NYC Environmental Protection

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April 27, 2021

Honorable Bill de Blasio
Mayor
The City of New York
City Hall
New York, NY 10007

Re: Local Law Air Reports for Fiscal Year 2020

Dear Mayor de Blasio:

Attached are the Local Law Air Reports for Fiscal Year 2020 as required by Local Laws 38, 39 as amended by local law 73 of 2013, 40, 41, 42 of 2005 and 43 of 2010 as amended by local law 119 of 2016.

These 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,

Vincent Sapienza, P.E.

c. Hon. Corey Johnson, Speaker New York City Council
Hon. Scott Stringer, Comptroller
Dean Fuleihan, First Deputy Mayor
Lisette Camilo, Commissioner DCAS
Meisha Porter, Chancellor, DOE
Edward Grayson, Commissioner, DSNY
Lorelei Salas, Commissioner, DCA
Henry Gutman, Commissioner, DOT
Mitchell Silver, Commissioner, DPR
Dave A. Chokshi, MD, MSc, Commissioner, DOHMH

Local Law 38 of 2005 Annual Report Fiscal Year 2020

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) is to achieve a 30% reduction in fuel consumption by Fiscal Year 2020 as compared to baseline fuel efficiency data from Fiscal Year 2005. This drop in fuel consumption would reduce the amount of greenhouse gas being released and would also improve the city's air quality.

The milestones in the legislation are as follows:

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

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

- January 1, 2007: The City will report for the last time, whether it has complied with the Local Law standard that 80% of the light duty vehicles are alternative fuel vehicles.

Following the July 2006 fuel economy milestone, LL38 dictates that the City will achieve an increase of 8% in average fuel economy in 2007; 10% in 2008; 12% in 2009; 15% in 2010; 18% by 2012; 20% for fiscal year 2015 through 2018, 20% in FY 2019; 30 % in FY 2020; 35% in FY 2021 and FY 2022; and 40% thereafter.

As of Fiscal Year 2020, the City exceeded the mandated 30% increase in fuel economy for light duty vehicles. Gasoline usage by light and medium duty vehicles has decreased from 2005, but diesel consumption increased because emergency services makes greater use of the gas card program 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 purchases be of the lowest polluting vehicles in their class, by purchasing 100% of the City's 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 CNG vehicles. However, not all agencies have the capacity for this fueling infrastructure.

The answers below describe the status of the City's implementation of the law and respond to the specific questions posed in the legislation.[1]

[1]Section 24-163.1 (e)(1) of the Administrative Code sets forth seven questions to which the Annual Report is required to provide an answer.

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 Health & Mental Hygiene (DOHMH)	0	0	0
Dept. of Environmental Protection (DEP)	47	0	47
Dept. of Transportation (DOT)	10	0	10
Dept. of Citywide Administrative Services (DCAS) & Managed by DCAS	37	0	37
Dept. of Sanitation (DSNY)	35	0	35
Dept. of Parks & Recreation (DPR)	10	3	13
Dept. of Education (DOE)	1	0	1
Total	**140**	**3**	**143**

NB: FDNY and PD are exempt from this reporting requirement as they are emergency 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/transitional 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
19	0	114	4	6	0	**143**

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.

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

In Lowest Polluting Category	Other	Vehicle Type
78*	0	Medium Size Sedan
55	0	Small-size Sports Utility
4	0	Mid-size Sports Utility
3	0	Light-duty Pick-ups
2	0	Medium-duty Pick-ups
1	0	Medium Duty Vans
Total: 143* vehicles	**Total: 0 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.

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

   The average fuel economy is 103.3 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 2020, DEP issued no waivers.

7. *What is the percentage increase in fuel economy? Target of 5% to 30%.*

   The average fuel economy was 103.3 miles per gallon, which exceeds the required reduction of 30% by Fiscal Year 2020 by obtaining a 32.2% increase. The baseline 2005 average fuel economy was 31.1 miles per gallon.

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 made greater use of the gas card program in 2020 for diesel fueling than in 2005. There was a decrease in gasoline consumption across the entire city fleet (light and medium duty vehicles) since 2005.

2005 Gallons of Diesel	2020 Gallons of Diesel
337,554	1,139,843

2005 Gallons of Gasoline	2020 Gallons of Gasoline
2,828,217	2,207,847

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 2020		
Year	**2005**	**2020**
Gasoline Consumed (gal)	2,828,217	2,207,847
CO_2 emissions (lbs)	54,867,410	42,832,231.8
Diesel Consumed (gal)	337,554	1,139,843
CO_2 emissions (lbs)	7,493,699	25,076,546
Total CO_2 Emissions (lbs)	**62,361,109**	**67,908,777.8**
Reduction (lbs)	NA	5,547,668.8
Reduction (%)	NA	+ 8.89%

Attachment A

Emissions Ratings on City Requirements Contracts for Fiscal Year 2020

Vehicle Type	ZEV	TZEV	APTZEV	SULEV	ULEV	LEV
Light Duty Vehicles						
Medium Sedan						
Toyota Prius, Prime		59				
Nissan Leaf	7*					
Chevrolet Bolt Crossover	12*					
Small-Size Sports Utility Vehicles						
Mitsubishi Outlander Plug-In		55				
Mid-size Sport Utility Vehicles						
Toyota Highlander Hybrid				4		
Light Duty Pickups						
Ford F-150					3	
Medium Duty Pickups						
Ford F-250					2	
Medium Duty Vans						
Chevrolet Express Van					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 2020 CALCULATION OF AVERAGE CITY MILEAGE AS REQUIRED FOR LOCAL LAW 38 REPORTING				
VEHICLE TYPE	**NUMBER PROCURED IN FY'20**	**FUEL TYPE**	**EPA MPG CITY**	**WEIGHTED FACTOR (COL. B x COL. C)**
CHEVROLET BOLT	12	ELECTRIC	127	1,524
FORD F150	3	GAS	18	54
MITSUBISHI OUTLANDER PLUG-IN HYBRID	55	ELECTRIC/GAS	74	4,070
NISSAN LEAF	7	ELECTRIC	118	826
TOYOTA PRIUS PRIME, PLUGIN	59	ELECTRIC/GAS	133	7,847
TOYOTA HIGHLANDER HYBRID	4	ELECTRIC/GAS	35	140
GRAND TOTALS	140			14,461
AVERAGE CITY MILEAGE FOR LIGHT DUTY VEHICLES PURCHASED IN FY'20				**103.3**

Local Law 39 of 2005/Local Law 73 of 2013 Annual Report Fiscal Year 2020

Local Law 39 of 2005 (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 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 that the City fleet is using the cleanest vehicles. This law requires that as of January 1, 2017, 90% of on-road vehicles are equipped with Diesel Particulate filters. The City met this mandate by achieving a 96.2% 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 6,897 non-emergency vehicles owned or operated by the City.

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	15	5	0	21	169	190	99.47%
DEP	12	31	8	0	51	543	594	97.98%
DOT	168	75	1	0	244	1016	1260	86.67%
PARKS	5	1	3	0	9	819	828	99.40%
DSNY	76	75	0	0	151	3854	4005	98.10%
DOHMH	0	0	0	0	0	20	20	100.00%
TOTAL	**262**	**197**	**17**	**0**	**476**	**6421**	**6897**	**96.20%**

'(1) This column includes the 224 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))*

   197

   Refer to the table above for question 1 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))*

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

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 diesel equipment, 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))*

   6,421

   Refer to Table above for question 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)?*[2]

   No waivers were issued.

[2]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.

Local Law 40 of 2005 Annual Report Fiscal Year 2020

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 2020, 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 were total Seventy - Five vehicles used for these contracts and all of these vehicles are diesel fuel-powered on road and off road vehicles.

Action Environmental Systems, LLC.				
Type of Vehicle	Make	Model	Year	EPA Certified Engine/BART
Excavator	Caterpillar	320EL	2013	Tier 4 Interim
Loader	Caterpillar	938M	2016	Tier 4 Final
Excavator	Caterpillar	336EL	2013	Tier 4 Final
Loader	Caterpillar	938K	2014	Tier 4 Interim
Excavator	Caterpillar	336EL	2013	Tier 4 Final
Loader	Caterpillar	980M	2017	Tier 4 Interim
Excavator	Caterpillar	336FL	2016	Tier 4 Final
American Recycling Management, LLC.				
Type of Vehicle	Make	Model	Year	EPA Certified Engine/BART
Front Loader	Komatsu	WA500-3LE	1996	DLT4MINE
Front Loader	Komatsu	WA500-3LE	1997	DLT4MINE
Excavator	Komatsu	PC-200-6LE	1998	DLT4MINE
Front Loader	Komatsu	WA500-8	2017	Tier 4 Final
Excavator	Sennebogen	818-R-HD	2018	Tier 4 Final
Covanta Sustainable Solutions LLP				
Type of Vehicle	Make	Model	Year	EPA Certified Engine/BART
Skid Steer	Bobcat	S550	2015	Tier 4 Interim
Skid Steer	Bobcat	S530	2014	Tier 4 Interim

Pratt Industries

Type of Vehicle	Make	Model	Year	EPA Certified Engine/BART
Loader	Caterpillar	938M	2017	Tier 4 Final
Loader	Komatsu	WA380-7	2012	Tier 4 Interim

Regal Recycling

Type of Vehicle	Make	Model	Year	EPA Certified Engine/BART
CAT	Caterpillar	320E	2013	Tier 4 Interim

Republic Services (Allied Waste Systems)

Type of Vehicle	Make	Model	Year	EPA Certified Engine/BART
Top Pick	Taylor	XRS-9972	2016	Tier 4 Final
Wheel Loader	Caterpillar	903C	2015	Tier 4 Final
Switcher	Ottawa	4x2	2007	Cleaire Phoenix
Switcher	Ottawa	4x2	2007	Cleaire Phoenix
Switcher	Ottawa	4x2	2007	Cleaire Phoenix
Mach Broom	Isuzu	Badger T4	2019	Tier 4 Final
Top Pick	Hyster	RS46-33CH	2020	Tier 4 Final

Sims Municipal Recycling of New York LLC.

Type of Vehicle	Make	Model	Year	EPA Certified Engine/BART
Loader	Caterpillar	962M	2018	Tier 4 Final
Material Handler	Sennebogen	840ME	2013	Tier 4 Interim
Material Handler	Fuchs	MHL360	2015	Tier 4 Final
Loader	Volvo	L150G	2013	Tier 4 Interim
Loader	Volvo	L150H	2020	Tier 4 Final
Material Handler	Sennebogen	835ME	2018	Tier 4 Final
Material Handler	Sennebogen	840ME	2020	Tier 4 Final
Material Handler	Sennebogen	804ME	2020	Tier 4 Final
Loader	Volvo	L150H	2016	Tier 4 Final
Material Handler	Fuchs	MHL370	2016	Tier 4 Final

Tully Environmental Inc.

Type of Vehicle	Make	Model	Year	EPA Certified Engine/BART
Waste Handler	Komatsu	WA470-7	2014	Tier 4 Final
Waste Handler	Komatsu	WA470-8	2017	Tier 4 Final

Waste Connections Inc.

Type of Vehicle	Make	Model	Year	EPA Certified Engine/BART
Front Loader	Caterpillar	966G	2002	CCRT
Front Loader	Caterpillar	966H	2008	CCRT
Skid Steer	Caterpillar	262D	2017	Tier 4 Final

Waste Management of NY LLC.

Type of Vehicle	Make	Model	Year	EPA Certified Engine/BART
Wheel Loader	Volvo	L180H	2019	Tier 4 Final
Wheel Loader	Volvo	L60	2018	Tier 4 Final
Excavator	Volvo	300	2018	Tier 4 Final
Excavator	Volvo	EC300EL	2016	Tier 4 Final
Compactor	Caterpillar	826K	2018	Tier 4 Final
Wheel Loader	Volvo	L180H	2016	Tier 4 Final
Wheel Loader	Volvo	L180G	2017	Tier 4 Final
Wheel Loader	Volvo	L90H	2019	Tier 4 Final
Compactor	Caterpillar	826K	2014	Tier 4 Final
Rail Switcher	Shuttle Wagon	NVX8040	2020	Tier 4 Final
Rail Switcher	Shuttle Wagon	NVX8040	2020	Tier 4 Final
Wheel Loader	Volvo	L180H	2016	Tier 4 Final
Forklift	Hyster	H80FT	2007	HUSS/CF
Wheel Loader	Volvo	L180	2014	Tier 4 Final
Excavator	Komatsu	PC210	2019	Tier 4 Final
Wheel Loader	Volvo	L180H	2020	Tier 4 Final
Wheel Loader	Volvo	L180H	2016	Tier 4 Final
Excavator	Volvo	EC300EL	2019	Tier 4 Final
Wheel Loader	Volvo	L70H	2020	Tier 4 Final
Excavator	Volvo	EC300	2014	Tier 4 Final
Container Handler	Taylor	TLX330S	2018	Tier 4 Final
Container Hander	Taylor	9972	2017	Tier 4 Final
Switcher	Shuttle Wagon	SWX525	2020	Tier 4 Final
Switcher	Shuttle Wagon	SWX525	2020	Tier 4 Final
Wheel Loader	Volvo	L120	2015	Tier 4 Final
Wheel Loader	Volvo	L120	2018	Tier 4 Final
Wheel Loader	Volvo	L70H	2016	Tier 4 Final
Wheel Loader	Volvo	L180H	2016	Tier 4 Final
Wheel Loader	Volvo	L180H	2015	Tier 4 Final
Wheel Loader	Volvo	LL70H	2015	Tier 4 Final
Excavator	Volvo	EC300	2015	Tier 4 Final
Reach Stacker	Taylor	TL9972	2020	Tier 4 Final
Reach Stacker	Taylor	TS9972	2015	Tier 4 Final
Rail Switcher	Shuttle Wagon	NVX6030	2020	Tier 4 Final
Switcher	Shuttle Wagon	NVX6030	2020	Tier 4 Final
Excavator	Volvo	EC300	2018	Tier 4 Final

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-Five 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-Five vehicles:

9 vehicles used Classification Level IV Diesel Particulate Filters	BART
9 vehicles used Tier IV Interim EPA Certified Engines	BART not required
57 Fifty-Seven vehicles are equipped with Certified Tier IV Final Engines.	BART not required

Tier IV Interim EPA Certified Engines and Certified Tier IV Final Engines are both OEM engines that meet EPA requirements and the requirements of LL40, so do not need BART. In addition, Certified Tier IV Final Engines are the most effective way to decrease pollutants as it uses PM reduction technology along with NOx reduction technology to reduce Nitrogen Oxide, Tier IV Interim EPA Certified Engines decrease PM, but do not decrease NOx.

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 numb er 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 fifty-five 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
300 Frank W. Burr Blvd – Suite 39
Teaneck, NJ 07666

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

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

9). Sims Municipal Recycling of New York
3027 Greenpoint Ave
Long Island City, NY 11101

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

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

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

5). Regal Recycling
172-06 Douglas Avenue
Jamaica, NY 11433

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

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

8). Sims Municipal Recycling of New York
850 Edgewater Road
Bronx, NY 10474

12). Waste Connections Inc.
110 50th Street
Brooklyn, NY 11232

13). Waste Management of NY LLC
38-50 Review Avenue
Long Island City, NY 11101

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

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

16). 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 of Local Law no.74 of 2013 which 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 United States Environmental Protection Agency standard. Therefore, contractors had to replace their older vehicles with newer ones that comply with current EPA standards.

Local Law 41 of 2005 Annual Report Fiscal Year 2020

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 into the environment, these vehicles must install emission reduction devices (BART).

As of Fiscal Year 2020, 100% of the required vehicles are in compliance by use of classification level 4 (BART) or equipped with 2007 or newer certified engines. Also, all diesel vehicles are powered by ULSDF (since the passage of LL41, EPA has required ULSDF 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 a total of 147 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)) in which 143 buses are equipped with a diesel engine and other 4 buses equipped with a gasoline engine.*

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

   94 vehicles utilize BART (See table below).

Sight Seeing Bus Company	Number Licensed by DCA	Number with BART	Type of Technology
Gray Line New York Tours Inc.	64	64	There are Sixty Six Classification Level IV Johnson Matthey CRT's.
CitySights New York LLC	2	2	There are Two Classification Level IV Diesel Particulate Filter (DPF's). Continuous Regenerating Traps JM (CRT's).
Go New York Tours Inc.	15	0	There are seven buses equipped with 2009 model year engines, One for 2010, One for 2011, Four for 2012 and Two for 2014 model year engines. (All buses are equipped with OEM Installed Technology).
Skyline Tours, LLC D.B.A. Big Bus Tours	5	0	All Five are certified 2012, 2013 model year engines.

Sight Seeing Bus Company	Number Licensed by DCA	Number With BART	Type of Technology
Experience the Ride	4	0	All Four are certified as 2008 model year engines. (OEM Installed Technology).
Big Bus Tours NYC D.B.A. Taxi Tours	47	28	There are Twenty Eight Classification Level IV CDTI / Cummins (DPF)'s. There are Twenty Seven Buses equipped with 2013-2015 newer certified model year engines.
Skyliner Travel & Tour Bus Corp.	8	0	Five 2009 - 2011 Certified Model Year Diesel Engines. (OEM's) *(Three are Gasoline Vehicles)*.
Madame Morbid LLC. (Trolley Tours)	1	NA	*This Bus is exempt; this bus is equipped with Gasoline Engine.*
RITE Tours	1	NA	One Vehicle 2013 Certified Model Year Engine. (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 of them 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 *section 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 Law 73 and 74 of the City of New York for the year 2013 requires level 4 emission control technology. None of these buses from the above list received any waivers and they all meet the level 4 emission control strategy.

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) or equipped with 2007 or newer model year engine.

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 49 such buses out of the 143 that are certified to the applicable 2007 USEPA standard. The 94 equipped with BART and 4 buses are exempt because these buses are equipped with gasoline engines.

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 addresses for the sightseeing companies.

Sight Seeing Bus Co.	Permanent Address	Mailing Address
Gray Line New York Tours Inc.	43 2nd Avenue Brooklyn, NY 11215	1430 Broadway New York, NY 10018
CitySights New York LLC	33 2nd Avenue Brooklyn, NY 11215	1430 Broadway New York, NY 10018
Go New York Tours Inc.	74 Onderdonk Avenue Ridgewood, NY 11385	2 East 42nd Street New York, NY 10017
Skyline LLC.	723 7th Avenue - 5th Floor New York, NY 10019	Same
Experience The Ride NY LLC	545 8th Avenue New York, NY 10018	Same
Big Bus Tours NYC / Taxi Tours Inc.	723 7th Avenue - 5th Floor New York, NY 10019	Same
Skyliner Travel & Tour Bus Corp.	19-41 42nd Street Astoria, NY 11105	Same
Madame Morbid LLC (Trolley Tours)	319 Schermerhorn Street - 12D Brooklyn, NY 11217	Same
RITE Tours	31 Oxford Place Staten Island, NY 10301	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.

Local Law 42 of 2005 Annual Report Fiscal Year 2020

§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 of these school buses use best available retrofit technology (BART) to reduce emissions.

Finally, *§24-163.7* requires the NYCDOE 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 DOE's contracted GE diesel fueled fleet, 97.6 % of the vehicles are using emission control devices and 97.1% of the vehicles are using the best available devices.

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 2,149 diesel powered Type C and D, general education school buses used to fulfill the requirements. (In total, there are currently 9,765 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))*

All the above buses 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))*

649 buses used this technology. Counts by year below; please see Table 1 below for further breakdown.

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	1	37	113	151
DPF with Closed Crankcase Ventilation System (CCVS)	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	26	75	112	222	435

Technology	Manufacturer	Engine-Type	USLD	2003	2004	2005	2006	Total
Diesel Oxidation Catalyst (DOC) with CCVS	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	0	0	0	0	0
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*	4*	4*	4*	12*
None	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	0*	3*	14*	34*	51*
Total Pre-2007 GE Diesel Fueled Bus Fleet	-	-	-	26	83	167	373	649

*As per DOE, 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))*

   None. Please see Table 1 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))*

   1,500 buses are equipped with the applicable 2007 EPA standard engines. See Table 2 for the breakdown.

Table 2. **Post-2007 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	111
2008	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	175

Year	Manufacturer	Engine-Type	ULSD	Number of Buses
2009	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	118
2010	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	85
2011	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	264
2012	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	106
2013	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	63
2014	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	127
2015	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	84
2016	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	77
2017	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	31
2018	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	82
2019	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	74
2020	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	57
2021	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	46
Post-2007 buses	-	-	-	1500

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 equipped with an engine certified to the applicable 2007 EPA standard for particulate matter? (Ad. Code 24.163.7(j)(1)(vi))*

All 32 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.

Local Law 43 of 2010 as Amended by Local Law 119 of 2016

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 as a way 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. We expect this trend to continue as evidenced by the introduction of a proposed change to local laws (LL43/2010 and amended by LL 119/2016), that would increase the requirement in heating oil from B2 to B5 for all buildings in New York City by October 1, 2017, and with the potential to increase the percentage blended over the next 20 years.

§ 3. Subdivision (h) of Section 24-168.1 of the Administrative Code of the City of New York, as amended by local law number 38 for the year 2015, is amended to read as follows:
(*h*) The Commissioner shall have 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 laboratory is determining the level of % Bio-Diesel in heating oil collected from the buildings storage oil tanks, major oil company 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, then summonses are issued by the Bureau of Environmental Compliance's (BEC) Enforcement group.

Data Discussion:

July 1st, 2019 to June 30, 2020 BEC's Enforcement Inspectors have collected oil samples totaling 583 samples from the buildings. Due to the corona virus (COVID-19) pandemic no samples were collected during April 2020 to July 2020. 1,193 attempts were made during July 1st, 2019 to March 31st, 2020 with no super on site at the building or no entry to the building. Notice of no entry and pending appointment letter were left at each building for the building owners to call us back for revisit.

Of 583 samples examined for the percentage of biodiesel mixture in heating oil, 6 samples were in violation of the percentage of biodiesel blend.