4, Sec. 42, Rt. 4	25 NG 409
5	Brooklyn 4, Sec. 43, Rt. 3	25 CW 218
6	Brooklyn 5, Sec. 51, Rt. 1	25 CF 156
7	Brooklyn 5, Sec. 52, Rt. 4	25 CW 156

Department of Sanitation of New York City
PRELIMINARY WASTE CHARACTERIZATION STUDY
Delivery Schedule: Monday, May 24th

Date Refuse is Collected	Saturday, May 22nd
Transfer Station Delivery	Harlem River Yards
Delivery Date	Monday, May 24
Delivery Hours	12am to 6am
Borough of Origin	Queens
Number of Samples	11

Sample Number	Selected Routes	Truck Number
1	Queens 1, Sec. 14, Rt. 1	25 CF 010
2	Queens 2, Sec. 21, Rt. 2	25 CN 215
3	Queens 5, Sec. 55, Rt. 1	25 CF 027
4	Queens 10, Sec. 103, Rt. 1	25 CU 272
5	Queens 10, Sec. 103, Rt. 5	25 CW 563
6	Queens 11, Sec. 116, Rt. 2	25 CN 194
7	Queens 12, Sec. 124, Rt. 3	25 CW 554
8	Queens 12, Sec. 125, Rt. 4	25 CU 256
9	Queens 12, Sec. 126, Rt. 1	25 CN 137
10	Queens 13, Sec. 132, Rt. 1	25 CN 371
11	Queens 13, Sec. 136, Rt. 3	25 CW 508

Department of Sanitation of New York City
PRELIMINARY WASTE CHARACTERIZATION STUDY
Delivery Schedule: Tuesday, May 25th

Date Refuse is Collected	Monday, May 24th
Transfer Station Delivery	Harlem River Yards
Delivery Date	Tuesday, May 25th
Delivery Hours	12am to 6am
Borough of Origin	Queens
Number of Samples	22

Sample Number	Selected Routes	Truck Number
1	Queens 1 Sec. 11, Rt. 1	25 CN 585
2	Queens 1 Sec. 13, Rt. 3	25 RY 114
3	Queens 1 Sec. 13, Rt. 4	25 CN 243
4	Queens 2 Sec. 21, Rt. 3	25 CU 231
5	Queens 3 Sec. 31, Rt. 7	25 CN 318
6	Queens 4 Sec. 41, Rt. 2	25 CF 024
7	Queens 4 Sec. 41, Rt. 3	25 CN 326
8	Queens 7 Sec. 74, Rt. 2	25 CF 177
9	Queens 7 Sec. 76, Rt. 3	25 CW 527
10	Queens 8 Sec. 82, Rt. 6	25 CN 113
11	Queens 8 Sec. 83, Rt. 2	25 CU 212
12	Queens 8 Sec. 84, Rt. 4	25 CN 104
13	Queens 9 Sec. 92, Rt. 1	25 CF 059
14	Queens 9 Sec. 94, Rt. 2	25 CN 364
15	Queens 11 Sec. 113, Rt. 1	25 CU 221
16	Queens 11 Sec. 114, Rt. 2	25 CU 230
17	Queens 12 Sec. 122, Rt. 3	25 CN 216
18	Queens 12 Sec. 125, Rt. 3	25 CU 246
19	Queens 12 Sec. 127, Rt. 3	25 CN 146
20	Queens 13 Sec. 134, Rt. 2	25 CU 292
21	Queens 13 Sec. 135, Rt. 4	25 CW 517
22	Queens 13 Sec. 133, Rt. 5	25 CW 508

Department of Sanitation of New York City
PRELIMINARY WASTE CHARACTERIZATION STUDY
Delivery Schedule: Wednesday, May 26th

Date Refuse is Collected	Tuesday, May 25th
Transfer Station Delivery	Varick Street
Delivery Date	Wednesday, May 26th
Delivery Hours	12am to 6am
Borough of Origin	Staten Island
Number of Samples	10

Sample Number	Selected Routes	Truck Number
1	Staten Island 1, Sec. 11, Rt. 3	25 CN 718
2	Staten Island 1, Sec. 12, Rt. 5	25 CW 131
3	Staten Island 1, Sec. 13, Rt. 3	25 CF 001
4	Staten Island 1, Sec. 13, Rt. 4	25 CN 020
5	Staten Island 2, Sec. 22, Rt. 6	25 CN 038
6	Staten Island 2, Sec. 23, Rt. 4	25 CU 096
7	Staten Island 2, Sec. 24, Rt. 3	25 CU 033
8	Staten Island 3, Sec. 33, Rt. 3	25 CU 129
9	Staten Island 3, Sec. 35, Rt. 1	25 CU 027
10	Staten Island 3, Sec. 36, Rt. 1	25 CW 134

Department of Sanitation of New York City
PRELIMINARY WASTE CHARACTERIZATION STUDY
Delivery Schedule: Wednesday, May 26th

Date Refuse is Collected	Tuesday, May 25th
Transfer Station Delivery	Harlem River Yards
Delivery Date	Wednesday, May 26th
Delivery Hours	12am to 6am
Borough of Origin	Queens
Number of Samples	10

Sample Number	Selected Routes	Truck Number
1	Queens 7, Sec. 74, Rt. 1	25 CF 177
2	Queens 8, Sec. 82, Rt. 3	25 CU 113
3	Queens 8, Sec. 84, Rt. 1	25 CU 204
4	Queens 8, Sec. 84, Rt. 3	25 CU 168
5	Queens 10, Sec. 101, Rt. 1	25 CW 526
6	Queens 10, Sec. 103, Rt. 4	25 CW 563
7	Queens 10, Sec. 104, Rt. 4	25 CU 189
8	Queens 12, Sec. 125, Rt. 2	25 CN 174
9	Queens 13, Sec. 134, Rt. 1	25 CW 508
10	Queens 13, Sec. 136, Rt. 4	25 CW 547

Department of Sanitation of New York City
PRELIMINARY WASTE CHARACTERIZATION STUDY
Delivery Schedule: Thursday, May 26th

Date Refuse is Collected	Wednesday, May 26th
Transfer Station Delivery	Harlem River Yards
Delivery Date	Thursday, May 27th
Delivery Hours	12am to 6am
Borough of Origin	Manhattan
Number of Samples	1

Sample Number	**Selected Routes**	**Truck Number**
1	Manhattan 2, Sec. 22, Rt. 1	25 CW 124

Appendix C
Recycling Truck Deliveries

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

MGP ROUTES

Delivery Schedule Monday, June 7, 2004

Date MGP is Collected	Saturday, June 5, 2004
Vendor for Delivery	Hugo Neu Schnitzer, Long Island City
Delivery Date	Monday, June 7, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Manhattan
Number of Samples	8

SELECTED MGP ROUTES

Sample Number	Borough	District	Section	Route	Truck Number	
1	Manhattan	1	1	1	25 CW 170	
2	Manhattan	1	1	2	25 CU 149	
3	Manhattan	2	1	1	25 CN 549	
4	Manhattan	5	1	1	25 CN 527	
5	Manhattan	8	4	1	25 CF 041	
6	Manhattan	8	5	1	25 CN 821	
7	Manhattan	8	5	3	25 CN 422	
8	Manhattan	12	4	2	25 CF 035	see note 1 on following page

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

PAPER ROUTES

Delivery Schedule Monday, June 7, 2004

Date Paper is Collected	Saturday, June 5, 2004
Vendor for Delivery	Shepherd Avenue (Metropolitan Paper)
Delivery Date	Monday, June 7, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Manhattan
Number of Samples	12

SELECTED PAPER ROUTES

Sample Number	Borough	District	Section	Route	Truck Number	
1	Manhattan	1	1	2	LOST	see note 2 on following page
2	Manhattan	1	1	3	25 CU 067	
3	Manhattan	2	1	1	25 CW 122	
4	Manhattan	2	2	1	25 CW 582	
5	Manhattan	2	2	2	25 CU 117	
6	Manhattan	6	3	2	25 CN 804	
7	Manhattan	6	3	4	25 CN 687	
8	Manhattan	8	4	3	25 CN 053	see note 3 on following page
9	Manhattan	8	5	2	25 CF 267	
10	Manhattan	10	3	1	25 CU 100	
11	Manhattan	12	4	2	25 CW 312	
12	Manhattan	12	4	3	25 CN 046	

NOTES

1. The "Weekly Recycling Summary Sheet" originally listed 3 MGP routes in Manhattan Distric 12, Section 4.
On 6/5/04 BCC informed BWPRR that there were only 2 MGP Routes in that District/Section.
The sample truck for that District has been changed from Section 4, Route 3 to Section 4, Route 2.

2. Truck originally assigned (25 CN-066) accidentally dumped on shift.
There was no replacement truck available from Manhattan 1, Section 1.

3. Original truck assigned to this route 25 CN 102 broke down. Replaced by 25 CN 053, which will deliver a half load for sampling to Shepherd on May 7, 12AM-8AM shift.

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

MGP ROUTES

Delivery Schedule Monday, June 7, 2004

Date MGP is Collected	Saturday, June 5, 2004
Vendor for Delivery	Hugo Neu Schnitzer, Long Island City
Delivery Date	Monday, June 7, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Queens
Number of Samples	5

SELECTED MGP ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Queens West	2	2	1	25 CN 240
2	Queens West	2	3	1	25 CN 278
3	Queens West	3	1	1	25 CN 373
4	Queens West	4	1	1	25 CN 615
5	Queens West	4	3	1	25 CU 060

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

PAPER ROUTES

Delivery Schedule Monday, June 7, 2004

Date Paper is Collected	Saturday, June 5, 2004
Vendor for Delivery	Shepherd Avenue (Metropolitan Paper)
Delivery Date	Monday, June 7, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Queens
Number of Samples	1

SELECTED PAPER ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Queens West	2	2	2	25 CU 223

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

DUAL-BIN ROUTES

Delivery Schedule Monday, June 7, 2004

Date MGP/Paper is Collected	Saturday, June 5, 2004
Vendor for Delivery	Hugo Neu LIC, then Shepherd Avenue (Metropolitan Paper)
Delivery Date	Monday, June 7, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Queens
Number of Samples	4

SELECTED DUAL-BIN ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Queens West	5	3	1	25 CM 014
2	Queens East	7	1	1	25 CM 061
3	Queens East	10	3	1	25 CM065
4	Queens East	12	3	1	25 CM147

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

MGP ROUTES

Delivery Schedule Tuesday, June 8, 2004

Date MGP is Collected	Monday, June 7, 2004
Vendor for Delivery	Hugo Neu Schnitzer, Long Island City
Delivery Date	Tuesday, June 8, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Bronx
Number of Samples	8

SELECTED MGP ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Bronx	4	3	1	25 CU 018
2	Bronx	5	3	2	25 CF 134
3	Bronx	7	3	2	25 CF 203
4	Bronx	8	1	1	25 CU 017
5	Bronx	11	1	2	25 CN 454
6	Bronx	12	1	1	25 CN 329
7	Bronx	12	2	1	25 CN 435
8	Bronx	12	3	1	25 CN 449

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

PAPER ROUTES

Delivery Schedule Tuesday, June 8, 2004

Date Paper is Collected	Monday, June 7, 2004
Vendor for Delivery	Shepherd Avenue (Metropolitan Paper)
Delivery Date	Tuesday, June 8, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Bronx
Number of Samples	4

SELECTED PAPER ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Bronx	5	3	1	25 CU 306
2	Bronx	7	3	1	25 CN 255
3	Bronx	8	1	1	25 CU 079
4	Bronx	11	1	2	25 CF 235

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

MGP ROUTES

Delivery Schedule Tuesday, June 8, 2004

Date MGP is Collected	Monday, June 7, 2004
Vendor for Delivery	Hugo Neu Schnitzer, Long Island City
Delivery Date	Tuesday, June 8, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Queens
Number of Samples	0

SELECTED MGP ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
	NONE				

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

PAPER ROUTES

Delivery Schedule Tuesday, June 8, 2004

Date Paper is Collected	Monday, June 7, 2004
Vendor for Delivery	Shepherd Avenue (Metropolitan Paper)
Delivery Date	Tuesday, June 8, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Queens
Number of Samples	1

SELECTED PAPER ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Queens West	4	2	2	25 CW 164

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

DUAL-BIN ROUTES

Delivery Schedule Tuesday, June 8, 2004

Date MGP/Paper is Collected	Monday, June 7, 2004
Vendor for Delivery	Hugo Neu LIC, then Shepherd Avenue (Metropolitan Paper)
Delivery Date	Tuesday, June 8, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Queens
Number of Samples	12

SELECTED DUAL-BIN ROUTES

Sample Number	Borough	District	Section	Route	Truck Number

1	Queens West	1	3	1	25 CA 001
2	Queens West	5	4	1	25 CM 008
3	Queens East	7	5	1	25 CM 061
4	Queens East	7	8	1	25 CM 073
5	Queens East	8	1	1	25 CM 013
6	Queens East	8	2	1	25 CM 040
7	Queens West	9	3	1	25 CM 091
8	Queens West	9	4	1	25 CM 059
9	Queens East	10	2	1	25 CM 071
10	Queens East	11	1	1	25 BW 018
11	Queens East	13	6	1	25 CM 113
12	Queens East	14	1	2	25 CM 095

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

MGP ROUTES

Delivery Schedule Wednesday, June 9, 2004

Date MGP is Collected	Tuesday, June 8, 2004
Vendor for Delivery	Hugo Neu Schnitzer, Long Island City
Delivery Date	Wednesday, June 9, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Queens
Number of Samples	0

SELECTED MGP ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
	NONE				

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

PAPER ROUTES

Delivery Schedule Wednesday, June 9, 2004

Date Paper is Collected	Tuesday, June 8, 2004
Vendor for Delivery	Shepherd Avenue (Metropolitan Paper)
Delivery Date	Wednesday, June 9, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Queens
Number of Samples	2

SELECTED PAPER ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Queens West	3	3	1	25 CN 809
2	Queens West	4	2	1	25 CN 234

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

DUAL-BIN ROUTES

Delivery Schedule Wednesday, June 9, 2004

Date MGP/Paper is Collected	Tuesday, June 8, 2004
Vendor for Delivery	Hugo Neu LIC, then Shepherd Avenue (Metropolitan Paper)
Delivery Date	Wednesday, June 9, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Queens
Number of Samples	5

SELECTED DUAL-BIN ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Queens West	5	5	2	25 CM 008
2	Queens East	10	1	1	25 CM 071
3	Queens East	12	1	1	25 CM 157
4	Queens East	12	5	1	25 CM 136
5	Queens East	13	6	2	25 CM 132

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

MGP ROUTES

Delivery Schedule Wednesday, June 9, 2004

Date MGP is Collected	Tuesday, June 8, 2004
Vendor for Delivery	Hugo Neu Schnitzer, Long Island City
Delivery Date	Wednesday, June 9, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Brooklyn
Number of Samples	7

SELECTED MGP ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Brooklyn North	5	1	1	25 CW 202
2	Brooklyn North	5	2	1	25 CN 563
3	Brooklyn North	5	2	2	25 CN 535
4	Brooklyn South	6	5	1	25 CN 210
5	Brooklyn North	8	1	1	25 CN 412
6	Brooklyn South	13	1	1	25 CN 416
7	Brooklyn South	13	2	1	25 CN 434

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

PAPER ROUTES

Delivery Schedule Wednesday, June 9, 2004

Date Paper is Collected	Tuesday, June 8, 2004
Vendor for Delivery	Shepherd Avenue (Metropolitan Paper)
Delivery Date	Wednesday, June 9, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Brooklyn
Number of Samples	6

SELECTED PAPER ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Brooklyn North	1	1	1	25 CN 279
2	Brooklyn North	3	2	1	25 CF 247
3	Brooklyn South	7	1	3	25 CN 487
4	Brooklyn North	8	1	1	25 CN 453
5	Brooklyn North	8	1	3	25 CN 528
6	Brooklyn North	8	1	2*	25 CN 557

*note: changed from Route 4 to Route 2

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

DUAL-BIN ROUTES

Delivery Schedule Wednesday, June 9, 2004

Date MGP/Paper is Collected	Tuesday, June 8, 2004
Vendor for Delivery	Hugo Neu LIC, then Shepherd Avenue (Metropolitan Paper)
Delivery Date	Wednesday, June 9, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Brooklyn
Number of Samples	4

SELECTED DUAL-BIN ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Brooklyn South	10	1	1	25 CM 244
2	Brooklyn South	12	2	1	25 CM 055
3	Brooklyn South	15	2	1	25 CM 250
4	Brooklyn South	15	2	2	25 CM 269

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

MGP ROUTES

Delivery Schedule Thursday, June 10, 2004

Date MGP is Collected	Wednesday, June 9, 2004
Vendor for Delivery	Hugo Neu Schnitzer, Long Island City
Delivery Date	Thursday, June 10, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Queens
Number of Samples	4

SELECTED MGP ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Queens West	2	1	1	25 CW 560
2	Queens West	3	3	1	25 CN 632
3	Queens West	3	3	2	25 CF 015
4	Queens West	6	1	3	25 CN 602

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

PAPER ROUTES

Delivery Schedule Thursday, June 10, 2004

Date Paper is Collected	Wednesday, June 9, 2004
Vendor for Delivery	Shepherd Avenue (Metropolitan Paper)
Delivery Date	Thursday, June 10, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Queens
Number of Samples	2

SELECTED PAPER ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Queens West	2	2	1	25 CNG 410
2	Queens West	6	1	3	25 RY 109

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

DUAL-BIN ROUTES

Delivery Schedule Thursday, June 10, 2004

Date MGP/Paper is Collected	Wednesday, June 9, 2004
Vendor for Delivery	Hugo Neu LIC, then Shepherd Avenue (Metropolitan Paper)
Delivery Date	Thursday, June 10, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Queens
Number of Samples	4

SELECTED DUAL-BIN ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Queens West	1	3	1	25 CA 003
2	Queens West	9	3	1	25 CM 080
3	Queens East	11	1	1	25 CM 025
4	Queens East	11	4	1	25 CM 060

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

MGP ROUTES

Delivery Schedule Thursday, June 10, 2004

Date MGP is Collected	Wednesday, June 9, 2004
Vendor for Delivery	Hugo Neu Schnitzer, Long Island City
Delivery Date	Thursday, June 10, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Brooklyn
Number of Samples	4

SELECTED MGP ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Brooklyn North	3	1	1	25 CW 113
2	Brooklyn South	9	3	2	25 CU 268
3	Brooklyn South	13	1	1	25 CU 047
4	Brooklyn South	14	4	1	25 CU 105

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

PAPER ROUTES

Delivery Schedule Thursday, June 10, 2004

Date Paper is Collected	Wednesday, June 9, 2004
Vendor for Delivery	Shepherd Avenue (Metropolitan Paper)
Delivery Date	Thursday, June 10, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Brooklyn
Number of Samples	4

SELECTED PAPER ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Brooklyn North	1	2	1	25 CN 394
2	Brooklyn South	6	5	2	25 CN 616
3	Brooklyn South	13	1	1	25 CU 037
4	Brooklyn South	16	1	2	25 CW 059

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

DUAL-BIN ROUTES

Delivery Schedule Thursday, June 10, 2004

Date MGP/Paper is Collected	Wednesday, June 9, 2004
Vendor for Delivery	Hugo Neu LIC, then Shepherd Avenue (Metropolitan Paper)
Delivery Date	Thursday, June 10, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Brooklyn
Number of Samples	5

SELECTED DUAL-BIN ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Brooklyn South	11	3	1	25 CM 167
2	Brooklyn South	15	2	2	25 CM 238
3	Brooklyn South	17	3	1	25 CM 185
4	Brooklyn South	18	5	2	25 CM 012
5	Brooklyn South	18	7	1	25 CM 184

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

MGP ROUTES

Delivery Schedule Friday, June 11, 2004

Date MGP is Collected	Thursday, June 10, 2004
Vendor for Delivery	Hugo Neu Schnitzer, Long Island City
Delivery Date	Friday, June 11, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Manhattan
Number of Samples	10

SELECTED MGP ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Manhattan	4	3	2	25 CU 173
2	Manhattan	6	1	1	25 CU 167
3	Manhattan	6	2	1	25 CN 802
4	Manhattan	7	4	1	25 CN 508
5	Manhattan	7	4	3	25 CN 517
6	Manhattan	7	3	1	25 CN 488
7	Manhattan	8	2	1	25 CN 422
8	Manhattan	8	2	2	25 CN 075
9	Manhattan	10	1	1	25 CU 200
10	Manhattan	12	1	2	25 CU 080

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

PAPER ROUTES

Delivery Schedule Friday, June 11, 2004

Date Paper is Collected	Thursday, June 10, 2004
Vendor for Delivery	Shepherd Avenue (Metropolitan Paper)
Delivery Date	Friday, June 11, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Manhattan
Number of Samples	12

SELECTED PAPER ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Manhattan	2	3	1	25 CW 570
2	Manhattan	2	3	4	25 CU 117
3	Manhattan	3	4	1	25 CN 469
4	Manhattan	4	3	1	25 CN 012
5	Manhattan	6	1	1	25 CN 601
6	Manhattan	6	1	4	25 CN 808
7	Manhattan	6	2	1	25 CU 035
8	Manhattan	6	2	4	25 CU 145
9	Manhattan	7	3	1	25 CN 807
10	Manhattan	8	1	3	25 CF 041
11	Manhattan	8	2	3	25 CF 267
12	Manhattan	10	1	1	25 CU 100

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

MGP ROUTES

Delivery Schedule Friday, June 11, 2004

Date MGP is Collected	Thursday, June 10, 2004
Vendor for Delivery	Hugo Neu Schnitzer, Long Island City
Delivery Date	Friday, June 11, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Bronx
Number of Samples	6

SELECTED MGP ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Bronx	2	1	2	25 CN 746
2	Bronx	5	2	1	25 CU 321
3	Bronx	7	2	1	25 CN 409
4	Bronx	7	2	2	25 CN 424
5	Bronx	9	2	1	25 CF 077
6	Bronx	9	2	2	25 CU 266

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

PAPER ROUTES

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Delivery Date	Friday, June 11, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Bronx
Number of Samples	4

SELECTED PAPER ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Bronx	8	2	1	26 CU 079
2	Bronx	8	3	1	25 CU 036
3	Bronx	11	3	1	25 CF 235
4	Bronx	12	4	2	25 CN 630

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

DUAL-BIN ROUTES

Delivery Schedule Friday, June 11, 2004

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Vendor for Delivery	Hugo Neu LIC, then Shepherd Avenue (Metropolitan Paper)
Delivery Date	Friday, June 11, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Bronx
Number of Samples	1

SELECTED DUAL-BIN ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Bronx	10	2	1	25 CM 156

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

MGP ROUTES

Delivery Schedule Saturday, June 12 2004

Date MGP is Collected	Friday, June 11, 2004
Vendor for Delivery	Hugo Neu Schnitzer, Long Island City
Delivery Date	Saturday, June 12 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Brooklyn
Number of Samples	8

SELECTED MGP ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Brooklyn North	2	3	1	25 CN 561
2	Brooklyn North	2	3	2	25 CN 494
3	Brooklyn South	7	3	1	25 CU 144
4	Brooklyn South	7	4	2	25 CN 324
5	Brooklyn South	9	1	1	25 CU 192
6	Brooklyn South	9	2	1	25 CU 282
7	Brooklyn South	9	2	2	25 CU 242
8	Brooklyn South	14	1	2	25 CN 308

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

PAPER ROUTES

Delivery Schedule Saturday, June 12 2004

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Vendor for Delivery	Shepherd Avenue (Metropolitan Paper)
Delivery Date	Saturday, June 12 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Brooklyn
Number of Samples	6

SELECTED PAPER ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Brooklyn South	7	4	2	25 CN 487
2	Brooklyn North	8	3	1	25 CN 736
3	Brooklyn South	9	2	1	25 CU 258
4	Brooklyn South	13	2	2	25 CU 054
5	Brooklyn South	14	2	1	25 CN 379
6	Brooklyn South	16	2	1	25 CW 059

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

DUAL-BIN ROUTES

Delivery Schedule Saturday, June 12 2004

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Vendor for Delivery	Hugo Neu LIC, then Shepherd Avenue (Metropolitan Paper)
Delivery Date	Saturday, June 12 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Brooklyn
Number of Samples	1

SELECTED DUAL-BIN ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Brooklyn South	12	1	1	25 CM 055

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

MGP ROUTES

Delivery Schedule Saturday, June 12, 2004

Date MGP is Collected	Friday, June 11, 2004
Vendor for Delivery	Hugo Neu Schnitzer, Long Island City
Delivery Date	Saturday, June 12, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Staten Island
Number of Samples	0

SELECTED MGP ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
	NONE				

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

PAPER ROUTES

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Vendor for Delivery	Shepherd Avenue (Metropolitan Paper)
Delivery Date	Saturday, June 12, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Staten Island
Number of Samples	0

SELECTED PAPER ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
	NONE				

New York City Department of Sanitation
PRELIMINARY WASTE CHARACTERIZATION STUDY

DUAL-BIN ROUTES

Delivery Schedule Saturday, June 12, 2004

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Delivery Date	Saturday, June 12, 2004
Delivery Hours	12AM to 8AM
Borough of Origin	Staten Island
Number of Samples	10

SELECTED DUAL-BIN ROUTES

Sample Number	Borough	District	Section	Route	Truck Number
1	Staten Island	1	3	1	25 CM 266
2	Staten Island	1	3	2	25 CM 254
3	Staten Island	1	4	1	25 CM 231
4	Staten Island*	1	4	3	25 CM 206
5	Staten Island	2	4	1	25 CM 276
6	Staten Island*	2	4	2	25 CM 262
7	Staten Island	3	4	2	25 CM 240
8	Staten Island	3	5	1	25 CM 246
9	Staten Island	3	5	2	25 CM 203
10	Staten Island	3	8	1	25 CM 219

SI District 1, Section 4, Route 3 and SI District 2, Section 4, Route 2
will dump paper at Shepherd Avenue but will dump MGP at its normal site (Jersey City)