NYC Environmental Protection

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February 13, 2019

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

Re: Local Law Air Reports for Fiscal Year 2018

Dear Mayor de Blasio:

Attached are the Local Law Air Reports for Fiscal Year 2018 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
Richard Carranza, Chancellor, DOE
Kathryn Garcia, Commissioner, DSNY
Lorelei Salas, Commissioner, DCA
Polly Trottenberg, Commissioner, DOT
Mitchell Silver, Commissioner, DPR
Oxiris Barbot, Commissioner, DOHMH

NYC Environmental Protection

Local Law 38 Annual Report Fiscal Year 2018

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 (LL38) is to achieve a 25% reduction in fuel consumption by Fiscal Year 2018 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, the City is to achieve an increase of 8% in average fuel economy in 2007; 10% in 2008; 12% in 2009; 15% in 2010; 18% by 2012; and 20% for fiscal year 2015 and 2016, and 25% in 2017 and 2018.

As of Fiscal Year 2018, the City exceeded the mandated 25% 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 98.9% 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 charging 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)	1	0	1
Dept. of Environmental Protection (DEP)	151	1	152
Dept. of Transportation (DOT)	67	0	67
Dept. of Citywide Administrative Services (DCAS) & Managed by DCAS	179	15	194
Dept. of Sanitation (DSNY)	64	0	64
Dept. of Parks & Recreation (DPR)	22	25	47
Dept. of Education (DOE)	1	11	12
Total	**485**	**52**	**537**

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 zero emission vehicles (PZEV) 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
112	0	256	112	57	0	**537**

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%.*

Lowest Category	Other	Vehicle Type
367*	3	Medium Size Sedan
1	1	Regular Size Van
104	0	Small-size Sports Utility
5	2	Mid-size Sports Utility
4	0	Light-duty Pick-ups
50	0	Medium Duty Vans
Total: 531* vehicles	**Total: 6 vehicles**	
Total: 98.9% (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 100.2 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 2018, DEP issued no waivers.

7. *What is the percentage increase in fuel economy? Target of 5% to 25%.*

   The average fuel economy was 100.2, which exceeds the required reduction of 25% by Fiscal Year 2018 by obtaining a 31% 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 makes greater use of the gas card program for diesel fueling. There was a decrease in gasoline consumption across the entire city fleet (light and medium duty vehicles) since 2005.

2005 Gallons of Diesel	2018 Gallons of Diesel
337,554	1,115,718

2005 Gallons of Gasoline	2018 Gallons of Gasoline
2,828,217	2,514,147

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 2018		
Year	**2005**	**2018**
Gasoline Consumed (gal)	2,828,217	2,514,147
CO_2 emissions (lbs)	54,867,410	48,774,451.8
Diesel Consumed (gal)	337,554	1,115,718
CO_2 emissions (lbs)	7,493,699	24,545,796
Total CO_2 Emissions (lbs)	**62,361,109**	**73,320,247.8**
Reduction (lbs)	NA	**10,959,138.8**
Reduction (%)	NA	**(17.5%)**

Attachment A

Emissions Ratings on City Requirements Contracts for Fiscal Year 2018

Vehicle Type	ZEV	TZEV	APTZEV	SULEV	ULEV	LEV
Light Duty Vehicles						
Medium Sedan						
Toyota Prius, Prime		158				
Toyota Camry Hybrid				3		
Ford Fusion, Energi		97				
Chevrolet Bolt Crossover	112*					
Regular Size Van						
Chrysler Pacifica					1	
Chrysler Pacifica Hybrid				1		
Small-Size Sports Utility Vehicles						
Toyota Rav 4 Hybrid				104		
Mid-size Sport Utility Vehicles						
Toyota Highlander Hybrid				5		
Chevrolet Suburban					1	
Chevrolet Tahoe					1	
Light Duty Pickups						
Ford F-150					4	
Medium Duty Vehicles						
Medium Duty Vans						
Chevrolet Express Van					1	
Chevrolet Express Van 3500					32	
Ford Transit 150					17	

* 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 2018 CALCULATION OF AVERAGE CITY MILEAGE AS REQUIRED FOR LOCAL LAW 38 REPORTING				
VEHICLE TYPE	**NUMBER PROCURED IN FY'18**	**FUEL TYPE**	**EPA MPG CITY**	**WEIGHTED FACTOR (COL. B x COL. C)**
CHEVROLET BOLT	112	ELECTRIC	128	14,336
CHEVROLET SUBURBAN	1	GAS	15	15
CHEVROLET TAHOE	1	GAS	16	16
CHRYSLER PACIFICA	1	GAS	18	18
CHRYSLER PACIFICA HYBRID	1	ELECTRIC/GAS	84	84
FORD F150	4	GAS	16	64
FORD FUSION ENERGI, PLUGIN	97	ELECTRIC/GAS	97	9,409
TOYOTA CAMRY HYBRID	3	ELECTRIC/GAS	51	153
TOYOTA PRIUS PRIME, PLUGIN	158	ELECTRIC/GAS	133	21,014
TOYOTA HIGHLANDER HYBRID	5	ELECTRIC/GAS	29	145
TOYOTA RAV4 HYBRID	104	ELECTRIC/GAS	34	3,536
GRAND TOTALS	**487**			**48,790**
AVERAGE CITY MILEAGE FOR LIGHT DUTY VEHICLES PURCHASED IN FY'18				100.2

NYC Environmental Protection

Local Law 39/Local Law 73 Annual Report Fiscal Year 2018

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 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 93.49% 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 6404 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	0	27	1	0	28	130	158	100.00%
DEP	11	78	43	0	133	419	552	97.83%
DOT	246	110	14	0	378	659	1037	75.51%
PARKS	9	12	5	0	27	568	595	98.32%
DSNY	141	157	0	0	298	3752	4050	96.52%
DOHMH	0	3	0	0	3	9	12	100.00%
TOTAL	**407**	**387**	**63**	**0**	**867**	**5537**	**6404**	**93.49%**

'(1) This column includes the 389 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))*

387

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))*

   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))*

   5537

   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.

NYC Environmental Protection

Local Law 40 Annual Report Fiscal Year 2018

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 2018, 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 75 vehicles used for these contracts and all of them are off road/on road vehicles. Unavailability waivers expired and could not be renewed because of Local Law 74 of 2013, which prohibits the renewal of a waiver after January 1, 2014 therefore; contractors have to replace their older equipment with newer technology which complies with current EPA standards.

No.	Type of Vehicle	Make	Model	Year	EPA Certified Engine / BART
1	Wheel Loader	Volvo	L180	2012	Tier 4 Interim
2	Wheel Loader	Volvo	L 60	2012	Tier 4 Interim
3	Excavator	Volvo	300	2018	Tier 4 Final
4	Excavator	Volvo	EC300EL	2016	Tier 4 Final
5	Compactor	Caterpillar	826K	2014	Tier 4 Interim
6	Wheel Loader	Caterpillar	L180H	2016	Tier 4 Final
7	Wheel Loader	Volvo	L 180 G	2013	Tier 4 Interim
8	Wheel Loader	Volvo	L 180 G	2014	Tier 4 Interim
9	Skid steer	Volvo	M135C	2017	Tier 4 Final
10	Railcar Switcher	Shuttle Wagon	NVX8040	2015	Tier 4 Final
11	Railcar Switcher	Shuttle Wagon	SWX605C	2007	HUSS/ADPF
12	Top Pick	Taylor	XRS-9972	2016	Tier 4 Final
13	Top Pick	Kalmar	DCF410CSG	2006	Cleaire Phoenix
14	Wheel Loader	Caterpillar	903C	2015	Tier 4 Interim
15	Switch Yard Jockey	Ottawa	Ottawa 4X2	2007	Cleaire Phoenix
16	Switch Yard Jockey	Ottawa	Ottawa 4X2	2007	Cleaire Phoenix
17	Switch Yard Jockey	Ottawa	Ottawa 4X2	2007	Cleaire Phoenix
18	Mech. Broom	Elgin	Elgin/Pelican	2006	Cleaire Phoenix
19	Wheel Loader	Caterpillar	L180H	2016	Tier 4 Final

No.	Type of Vehicle	Make	Model	Year	EPA Certified Engine / BART
20	Wheel Loader	Volvo	L180 H	2016	Tier 4 Final
21	Forklift	Hyster	H80FT	2007	Huss/ADPF
22	Wheel Loader	Volvo	L70	2009	HUSS/ADPF
23	Excavator	Volvo	EC300	2014	Tier 4 Final
24	Container Handler	Taylor	SK1	2008	HUSS/ADPF
25	Container Handler	Taylor	975	2012	Tier 4 Interim
26	Switcher	Shuttle Wagon	SW525BE	2010	HUSS/ADPF
27	Switcher	Shuttle Wagon	SW465	2002	HUSS/ADPF
28	Wheel Loader	Volvo	L 120	2015	Tier 4 Interim
29	Wheel Loader	Volvo	L 120	2018	Tier 4 Interim
30	Skid Steer	Caterpillar	272D2	2017	Tier 4 Final
31	Skid Steer	Caterpillar	272D2	2018	Tier 4 Final
32	Wheel Loader	Volvo	L70 H	2016	Tier 4 Final
33	Wheel Loader	Volvo	L180 H	2016	Tier 4 Final
34	Wheel Loader	Volvo	L180 H	2015	Tier 4 Final
35	Wheel Loader	Volvo	L70 H	2015	Tier 4 Final
36	Excavator	Volvo	EC 300	2015	Tier 4 Final
37	Reach Stacker	Taylor	TS9972	2015	Tier 4 Interim
38	Reach Stacker	Taylor	TS9972	2015	Tier 4 Interim
39	Rail Switcher	Shuttle Wagon	NVX6030	2015	Tier 4 Interim
40	Switcher	Rail King	SS4600	2000	HUSS/ADPF
41	Excavator	Volvo	EC300	2018	Tier 4 Final
42	Front End Loader	Caterpillar	966G	2002	JM/CCRT
43	Front End Loader	Caterpillar	966H	2008	JM/CCRT
44	Skid Steer	Caterpillar	262D	2017	Tier 4 Final
45	Front End Loader	Caterpillar	966G	1999	DCL/DPF
46	Front End Loader	Caterpillar	966H	2010	DCL/DPF
47	Front End Loader	Caterpillar	966H	2010	DCL/DPF
48	Skid Steer	Caterpillar	262D	2017	Tier 4 Final
49	Excavator	Caterpillar	336EL	2013	Tier 4 Interim
50	Loader	Caterpillar	938K	2014	Tier 4 Interim
51	Excavator	Caterpillar	336EL	2013	Tier 4 Interim
52	Loader	Caterpillar	980M	2017	Tier 4 Final
53	Excavator	Caterpillar	336FL	2016	Tier 4 Interim
54	Waste Handler	Komatsu	WA470-7	2014	Tier 4 Interim
55	Waste Handler	Komatsu	WA470-8	2017	Tier 4 Final
56	Front E. Loader	Komatsu	WA-500	1996	DCL MINE-X Sootfilter
57	Front E. Loader	Komatsu	WA-500	1997	DCL MINE-X Sootfilter
58	Excavator	Komatsu	PC 200	1998	DCL MINE-X Sootfilter
59	Front Loader	Komatsu	WA-500-8	2017	Tier 4 Final
60	Excavator	Sennebogen	818-R-HD	2018	Tier 4 Final
61	Hydraulic Excavator	Caterpillar	320E	2013	Tier 4 Interim

No.	Type of Vehicle	Make	Model	Year	EPA Certified Engine / BART
62	Loader	Volvo	L150G	2013	Tier 4 Interim
63	Material Handler	Fuchs	MHL370	2016	Tier 4 Final
64	Material Handler	Fuchs	MHL370	2016	Tier 4 Final
65	Loader	Volvo	L150H	2016	Tier 4 Final
66	Loader	Volvo	L150H	2016	Tier 4 Final
67	Material Handler	Fuchs	MHL370	2016	Tier 4 Final
68	Loader	Volvo	L120G	2014	Tier 4 Interim
69	Loader	Volvo	L120G	2012	Tier 4 Interim
70	Material Handler	Sennebogen	840M'E'	2013	Tier 4 Interim
71	Material Handler	Fuchs	MHL360	2015	Tier 4 Final
72	Loader	Caterpillar	938M	2017	Tier 4 Final
73	Loader	Komatsu	WA380-7	2012	Tier 4 Interim
74	Front End Loader	Komatsu	WA500-8	2017	Tier 4 Final
75	Skid Steer	Bobcat	S550	2015	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, Twenty of these vehicles used Classification Level IV Diesel Particulate Filters *(BART)*. Twenty-Three vehicles are equipped with Tier IV Interim EPA Certified Engines. Thirty-Two vehicles are equipped with Certified Tier IV Final Engines. Certified Tier IV Final Engines are the most effective way to decrease pollutants as it uses PM reduction technology along with NOx reduction technology as well to reduce Nitrogen Oxide.

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 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) Waste Management of NY LLC
98 Lincoln Avenue
Bronx, NY 10474

2) Allied Waste Systems/ Staten Island Tfr.
600 West Service Road
Staten Island, NY 10314

3) Waste Management of NY LLC
215 Varick Street
Brooklyn, NY 11237

4) Covanta Recovery / North Shore MTS
(DSNY) 123-15 31 Avenue
Queens, NY 11358

5) Waste Management/Hamilton Ave MTS
500 Hamilton Avenue
Brooklyn, NY 11232

6) Waste Management of NY LLC
400 Bay 41st Street
Brooklyn, NY 11214

7) Waste Management of NY LLC
38-50 Review Avenue
Brooklyn, NY 11222

8) IESI NY Corporation
577 Court Street
Brooklyn, NY 11231

9) IESI NY Corporation
110 50th Street
Brooklyn, NY 11232

10) Action Environmental
941 Stanley Avenue
Brooklyn, NY 11208

11) Tully Environmental Inc.
127-20 34th Avenue
Flushing, NY 11368

12) American Recycling Mgmt.
172-33 Douglas Avenue
Jamaica, NY 11433

13) Regal Recycling
172-02 Douglas Avenue
Jamaica, NY 11433

14) Sims Municipal Recycling of NY
472 2nd Avenue
Brooklyn, NY 11232

15) Sims Municipal Recycling of NY
30-27 Green point Avenue
Long Island City, NY 11101

16) Sims Municipal Recycling of NY
850 Edgewater Road
Bronx, NY 10474

17) Visy-Pratt Industries
4435 Victory Blvd
Staten Island, NY 10314

18) We Care-Metropolitan
287 Halleck Street
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.

NYC Environmental Protection

Local Law 41 Annual Report Fiscal Year 2018

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 2018, 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 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 208 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 203 buses are equipped with diesel engines and an additional 5 buses are equipped with gasoline engines.

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

Sight Seeing Bus Company	Number Licensed by DCA	Number with BART	Type of Technology
Gray Line New York Tours Inc.	87	87	There are Eighty Seven Classification Level IV Johnson Matthey CRT's
CitySights New York LLC	07	07	There are Seven Classification Level IV Diesel Particulate Filter (DPF's). Continuous Regenerating Traps (CRT's)
Go New York Tours Inc.	27	23	Ten CDTI Active Electrical Regeneration units, Thirteen CDTI Passive units and Four are certified 2010-2014 model year engines (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 (Equipped with OEM Installed Technology)
Experience the Ride	4	0	All four are certified as 2008 model year engines (OEM Installed Technology)

Sight Seeing Bus Company	Number Licensed by DCA	Number With BART	Type of Technology
Taxi Tours D.B.A. Big Bus Tours NYC	66	25	There are Twenty Five Classification Level IV CDTI (DPF)'s. There are Forty One Buses equipped with 2008-2015 newer certified model year engines. (OEM Installed Technology)
RDSL Urban NY / Open Loop Tours NY	1	0	One bus 2015 Certified Model Year Engines. (OEM Installed Technology)
Skyliner Travel & Tour Bus Corp.	9	0	Six 2009 - 2013 Certified Model Year 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.*
City Brew Tours NYC LLC	1	NA	*This bus is exempt; this bus is equipped with Gasoline Engine.*

* 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, 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 no.73 and no.74 of the City of New York for the year 2013.
None of these buses from the above list are under any waiver provisions and they all meet 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 61 such buses out of the 208 that are certified to the applicable 2007 USEPA standard. The 142 equipped with BART and 5 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, NY (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
RDSL Urban NY, LLC/ DBA Open Tour NY	723 7th Avenue, NY (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
City Brew Tours NYC LLC	1 Grove Street Watertown, MA 02472	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.

NYC Environmental Protection

Local Law 42 Annual Report Fiscal Year 2018

§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 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 NYCDOE's contracted GE diesel fueled fleet, 97.1% are using emission control devices with 93.3% 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 2,184 diesel powered Type C and D, general education school buses used to fulfill the requirements. (In total, there are currently 9,682 active 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))*

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

Year	Retrofitted with DPF Count
1999	3*
2000	3*
2001	19*
2002	19
2003	107
2004	107
2005	178
2006	268
Total	**704**

*used as spare vehicles

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))*

   5 buses used other authorized technology. 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))*

   There were 1,334 buses are equipped with the applicable 2007 EPA standard engines.

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)*

   See Table

Table 1 – DPF

Technology	Manufacturer	Engine-Type	ULSD	Meets 2007 EPA Standard	No. of Buses*
Diesel Particulate Filter (DPF)	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	1,334	2038
Diesel Oxidation Catalyst (DOC) with Closed Crankcase Ventilation System (CCVS)	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/ Freightliner/Ford	Yes		5
DOC Only	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes		0
CCVS Only	IC, Bluebird, Thomas	Cummins/Navistar/Caterpillar/Freight liner/Ford	Yes		77
None	IC, Bluebird, Thomas	Cummins/Navistar/Caterpillar/Freight liner/Ford	Yes		64
Retrofit in Process	IC, Bluebird, Thomas	Cummins/Navistar/Caterpillar/Freight liner/Ford	Yes		
Not Required to Retrofit	IC, Bluebird, Thomas	Cummins/Navistar/Caterpillar/Freight liner/Ford	Yes		141*
Total GE Diesel Fueled Bus Fleet	See Above	Cummins/Navistar/Caterpillar/Freight liner/Ford	Yes	1,334	2,184

*Not included in total as these are already counted in the "CCVS" and "None" categories

NYC Environmental Protection

Local Law 43 / 2010 as Amended by Local Law 119 / 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 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, then summonses are issued by the Bureau of Environmental Compliance's (BEC) Enforcement group.

Data Discussion:

July 1st, 2017 to June 30, 2018 BEC's Enforcement Inspectors have collected oil samples totaling 772 samples from buildings, 4 samples from delivery trucks, and 1 sample from the terminal, totaling 777 samples, an increase of 25% from the samples collected last year. Out of the 777 samples that were analyzed, no corrective measures were necessary by BEC's Enforcement Unit. All 777 samples complied with Subdivision (h) of Section 24-168.1 of the Administrative Code of the City of New York, as amended by local law number 38. In January of 2018, BEC created a new unit to focus on collecting oil samples from burners.