NYC Environmental Protection

Rohit T. Aggarwala
Commissioner

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59-17 Junction Blvd.
Flushing, NY 11373

April 29, 2024

Honorable Eric L. Adams
Mayor
The City of New York
City Hall
New York, NY 10007

Re: Local Law Air Reports for Fiscal Year 2023

Dear Mayor Adams:

Attached are the Local Law Air Reports for Fiscal Year 2023 as required by Local Laws 38, 39 as amended by Local Law 73 of 2013, 40, 41, 42 of 2005, 43 of 2010 as amended by Local Law 119 of 2016.

Local Laws 38 through 43 reports document the use of ultra-low sulfur diesel fuel, compliance with biodiesel requirements, as well as best available control technologies to reduce particulate matter and nitrogen oxides in the environment.

Sincerely,

Rohit T. Aggarwala

c. Hon. Adrienne E. Adams, Speaker New York City Council
Hon. Brad Lander, Comptroller
Sheena Wright, First Deputy Mayor
Dawn M. Pinnock, Commissioner DCAS
David Banks, Chancellor, DOE
Jessica Tisch, Commissioner, DSNY
Vilda Vera Mayuga, Commissioner, DCWP
Ydanis Rodriguez, Commissioner, DOT
Susan Donoghue, Commissioner, DPR
Ashwin Vasan, MD, PhD, Commissioner, DOHMH

Local Law 38 Annual Report Fiscal Year 2023

This report details New York City's purchase of fuel-efficient light and medium duty cars (typically, cars and vans respectively). The aim of Local Law 38 of 2005 (LL38) was to achieve a 40% reduction in fuel consumption by Fiscal Year 2023 as compared to baseline fuel efficiency data from Fiscal Year 2005. This drop in fuel consumption was to reduce the amount of greenhouse gas being released and would also improve the city's air quality.

The City, even after meeting the below milestones, is still required to report on the average increase in fuel economy. It is also required to report on the number of total light and medium duty vehicles certified to California LEV II standards that are purchased by the City, with a requirement to purchase Zero Emissions Vehicles. There is no sunset clause on these remaining reporting requirements.

The milestones in LL 38 were as follows:

- October 1, 2005: The City was to complete a fuel economy inventory of all light-duty vehicles purchased by the City during Fiscal Year 2005 and calculate the average fuel economy of these vehicles.

- July 1, 2006: Each light-duty vehicle and medium-duty vehicle that the City purchased was to achieve the highest California LEV II standards. The City was to also achieve a 5% increase in average fuel economy in all light duty vehicles.

- January 1, 2007: The City was to report whether it had complied with the Local Law standard that 80% of the light duty vehicles purchased during the Fiscal Year beginning July 1, 2005 be alternative fuel vehicles.

Following the July 2006 fuel economy milestone, the city was to achieve an increase of 8% in average fuel economy in 2007; 10% in 2008; 12% in 2009; 15% in 2010; 18% in 2012; 20% for fiscal years 2015 through 2018; 20% in FY 2019; 30% in FY 2020; and 35% in FY 2021 and FY 2022; and thereafter 40%.

As of Fiscal Year 2023, the City achieved the mandated 40% increase in fuel economy for light duty vehicles by achieving a 361% reduction. Gasoline usage by light and medium duty vehicles has decreased from 2005, but diesel consumption increased because emergency services make greater use of the gas card program, that uses card services for tracking both retail and in-house stations for diesel fueling. This trend does not represent total fuel use, which combines in-house and gas card (private) fueling. The City

exceeded the legislative goal that 95% of the light and medium vehicle purchases be of the lowest polluting vehicles in their class. It purchased 100% of its fleet in the lowest polluting class. The City made a policy decision to purchase CNGs which are in a lower polluting category than the non-Compressed Natural Gas (CNG) vehicles. However, not all agencies have the capacity for this charging infrastructure.

The answers below describe the status of the City's implementation of the law in FY 2023 and respond to the specific questions posed in the legislation.

1. *What is the total number of light-duty vehicles and medium-duty vehicles purchased by each agency?*

Agency	Light Duty	Medium Duty	Total
Dept. of Sanitation (DSNY)	0	0	0
Dept. of Environmental Protection (DEP)	6	0	6
Dept. of Transportation (DOT)	4	0	4
Dept. of Citywide Administrative Services (DCAS) & Managed by DCAS	67	31	98
Dept. of Parks & Recreation (DPR)	1	1	2
Total	**78**	**32**	**110**

NB: FDNY and PD are exempt from this reporting requirement as they are emergency vehicles. Agencies not listed did not purchase light or medium duty vehicles.

2. *What is the total number of light and medium duty vehicles purchased in each rating category, disaggregated by vehicle model?*
   - *a. The total number of zero emission vehicles (ZEV) purchased;*
   - *b. The total number of advanced technology partial zero emission vehicles (ATPZEV) purchased;*
   - *c. The total number of partial zero emission vehicles (PZEV)/(TZEV) purchased;*
   - *d. The total number of super ultra-low emission vehicles (SULEV) purchased;*
   - *e. The total number of ultra-low emission vehicles (ULEV) purchased; and*
   - *f. The total number of low emission vehicles (LEV) purchased.*

Total ZEV	Total ATPZEV	Total TZEV	Total SULEV	Total ULEV	Total LEV	Vehicle Total
95	0	0	11	4	0	**110**

Note: Please see Attachment A for the breakdown of the above numbers disaggregated by vehicle model. It shows that the vehicles purchased were within the highest fuel efficiency ratings.

3. *How many Alternative Fuel Buses were purchased?*

   Zero buses were purchased by DCAS

4. *What is the percentage of light and medium duty vehicles purchased as the lowest polluting vehicle in each category? Target of 95%.*

Lowest Category	Other	Vehicle Type
55	0	Medium-Size Sedan

9	0	Small-Size Sports Utility
2	2	Mid-Size Sports Utility
29	0	Medium Duty Van
10	2	Light Duty Pick up
1	0	Medium Duty Pick up
Total: 106 * vehicles	**Total: 4 vehicles**	
Total: 100% (see below)		

*As per 24-163.1(b)(2), the city shall not be required to purchase a zero-emission vehicle or advanced technology partial zero emission vehicle in accordance with paragraph one of this subdivision if the only available vehicle or vehicles that achieve such a rating cost greater than fifty percent more than the lowest bid as determined by the applicable procurement process for a vehicle available in the next highest rating category that meets the requirements for the intended use by the city of such vehicle or if, after consultation with the affected agency, the Commissioner determines that the use of such vehicle would be impractical or would unduly hinder the operations of a city agency, or if the commissioner determines that the city lacks the charging and fueling infrastructure to support use of such a vehicle, provided that the next highest rating category that meets the requirements for the intended use by the city of such vehicle shall be selected. Vehicles in this category are shown in the "Other" column.

5. *What is the average fuel economy of light duty vehicle purchases?*

   The average fuel economy is 112.4 miles per gallon. Please see Attachment B for details.

6. *If a vehicle was not purchased in the highest fuel rating category, what was the basis for purchasing a vehicle in the next highest fuel rating category?*

   A waiver is needed from DEP in order to select a vehicle in the next rating category. In FY 2023 DEP issued no waivers as explained in the Footnote above that exempts out a certain percentage of zero emission vehicles.

7. *What is the percentage increase in fuel economy? Target of 35%.*

   The average fuel economy was 112.4 miles per gallon, which achieved the required reduction of 40% by Fiscal Year 2023. The 2005 average fuel economy was 31.1 miles per gallon. Using this number as the baseline, this represents a 361% reduction in miles per gallon from 2005.

8. *What is the estimated amount of fuel consumed by motor vehicle, disaggregated by vehicle type?*

   The chart below is based on the Gas Card System, which shows an increase in consumption of diesel since 2005. The increase in diesel use is because emergency services make greater use of the gas card program for diesel fueling light and medium duty vehicles). There has been a decrease in gasoline consumption across the entire city fleet (light and medium duty vehicles) since 2005.

2005 Gallons of Diesel	2023 Gallons of Diesel
337,554	1,037,928

2005 Gallons of Gasoline	2023 Gallons of Gasoline
2,828,217	2,076,073

9. *What is the estimated total amount of equivalent carbon dioxide emitted for each type of fuel consumed by motor vehicles, disaggregated by fuel type?*

CO_2 Calculations for Local Law 38 Fiscal Year 2023		
Year	**2005**	**2023**
Gasoline Consumed (gal)	2,828,217	2,014,556
CO_2 emissions (lbs.)	54,867,410	39,082,386.4
Diesel Consumed (gal)	337,554	989,042
CO_2 emissions (lbs.)	7,493,699	21,956,732.4
Total CO_2 Emissions (lbs.)	**62,361,109**	**61,039,118.8**
Reduction (lbs.)	**NA**	**101,443,495**
Reduction (%)	**NA**	**1.63%**

Attachment A

Emissions Ratings on City Requirements Contracts for Fiscal Year 2023

Vehicle Type	ZEV	TZEV	APTZEV	SULEV	ULEV	LEV
Light Duty Vehicles						
Medium Sedan						
Chevrolet Bolt Crossover	39					
Ford Mustang Mach E Crossover	12					
Ford Mustang Mach E-GT	3					
Toyota Prius Prime	1					
Small-Size Sport Utility Vehicles						
Mitsubishi Outlander Plug-in				9		
Mid-Size Sports Utility Vehicles						
Chevrolet Suburban					2	
Toyota Highlander Hybrid				2		
Medium Duty Vans						
Ford E Transit	29					
Light Duty Pick Up						
Ford F 150 Lightning	8					
Ford F 150 Hybrid					2	
Ford F 150 Lightning Extended Battery	2					
Medium Duty Pick Up						
Ford F-250	1					

* As per 24-163.1(b)(2), The city shall not be required to purchase a zero-emission vehicle or advanced technology partial zero-emission vehicle in accordance with paragraph one of this subdivision if the only available vehicle or vehicles that achieve such a rating cost greater than fifty percent more than the lowest bid as determined by the applicable procurement process for a vehicle available in the next highest rating category that meets the requirements for the intended use by the city of such vehicle or if, after consultation with the affected agency, the Commissioner determines that the use of such vehicle would be impractical or would unduly hinder the operations of a city agency, or if the commissioner determines that the city lacks the charging and fueling infrastructure to support use of such a vehicle, provided that the next highest rating category that meets the requirements for the intended use by the city of such vehicle shall be selected.

Emission Ratings
(As defined by the California Air Resources Board)
www.driveclean.ca.gov

ZEV: Zero Emission Vehicles
ZEVs have zero tailpipe emissions and are 98% cleaner than the average new model year vehicle. These include battery electric vehicles and hydrogen fuel cell vehicles.

TZEV: Transitional Zero Emission Vehicle
TZEV is the new terminology for Enhanced Advanced Technology Partial Zero Emission Vehicle and meet the same requirements of an enhance At PZEV and have additional "ZEV-like" characteristics. A dedicated compressed natural gas vehicle or a hybrid vehicle with engine emissions that meet the PZEV standards.

AT PZEV: Advanced Technology PZEVs
AT PZEVs meet the PZEV requirements and have additional "ZEV-like" characteristics. A dedicated compressed natural gas vehicle or a hybrid vehicle with engine emissions that meet the PZEV standards would be an AT PZEV.

SULEV: Super Ultra Low Emission Vehicle
SULEVs are 90% cleaner than the average new model year car.

ULEV: Ultra Low Emission Vehicles
ULEVs are 50% cleaner than the average new model year car.

LEV: Low Emission Vehicle
Minimum rating that will meet California Air Resources Board standards.

Attachment B

CITYWIDE LIGHT DUTY VEHICLE PURCHASES FISCAL YEAR 2023 CALCULATION OF AVERAGE CITY MILEAGE AS REQUIRED FOR LOCAL LAW 38 REPORTING				
VEHICLE TYPE	**NUMBER PROCURED IN FY'23**	**FUEL TYPE**	**EPA MPG CITY**	**WEIGHTED FACTOR (COL. B x COL. C)**
CHEVROLET BOLT	670	ELECTRIC	131	87,770
CHEVROLET SUBURBAN	2	GAS	15	30
FORD F150 HYBRID	18	ELECTRIC/GAS	25	450
FORD F150 LIGHTNING	143	ELECTRIC	76	10,868
FORD MUSTANG MACH-E	92	ELECTRIC	99	9,108
FORD MUSTANG MACH-E GT	45	ELECTRIC	90	4,050
MITSUBISHI OUTLANDER PLUG-IN HYBRID	75	ELECTRIC/GAS	64	4,800
TOYOTA HIGHLANDER HYBRID	2	ELECTRIC/GAS	36	72
TOTOTA PRIUS PRIME	24	ELECTRIC/GAS	133	3,192
GRAND TOTALS	**1,071**			**120,340**
AVERAGE CITY MILEAGE FOR LIGHT DUTY VEHICLES PURCHASED IN FY'23				**112.4**

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Local Law 39/Local Law 73 Annual Report Fiscal Year 2023

Local Law 39 (LL39) requires all City owned and operated diesel-powered vehicles greater than 8,500 lbs., such as garbage collection trucks and DEP's truck fleet, to use ultra-low sulfur diesel (ULSD) to reduce pollutants. In order to lower the emission of harmful pollutants into the environment, these vehicles also must install emission reduction devices.

All on-road diesel vehicles are powered by Ultra Low Sulfur Diesel Fuel ("ULSD"). Since the passage of LL39, the EPA has required ULSD to be sold nationwide for the on-road fleet. The City Council passed Local law 73 of 2013 (LL73) to further strengthen the requirement that the City fleet is using the cleanest vehicles. This law requires that as of January 1, 2017, 90% of on-road vehicles be equipped with Diesel Particulate filters. The City met this mandate by achieving a 97.7% compliance rate, as shown in the Table for Q1 under the heading 'Percent of all Non-Emergency Vehicles in compliance.'

The answers below describe the status of the City's implementation of the law and respond to the specific questions set forth in Section 24-163.4 (g)(1) of the Administrative Code.

1. *What is the total number of diesel fuel powered motor vehicles owned or operated by each City agency? (Ad. Code 24-163.4(g)(1)(i))*

   Please see table below for each City agency under the column 'All Non-Emergency Diesel Vehicles'. There are in total 6,920 non-emergency vehicles owned or operated by the City in FY 2023. Diesel Particulate Filters are referenced in the table as "DPFs."

AGENCY	TOTAL NUMBER OF PRE 2007 NON-EMERGENCY DIESEL VEHICLES WITHOUT DPFs or MISSING DATA (1)	TOTAL NUMBER OF PRE 2007 NON EMERGENCY DIESEL VEHICLES RETROFITTED WITH DPFs	TOTAL NUMBER OF PRE 2007 NON EMERGENCY DIESEL VEHICLES LISTED FOR SALVAGE	IN PROGRESS OF INSTALLATION BY DCAS	TOTAL NUMBER OF PRE 2007 NON EMERGENCY DIESEL VEHICLES	TOTAL NUMBER OF 2007 AND LATER NON EMERGENCY DIESEL VEHICLES	ALL NON EMERGENCY DIESEL VEHICLES	PERCENT of All NON EMERGENCY DIESEL VEHICLES IN COMPLIANCE (2)
DCAS/ DCAS CLIENTS	1	12	0	3	16	142	158	99.3%
DEP	10	28	7	0	45	533	578	98.27%
DOT	76	53	1	0	130	1346	1476	94.85%
PARKS	3	0	1	0	4	714	718	99.58%
DSNY	64	7	0	0	71	3900	3971	98.39%
DOHMH	0	1	0	0	1	18	19	100.00%
TOTAL	**154**	**101**	**9**	**3**	**267**	**6653**	**6920**	**97.77%**
'(1) This column includes the 133 Diesel Vehicles that have a Diesel Oxidation Catalyst (DOC) installed. While LL73 calls for the tracking of DPF compliance, the reduction in diesel pollutants by using these devices should be noted.								
'(2) Compliance includes units with retrofit DPFs, units purchased 2007 or later and governed by federal law on DPFs, units currently scheduled for salvage and units currently being retrofitted by DCAS.								

2. *What is the number of such diesel fuel powered motor vehicles that used best available retrofit technology (BART) to reduce the emission of pollutants, including a breakdown by vehicle model and the type of technology used for each vehicle? (Ad. Code 24-163.4(g)(1)(iii))*

   There are 101 vehicles that used BART. Refer to the table above for Q1 for the total under the column 'Total Number of Pre 2007 Non-Emergency Diesel Vehicles Retrofitted with DPFs'.

The Table below shows a sample breakdown by vehicle model, type, and technology.

Agency & Vehicle	BART Manufacturer	BART Type
DSNY Collection Truck	Clearie	Diesel Particulate Filter (DPF)

DSNY Collection Truck	Fleetguard	DPF
DSNY Mechanical Truck	Engine Control Systems	DPF
DPR 16 Yard Dump	OEM	DPF
DOT Utility Truck	ESW Thermacat	DPF
DOT Mack Dump Truck	Clearie	DPF
DOT Collection Truck	Engine Control Systems	DPF
DEP Mack CV713	Clearie	DPF
DEP Freightliner FL 70	HUG	DPF
DEP Sterling Acterra	HUG	DPF
DEP CAT L9500	Engine Control Systems	DPF
DEP Heavy Duty	ESW ThermaCat	DPF

Note: For a complete list of diesel equipment, engine details, and agency-specific vehicle counts, please contact DEP.

3. What is the number of such diesel fuel powered motor vehicles that used other authorized technology in accordance with this section, including a breakdown by vehicle model and the type of technology used for each vehicle? (Ad. Code 24-163.4(g)(1)(iv))

133 vehicles used a Diesel Oxidation Catalyst per FN 1 in the Chart for the Response to Question 1.

The table below shows a sample breakdown by vehicle model, type, and technology that used a DOC.

Agency & Vehicle	BART Manufacturer	BART Type
DPR 16 Yard Packer	Donaldson	Diesel Oxidation Catalyst (DOC)
DOT Dump Truck Crew Cab	Nelson	DOC
DOT International 4700 LP	Cummings	DOC w/o CCV(technological concerns)

Note: For a complete list of vehicles and engine details, and agency-specific vehicle counts, please contact DEP.

4. What were the number of such motor vehicles equipped with the applicable 2007 EPA standard for particulate matter as set forth in §86.007-11 of title 40 of the CFR? (24-163.4(g)(1)(v))

6,653

Refer to Table above for Q.1 under the column 'Total Number of 2007 and Later Non-Emergency Vehicles.

5. Were any findings made or waivers issued pursuant to §24-163.4(g)(1)(vii)?[1]

No waivers were issued.

[1]These waivers are granted for vehicles that do not use ultra-low sulfur diesel fuel. These waivers were contemplated during the enactment of this legislation, as it was uncertain a sufficient supply of vehicles that run on ULSDF would be available.

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Local Law 40 Annual Report Fiscal Year 2023

Local Law 40 (LL40) requires all contractors managing the City's solid waste disposal program or recycling program for the Department of Sanitation to use ultra-low sulfur diesel fuel (ULSD). It also requires these vehicles to be equipped with emissions reduction technology to reduce the pollutants their vehicles emit into the environment.

As of Fiscal Year 2023, all contractor vehicles were in compliance with this legislation.

Below are answers to the questions posed in the legislation describing the City's status in achieving these milestones. The data for these questions was provided from the Department of Sanitation and their contractors.

1. *What is the total number of diesel fuel-powered motor vehicles and diesel-powered off-road vehicles, respectively, used in the performance of solid waste contracts or recyclable materials contracts? (Ad. Code 24-163.5(j)(1)(i))*

   There was total of seventy-nine vehicles used for these contracts and all of these vehicles are diesel fuel-powered on road and off-road vehicles.

Action Environmental Systems / Interstate Waste						
Total No.	**Company No.**	**Type of Vehicle**	**Make**	**Model**	**Year**	**EPA Certified Engine/BART**
1	1	Loader	CAT	980M	2017	Tier 4
2	2	Excavator	CAT	336GC	2019	Tier 4
3	3	Loader	CAT	906M	2021	Tier 4
4	4	Loader	CAT	966M	2021	Tier 4
5	5	Excavator	CAT	336CGI	2021	Tier 4
6	6	Excavator	CAT	336CGI	2022	Tier 4
7	1	Loader	CAT	938M	2017	Tier 4
8	2	Excavator	CAT	321DP	2014	Tier 4
9	3	Excavator	CAT	320L	2018	Tier 4
American Recycling Management, LLC.						
Total No.	**Company No.**	**Type of Vehicle**	**Make**	**Model**	**Year**	**EPA Certified Engine/BART**
10	1	Front Loader	Komatsu	WA-500-8	2017	Tier 4
11	2	Excavator	Komatsu	PC-210LC-11	2020	Tier 4
12	3	Excavator	Sennebogen	818-R-HD	2018	Tier 4
13	4	Front Loader	Komatsu	WA-500-8	2018	Tier 4

Covanta Sustainable Solutions LLP						
Total No.	**Company No.**	**Type of Vehicle**	**Make**	**Model**	**Year**	**EPA Certified Engine/BART**
14	1	Skidsteer	Bobcat	S550	2015	Tier 4
15	2	Skidsteer	Bobcat	S550	2014	Tier 4
Pratt Industries						
Total No.	**Company No.**	**Type of Vehicle**	**Make**	**Model**	**Year**	**EPA Certified Engine/BART**
16	1	Loader	Komatsu	WA-320-8	2022	Tier 4
17	2	Loader	Komatsu	WA-380-7	2012	Tier 4
Regal Recycling Co.						
Total No.	**Company No.**	**Type of Vehicle**	**Make**	**Model**	**Year**	**EPA Certified Engine/BART**
18	1	CAT	CAT	320E	2013	Tier 4
19	2	CAT	CAT	950GC	2022	Tier 4
Republic Services (Allied Waste Systems)						
Total No.	**Company No.**	**Type of Vehicle**	**Make**	**Model**	**Year**	**EPA Certified Engine/BART**
20	1	Top Pick	Taylor	XRS-9972	2016	Tier 4
21	2	Wheel Loader	Caterpillar	903C	2015	Tier 4
22	3	Switcher	Ottawa	4x2	2019	Tier 4
23	4	Switcher	Ottawa	4x2	2007	Tier 4
24	5	Switcher	Ottawa	4x2	2007	Tier 4
25	6	Mech Boom	Isuzu	Badger T4	2019	Tier 4
26	7	Loader	Hyster	RS46-33CH	2020	Tier 4
Sims Municipal Recycling of New York LLC						
Total No.	**Company No.**	**Type of Vehicle**	**Make**	**Model**	**Year**	**EPA Certified Engine/BART**
27	1	Loader	Volvo	L150G	2013	Tier 4
28	2	Loader	Volvo	L150H	2020	Tier 4
29	3	Material Handler	Sennebogen	840E	2021	Tier 4
30	4	Material Handler	Sennebogen	840E	2021	Tier 4

Sims Municipal Recycling of New York LLC						
Total No.	**Company No.**	**Type of Vehicle**	**Make**	**Model**	**Year**	**EPA Certified Engine/BART**
31	5	Loader	Komatsu	WA470-SHL	2019	Tier 4
32	6	Material Handler	Sennebogen	835ME	2018	Tier 4
33	7	Loader	Volvo	L150H	2023	Tier 4
34	8	Material Handler	Sennebogen	840	2023	Tier 4
Tully Environmental Inc.						
Total No.	**Company No.**	**Type of Vehicle**	**Make**	**Model**	**Year**	**EPA Certified Engine/BART**
35	3	Waste Handler	Komatsu	WA-470-8	2017	Tier 4
36	4	Waste Handler	Komatsu	WA-470-8	2022	Tier 4
Waste Connections Inc						
Total No.	**Company No.**	**Type of Vehicle**	**Make**	**Model**	**Year**	**EPA Certified Engine/BART**
37	1	Front Loader	CAT	962G	2002	Tier 4
38	2	Front Loader	CAT	966H	2008	Tier 4
39	3	Skidsteer	CAT	262D	2016	Tier 4
40	1	Front Loader	CAT	962G	1997	Tier 4
41	2	Front Loader	CAT	966H	2010	Tier 4
42	3	Front Loader	CAT	966H	2010	Tier 4
43	4	Skidsteer	CAT	262D	2016	Tier 4
Waste Management of NY LLC						
Total No.	**Company No.**	**Type of Vehicle**	**Make**	**Model**	**Year**	**EPA Certified Engine/BART**
44	1	Wheel Loader	Volvo	L 70H	2016	Tier 4
45	2	Wheel Loader	Volvo	L 180H	2016	Tier 4
46	3	Wheel Loader	Volvo	L 70H	2015	Tier 4
47	4	Wheel Loader	Volvo	L 180H	2022	Tier 4
48	5	Excavator	Volvo	EC300	2023	Tier 4
49	6	Excavator	Volvo	EC300	2018	Tier 4
50	7	Reach Stacker	Taylor	TL9972	2020	Tier 4

Waste Management of NY LLC						
Total No.	**Company No.**	**Type of Vehicle**	**Make**	**Model**	**Year**	**EPA Certified Engine/BART**
52	9	Rail Switcher	Shuttle Wagon	NVX 6030	2020	Tier 4
53	10	Rail Switcher	Shuttle Wagon	NVX 6030	2020	Tier 4
54	1	Wheel Loader	Volvo	L 180H	2016	Tier 4
55	2	Wheel Loader	Volvo	L 180H	2022	Tier 4
56	3	Excavator	Volvo	EC 250 EL	2017	Tier 4
57	1	Wheel Loader	Volvo	L 180H	2020	Tier 4
58	2	Wheel Loader	Volvo	L 180H	2022	Tier 4
59	3	Excavator	Volvo	EC300	2015	Tier 4
60	4	Excavator	Volvo	EC300	2021	Tier 4
61	5	Wheel Loader	Volvo	L 700H	2020	Tier 4
62	6	Wheel Loader	Volvo	L 120H	2018	Tier 4
63	7	Wheel Loader	Volvo	L 120H	2022	Tier 4
64	8	Container Handler	Taylor	TLX330S	2018	Tier 4
65	9	Container Handler	Taylor	9972	2017	Tier 4
66	10	Rail Switcher	Shuttle Wagon	SWX 525	2020	Tier 4
67	11	Rail Switcher	Shuttle Wagon	SWX	2020	Tier 4
68	1	Wheel Loader	Volvo	L 180H	2019	Tier 4
69	2	Wheel Loader	Volvo	L 60H	2018	Tier 4
70	3	Excavator	Volvo	EC300	2018	Tier 4
71	4	Excavator	Volvo	EC300	2016	Tier 4
72	5	Compactor	CAT	826K	2018	Tier 4
73	6	Wheel Loader	Volvo	L 180H	2017	Tier 4
74	7	Wheel Loader	Volvo	L 180H	2018	Tier 4
75	8	Wheel Loader	Volvo	L 90H	2019	Tier 4
76	9	Compactor	CAT	826K	2022	Tier 4
77	10	Wheel Loader	Volvo	L 180H	2019	Tier 4
78	11	Rail Switcher	Shuttle Wagon	NVX8040	2020	Tier 4
79	1	Rail Switcher	Shuttle Wagon	NVX8040	2020	Tier 4

2. *What is the number of such vehicles that were powered by ultra-low sulfur diesel fuel (ULSDF)? (Ad. Code 24-163.5(j)(1)(ii))*

   All seventy-nine vehicles used for these contracts were powered by ULSDF.

3. *What is the number of such vehicles that used the best available retrofit technology (BART), including a breakdown of such vehicles by model, engine year, and technology? (Ad. Code 24-163.5(j)(1)(iii))*

   The above chart shows that out of the seventy-nine vehicles, seven of these vehicles used Classification Level IV Diesel Particulate Filters *(BART)*. Seventy-two vehicles are equipped with OEM Tier IV EPA Certified Engines.

4. *What is the number of such vehicles that used other authorized technology? (Ad. Code 24-163.5(j)(1)(iv))*

   No technology, other than those presented above, were used.

5. *What is the number of vehicles equipped with an engine certified to the applicable 2007 EPA standard for particulate matter as set forth in section 86.007-11 of title 40 of the Code of Federal Regulations (CFR)? (Ad. Code 24-163.5(j)(1)(v))*

   There are seventy-two vehicles certified to comply with section 86.007-11 of Title 40 of the CFR, as they are model engine year 2007 or later.

6. *What were the locations where such vehicles were used? (Ad. Code 24-163.5(j)(1)(vi))*

   The locations were as follows:

1). Action Environmental Systems, LLC
920 E. 132nd Street
Bronx, NY 10454

2). Action Environmental Systems, LLC
941 Stanley Avenue
Brooklyn, NY 11237

3). American Recycling Management, LLC
172-33 Douglas Ave
Jamaica, NY 11433

4). Covanta Sustainable Solutions LLP
445 South Street
Morristown, NJ 07960

5). Pratt Industries
4435 Victory Blvd
Staten Island, NY 10314

8). Sims Municipal Recycling of New York LLC
472 2nd Ave
Brooklyn, NY 11232

9). Tully Environmental Inc
127-50 Northern Blvd
Flushing, NY 11368

10). Waste Connections Inc.
577 Court Street
Brooklyn, NY 11231

11). Waste Management of NY LLC
38-22 Review Avenue
Long Island City, NY 11101

12). Waste Management of NY LLC
475 Scott Ave
Brooklyn, NY 11222

6). Regal Recycling Company
176-06 Douglas Avenue
Jamaica, NY 11433

7). Republic Services (Allied Waste Systems
600 West Service Road
Staten Island, NY 10314

13). Waste Management of NY LLC
221 Varick Street
Brooklyn, NY 11237

14). Waste Management of NY LLC
98 Lincoln Ave
Bronx, NY 10474

7. *What waivers were issued for ULSDF (Ad Code 24-163.5(j)(1)(vii))*

There were no waivers issued.

8. *What waivers were issued for the use of other authorized technology in lieu of the best available technology (Ad. Code 24-163.5(j)(1)(viii))*

There were no waivers issued because Local Law 74 of 2013 states that, *the Commissioner shall not renew any waiver issued pursuant to this subdivision after January 1, 2014.*

Local Law 73 of 2013 states, as of January 1, 2017, all diesel fuel-powered motor vehicles used in the performance of such contract shall utilize the best available retrofit technology that meets the level 4 emission control strategy or be equipped with an engine certified to the applicable 2007 on-road and 2010 off-road United States Environmental Protection Agency standard. Therefore, contractors had to replace their older vehicles with newer ones that comply with current EPA standards.

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Local Law 41 Annual Report Fiscal Year 2023

Local Law 41 (LL41) requires all City-licensed sightseeing diesel buses to use Ultra Low Sulfur Diesel (ULSD) to reduce pollutants. In addition, to lower the emission of harmful pollutants intothe environment, these vehicles must install emission reduction devices (BART).

As of Fiscal Year 2023, 100% of the required vehicles are complying by use of classification level 4 (BART) or equipped with 2007 or newer certified engines. Also, all diesel vehicles are powered by ULSD (since the passage of LL41, the EPA has required ULSD to be sold nationwide).

LL41 codified at Section 24-163.6 (g) (1) of the Administrative Code, sets forth seven questions to be answered in the Annual Report. The questions and the charts below summarize those responses from Sightseeing Bus Companies and City Agencies.

1. What is the total number of diesel fuel-powered sightseeing buses licensed pursuant to Subchapter 21 of Chapter 2 of title 20 of the Administrative Code? (Ad. Code 24-163.6(g) (1)(i))

There are Ninety-Eight sightseeing buses licensed pursuant to S*ubchapter 21 of Chapter 2 of Title 20 of the Administrative Code. (Ad. Code 24-163.6(g) (1) (i))* in which Ninety-Eight buses are equipped withdiesel engines.

2. What is the number of such buses that utilized the best available retrofit technology? (24-163.6(g) (1) (ii))

Twenty-Six vehicles utilize BART (See table below)

Sight Seeing BusCompany	Number Licensed by DCA	Number with OEM	Number with BART	Type of Technology
Go New York Tours Inc.	48	41	7	There are Seven CDTI Active Electrical Regeneration units and Forty-One are certified 2009-2014 model year engines (Equipped with OEM Installed Technology).
Taxi Tours D.B.A. Big Bus Tours NYC	40	25	15	There are Twelve Classification Level IV CDTI (DPF)'s and Three Cummins (DPF)'s. Twenty-five are certified 2012, 2013, 2014 and 2015 model year engines (Equipped with OEM Installed Technology).

Sight Seeing BusCompany	Number Licensed by DCA	Number with OEM	Number with BART	Type of Technology
Experience the Ride Inc (Durama Tours Inc.)	3	3	0	There are Three bus certified model year engines (Equipped with OEM Installed Technology).
Gray Line New York Tours Inc.	1	0	1	There is One Classification Level IV JM CRTDM (DPF)'s.
Aurora Tourism Services LLC	3	0	3	There is Three Classification level IV BART.
USA Guided Tours NY LLC.	3	3	0	There are Three 2015, 2016 and 2017 model year engines (Equipped with OEM Installed Technology).

* Pursuant to EPA regulations, all 2007 and later model engine years are certified to be at least or more stringent as "BART" requirements because the manufacturer (OEM) pre-retrofits the majority with DPFs. These are EPA Certified engines, and therefore, meet LL41 requirements.

2007 and newer engines meet applicable United States Environmental Protection Agency (EPA) standards for Particulate Matter (PM) as set forth in S*ection 86.007-11 of Title 40* of the Code of Federal Regulations. (2010 or newer Certified Engines gives NOx benefit in addition to PM).

According to Local Laws 73 and 74 of the City of New York for the year 2013, Diesel Particulate Filters shall be required. As all the sightseeing buses have DPFs, no waivers were required and therefore the buses all meet level 4emission control strategies.

3. What is the number of such buses that utilized other authorized technology? (24- 163.6(g)(1)(iii)?

Not applicable. All were either Level IV (DPF's) / BART or equipped with 2007 or newer model year engine/OEM Technology.

4. What is the number of such buses that are equipped with engines certified to the applicable 2007 USEPA standard for Particulate Matter as set forth in §86.007-11 of Title 40 of the CFR? (24-163.4(g)(1)(iv)

There are Seventy-Two such buses out of the Ninety-Eight that are certified to the applicable 2007 USEPA standard, the other Twenty-Six buses are equipped with level 4 BART (DPF).

5. What were the locations where such buses utilized the best available retrofit technology? (24-163.6(g)(1)(v))

These buses tour all of New York City, and as a result, this report provides the permanent addressesfor the sightseeing companies.

Sight Seeing Bus Co.	Permanent Address	Mailing Address
Go New York Tours Inc.	74 Onderdonk Avenue Ridgewood, NY 11385	2 E 42nd Street New York, NY 10017
Big Bus Tours NYC / Taxi Tours Inc.	723 7th Avenue 5th Floor New York, NY 10019	Same
Experience the Ride Inc (Durama Tours Inc.)	545 8th Avenue Suite 14S New York, NY 11108	Same
Gray Line New York Tours Inc.	43 2nd Avenue Brooklyn, NY 11215	1430 Broadway New York, NY 10018
Aurora Tourism Services LLC.	25 Broadway New York, NY 10004	Same
USA Guided Tours NY LLC.	1325 Avenue of the Americas New York, NY 10019	Same

6. What was the age of the engine that did not utilize BART? (§ 24-163.6(g)(l)(vi))?

All were equipped with BART classification Level 4 device or were certified to 2007 and later model year engines, which are exempt from BART pursuant to 40 C.F.R. § 86.007-11.

7. Were any waivers issued for failure to use BART? (§24-163.6(g) (1)(vii))?

No waivers were issued.

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Local Law 42 Annual Report Fiscal Year 2023

§24-163.7 of NYC Administrative Code required that by September 1, 2006, certain General Education (GE) diesel fuel-powered school buses be powered by a specific diesel fuel, ultra-low sulfur diesel fuel (ULSD). In addition, §24-163.7 required that by September 1, 2007, all theseschool buses use best available retrofit technology (BART) to reduce emissions.

Finally, §24-163.7 requires the DOE to submit a report each year regarding the use of ultra-low sulfur diesel fuel and the use of the best available retrofit technology by school buses during the immediately preceding fiscal year and answering the specific questions below.

Of NYC DOE's contracted GE diesel fueled fleet, 99 % of the vehicles are using emission control devices. There are currently Eight active or spare vehicles that require retrofitting. DOE continues its ongoing work with the vendors to complete these retrofits.

Below are answers to the specific questions posed in Ad. Code 24-163.7(j)(1):

1. *What is the total number of school buses used to fulfill the requirements of school bus contracts? (Ad. Code 24-163.7(j)(1)(i))*

   There is a fleet of 1,740 diesel powered Type C and D, general education school buses used to fulfill the requirements. (In total, there are currently 9,447 active or spare vehicles listed by vendors in OPT's system.)

2. *What is the total number of such buses that were powered by ULSD? (Ad. Code 24.163.7 (j)(1)(ii))*

   As of December 1, 2010, all highway diesel fuel nationwide has been ULSD. All the buses reported are powered by ULSD.

3. *What is the number of such buses that used BART, including a breakdown by vehicle model, engine year, and the type of technology used for each vehicle? (Ad. Code 24.163.7(j)(1)(iii))*

122 buses used this technology. The distribution was as follows: only were 9 were DPF only, 106 were equipped with DPF and CCVS, and one used a CCVS only. This information is provided in table 1 below.

Table 1. Pre 2007 school buses by type of particulate reducing technology and manufacturer year.

Technology	Manufacturer	Engine-Type	USLD	2003	2004	2005	2006	Total
Diesel Particulate Filter (DPF) Only	IC, Bluebird, Thomas	Cummins/ IC-Navistar/ Caterpillar/ Freightliner/Ford	Yes	0	0	0	9	9
Diesel Particulate Filter (DPF) with Closed Crankcase Ventilation System (CCVS)	IC, Bluebird, Thomas	Cummins/ IC-Navistar/ Caterpillar/ Freightline/Ford	Yes	0	0	0	106	106
Diesel Oxidation Catalyst (DOC) with CCVS	IC, Bluebird, Thomas	Cummins/ IC- Navistar/ Caterpillar/ Freightliner/ Ford	Yes	0	0	0	6	6
DOC Only	IC, Bluebird, Thomas	Cummins/ IC- Navistar/ Caterpillar/ Freightliner/ Ford	Yes	0*	0*	0*	0*	0*
CCVS Only	IC, Bluebird, Thomas	Cummins/ IC- Navistar/ Caterpillar/ Freightliner/ Ford	Yes	0*	0*	0*	1*	1*
None	IC, Bluebird, Thomas	Cummins/IC-Navistar/ Caterpillar/ Freightliner/ Ford	Yes	0*	0*	0*	0*	0*

*Not required to retrofit as buses are part of 5-year waiver from the Mayor's Office.

4. *What is the number of such buses that used other authorized technology in accordance with the law, including a breakdown by model and engine age technology? (Ad. Code 24.163.7 (j)(1)(iv))*

Please see Table 1 (above) for the breakdown.

5. *What is the number of such buses that are equipped with an engine certified to the applicable 2007 EPA standard for particulate matter in accordance with the law? (Ad. Code 24.163.7(j)(1)(v)). Please refer to Table 2 below.*

1,740 buses are equipped with the applicable 2007 or later EPA standard engines.

Table 2. *later* School buses by year of manufacture.

Year	Manufacturer	Engine-Type	ULSD	Number of Buses
2007	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	26
2008	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	175
2009	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	151
2010	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	78
2011	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	276
2012	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	117
2013	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	66
2014	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	113
2015	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	127
2016	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	139

2017	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	112
Year	**Manufacturer**	**Engine-Type**	**ULSD**	**Number of Buses**
2018	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	111
2019	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	78
2020	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	39
2021	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	37
2022	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	13
2023	IC, Bluebird, Thomas	Cummins/IC- Navistar/Caterpillar/Freightliner/Ford	Yes	35
2024	IC, Bluebird, Thomas	Cummins/IC- Navistar/Caterpillar/Freightliner/Ford	Yes	45
2025	IC, Bluebird, Thomas	Cummins/IC- Navistar/Caterpillar/Freightliner/Ford	Yes	2
Total	**-**	**-**	**-**	**1740**

6. Where were the locations of the school districts where such buses were powered by ULSDF, used BART or other authorized technology in accordance with this section, or were equippedwith an engine certified to the applicable 2007 EPA standard for particulate matter? (Ad. Code 24.163.7(j)(1)(vi))

All Thirty-Two community school districts within the five boroughs of New York City used these buses as well as school districts in Westchester, Rockland, Nassau, and Suffolk counties in New York.

7. Were any waivers granted pursuant to 24-163.7(h) of this law? (Ad. Code 24.163.7(j)(1)(vii)

No waivers were granted.

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Local Law 43 / 2010 as Amended by Local Law 119 / 2016
Fiscal Year 2023 Annual Report

Introduction

The environmental and public health benefits of blending biodiesel into heating oil are substantial. Unlike petroleum diesel, biodiesel is non-toxic and biodegradable, making it less of a threat to human health and the environment than petroleum-based fuels in instances of spills, and other direct exposure scenarios. Blending biodiesel into home heating oil leads to reductions in emissions, like particulate matter (PM), sulfates and air toxics that are harmful to public health, reductions in lifecycle carbon dioxide (CO2) emissions, reductions in agricultural and food waste, and increased sustainability in fuel production practices.

Biodiesel is a blend stock commodity primarily used as a value-added blending component with diesel fuel. Biofuels are a renewable energy source derived from organic material either directly from plants, or indirectly from agricultural, commercial, domestic, and industrial wastes. Over the past decade, public policy at the federal level, as well as in some states, is requiring the use of biofuels to displace petroleum-based fossil fuels to reduce emissions of greenhouse gases and to enhance energy security by reducing dependence on foreign oil.

Laws and Regulations:

Effective in 2012, New York City local law has required all heating oil dealers in the city to sell a B2 biodiesel blend in place of traditional heating oil. Local laws (LL43/2010 and LL 119/2016) increased the requirement in heating oil from B2 to B5 for all buildings in New York City by October 1, 2017. The percentage blended over the next 20 years must increase as per this Local Law up to 20% on or after October 1, 2034.

Subdivision (h) of Section 24-168.1 of the Administrative Code of the City of New York provides that DEP has the authority to sample, test and analyze heating oil supplied to buildings in the city to determine compliance with this section.

% Bio-Diesel Blend in Heating Oil Program:

The DEP laboratory determines the level of % Biodiesel in heating oil collected from the sampled buildings' storage oil tanks, major oil companies' terminals, and oil trucks delivering oil to residential and commercial buildings. If a sample result is found to be below the regulated % Bio-Diesel Blend levels in heating oil which is 5%, then summonses are issued by the Bureau of Environmental Compliance's (BEC) Enforcement group.

Data Discussion:

July 1st, 2022, to June 30, 2023, BEC's Enforcement inspectors collected 258 oil samples from the boiler rooms in buildings in four out of the five boroughs.[2]

A total of 258 samples (as shown in table 2) were taken at the boiler level from a strainer before oil enters the burner. Samples were scanned for the percentage of biodiesel mixture in heating oil. Seven (7) samples (as shown in Table 1) did not comply with Subdivision (h) of Section 24-168.1 of the Administrative Code of the City of New York. Seven notices of violations (NOV's) were issued as part of the corrective steps by the Bureau of Environmental Compliance (BEC).

Table 1:

House #	Street	Borough	Complaint/Incident Number	Sample #	Type of Oil Sample	ASTM D7371-Biodiesel
90-10	34 Avenue	Queens	706-032123-1657-04	706	#4 Oil	**4.31**
165	Bennett Avenue	Manhattan	298-042023-1507-02	298	#2 Oil	**1.06**
140	Riverside Boulevard	Manhattan	694-042123-1549-04	694	#4 Oil	**0.06**
160	Riverside Boulevard	Manhattan	695-042123-1549-04	695	#4 Oil	**0.03**
180	Riverside Boulevard	Manhattan	696-042123-1549-04	696	#4 Oil	**2.28**

[2] There were 663 attempts made during July 1st, 2022, to June 30th, 2023, with no super on site at the building or no entry to the building. Notice of no entry, and pending appointment letters were left at each building for the building owners to call us back for a reinspection. Summonses were issued if there was no response to the DEP notices after the third attempt.

166	West 72nd Street	Manhattan	680-040523-1549-04	680	#4 Oil	**4.1**
315	West 98 Street	Manhattan	681-040523-1549-02	681	#2 Oil	**3.69**

Table 2

Sample # & Oil Grade	% Biodiesel	Location
412-04	**7.4**	**Bronx**
413-04	**8**	**Bronx**
414-04	**7.2**	**Bronx**
415-04	**8.9**	**Bronx**
416-04	**7.5**	**Bronx**
618-02	**6.7**	**Bronx**
619-02	**6.9**	**Bronx**
267-02	**5.93**	**Bronx**
145-02	**6.8**	**Bronx**
417-04	**9.8**	**Bronx**
266-04	**6.9**	**Bronx**
268-02	**5.2**	**Bronx**
283-02	**6.28**	**Bronx**
284-02	**6.01**	**Bronx**
418-02	**8.8**	**Bronx**
419-02	**6.8**	**Bronx**
420-02	**5.7**	**Bronx**
160-04	**10.8**	**Bronx**
161-02	**8.4**	**Bronx**
717-02	**6.2**	**Bronx**
718-02	**5.8**	**Bronx**
719-02	**5.9**	**Bronx**
720-02	**6.2**	**Bronx**
721-02	**5.2**	**Bronx**
722-02	**5.8**	**Bronx**
297-02	**6**	**Bronx**

689-04	**5.9**	**Bronx**
690-04	**6.9**	**Bronx**
691-02	**7.3**	**Bronx**
299-04	**7.3**	**Bronx**
803-02	**5.6**	**Bronx**
910-04	**6.53**	**Bronx**
911-04	**7.02**	**Bronx**
913-04	**6.4**	**Bronx**
912-04	**6**	**Bronx**
914-04	**6.8**	**Bronx**

Sample # & Oil Grade	% Biodiesel	Location
483-02	**7.1**	**Brooklyn**
484-02	**5.6**	**Brooklyn**
485-02	**5.3**	**Brooklyn**
486-02	**5.3**	**Brooklyn**
487-02	**8.8**	**Brooklyn**
489-02	**5.5**	**Brooklyn**
491-02	**6**	**Brooklyn**
492-02	**6.5**	**Brooklyn**
494-02	**6.3**	**Brooklyn**
495-02	**6.8**	**Brooklyn**
493-04	**8.2**	**Brooklyn**
604-02	**8.3**	**Brooklyn**
263-02	**5.31**	**Brooklyn**
264-02	**5.35**	**Brooklyn**
644-02	**6.1**	**Brooklyn**
646-02	**6.2**	**Brooklyn**
611-02	**6.1**	**Brooklyn**
614-02	**6.4**	**Brooklyn**
615-02	**9.4**	**Brooklyn**
617-02	**5.5**	**Brooklyn**
645-04	**6.1**	**Brooklyn**
647-04	**6**	**Brooklyn**
648-04	**8.9**	**Brooklyn**
421-02	**6.9**	**Brooklyn**
601-02	**13**	**Brooklyn**
667-04	**11.1**	**Brooklyn**
669-02	**14**	**Brooklyn**

670-02	22.8	Brooklyn
164-02	6.1	Brooklyn
2023FL05-00719	9.4	Brooklyn
782-1619-02	10.8	Brooklyn
783-1619-02	5.3	Brooklyn
784-1619-02	14	Brooklyn
807-1549-02	5.2	Brooklyn

Sample # & Oil Grade	% Biodiesel	Location
132-02	6.1	Manhattan
137-02	6.7	Manhattan
138-02	5.6	Manhattan
139-02	6.3	Manhattan
140-02	5.8	Manhattan
141-4	7.5	Manhattan
142-02	5.8	Manhattan
146-04	9.1	Manhattan
147-04	9.1	Manhattan
602-02	6.2	Manhattan
603-02	6.3	Manhattan
605-04	6.4	Manhattan
608-04	7.9	Manhattan
609-04	6.7	Manhattan
610-04	6.6	Manhattan
616-04	6.5	Manhattan
622-02	6	Manhattan
623-02	5.8	Manhattan
624-02	6.6	Manhattan
626-02	5.6	Manhattan
154-02	6.3	Manhattan
638-02	5.4	Manhattan
642-02	14.02	Manhattan
156-02	5.34	Manhattan
153-02	5.6	Manhattan
606-02	5.9	Manhattan
607-02	5.6	Manhattan
620-04	6.7	Manhattan

625-04	9.5	Manhattan
628-04	8	Manhattan
629-04	5	Manhattan
630-02	5.4	Manhattan
631-02	6.3	Manhattan
151-02	5.8	Manhattan
152-02	8	Manhattan
632-04	7	Manhattan
633-02	9.9	Manhattan
634-02	6	Manhattan
635-02	5.2	Manhattan
636-02	5.9	Manhattan
637-02	6.6	Manhattan
150-02	6.2	Manhattan
638-04	5.4	Manhattan
639-04	5.6	Manhattan
640-04	9.7	Manhattan
641-04	6.8	Manhattan
643-04	9.7	Manhattan
155-04	6	Manhattan
156-04	5.7	Manhattan
157-04	6	Manhattan
158-04	6.8	Manhattan
159-04	8	Manhattan
656-02	13.3	Manhattan
627-02	5.2	Manhattan
650-04	8.6	Manhattan
651-02	6.8	Manhattan
290-04	9.1	Manhattan
291-04	9.4	Manhattan
668-02	14	Manhattan
292-02	10	Manhattan
293-02	7	Manhattan
294-02	5.15	Manhattan
295-04	5.81	Manhattan
671-04	5.65	Manhattan
673-04	5.62	Manhattan
674-04	9.26	Manhattan

675-04	5.49	Manhattan
676-04	5.85	Manhattan
679-02	13.4	Manhattan
680-04	4.1	Manhattan
681-02	3.69	Manhattan
682-04	5.24	Manhattan
683-02	5.4	Manhattan
684-04	6	Manhattan
296-04	5.8	Manhattan
723-02	6.7	Manhattan
724-02	5.2	Manhattan
725-02	5.4	Manhattan
726-02	5.9	Manhattan
727-02	6.3	Manhattan
728-02	6.3	Manhattan
733-02	6.8	Manhattan
734-02	9.1	Manhattan
735-02	10.7	Manhattan
736-02	17.1	Manhattan
298-02	1.06	Manhattan
739-04	6.1	Manhattan
694-04	.06	Manhattan
695-04	.03	Manhattan
696-04	2.28	Manhattan
740-02	6.7	Manhattan
741-02	7.5	Manhattan
742-02	6.3	Manhattan
743-02	8.8	Manhattan
697-04	6.8	Manhattan
698-04	5.8	Manhattan
744-02	18	Manhattan
745-02	6.5	Manhattan
746-02	11.2	Manhattan
747-02	7.2	Manhattan
748-02	5.6	Manhattan
749-02	6.3	Manhattan
750-02	9.6	Manhattan
751-02	8.7	Manhattan

752-02	7.3	Manhattan
166-02	5.7	Manhattan
753-02	11.7	Manhattan
754-02	16	Manhattan
755-02	18.2	Manhattan
756-02	6.7	Manhattan
758-02	7	Manhattan
759-02	16.8	Manhattan
760-02	5.1	Manhattan
761-02	6.8	Manhattan
762-02	6.5	Manhattan
763-02	6.8	Manhattan
764-02	6.9	Manhattan
765-02	6.5	Manhattan
766-02	8	Manhattan
767-02	6.9	Manhattan
768-02	15.5	Manhattan
769-02	6.4	Manhattan
770-02	6.4	Manhattan
300-02	5.7	Manhattan
771-02	5.3	Manhattan
776-02	13.4	Manhattan
699-02	14.8	Manhattan
801-02	11.2	Manhattan
778-02	5.4	Manhattan
779-02	8.3	Manhattan
804-02	11.9	Manhattan
168-04	6.1	Manhattan
169-02	9.4	Manhattan

Sample # & Oil Grade	% Biodiesel	Location
133-02	13	Queens
143-02	7.3	Queens
144-02	6	Queens
148-02	6.4	Queens
149-04	8.1	Queens
481-02	13.2	Queens
482-02	5	Queens

798-04	9.4	Queens
700-04	8.3	Queens
702-02	7.3	Queens
703-04	9.5	Queens
701-04	9.8	Queens
704-04	8.3	Queens
705-04	9.8	Queens
706-04	4.31	Queens
707-02	14.6	Queens
708-02	8.5	Queens
709-02	13.3	Queens
710-02	19	Queens
711-02	19	Queens
712-02	7.8	Queens
713-02	5.43	Queens
714-02	6	Queens
716-02	6.2	Queens
163-02	6.5	Queens
685-04	6.2	Queens
686-04	6.8	Queens
687-04	6.8	Queens
688-02	6.5	Queens
692-03	5.5	Queens
693-04	6.5	Queens
165-02	8.1	Queens
167-02	6.3	Queens
780-02	5.9	Queens
781-02	16.4	Queens
785-02	6.1	Queens
786-04	6.7	Queens
787-04	5.29	Queens
790-04	8.55	Queens
791-04	7.2	Queens
792-04	5.59	Queens
793-04	6	Queens
794-04	5.92	Queens
796-04	6.04	Queens
797-04	5.31	Queens

799-04	5.78	Queens
901-04	5.56	Queens
902-04	5.1	Queens
903-04	5.2	Queens
904-04	5.2	Queens
905-04	7.01	Queens
906-04	7.07	Queens
907-02	8.16	Queens
908-04	6.11	Queens
909-04	6.85	Queens

Bronx Total: 36
Brooklyn Total: 34
Manhattan Total: 133
Queens Total: 55

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