

## **Appendix H**

### **Air Quality**

**Appendix H-1**  
**Industrial Source Analysis Emissions Profile**

## Gowanus Rezoning - Industrial Source Analysis Emissions Profile

Use	Number of Permits	Representative Processes Included	CAS No: Pollutant	Emissions (ST) (lb/hr) 93rd Percentile	Emissions (AN) (lb/yr) 93rd Percentile
<b>Use Group 6A</b>					
Custom tailor/dressmaker shops	37	Laundry, drying, dyeing, silk screening, and painting of textiles	00064-19-7: ACETIC ACID 00074-82-8: METHANE 00092-52-4: BIPHENYL 00095-50-1: DICHLOOROBENZINE, ortho 00106-46-7: 1,4-DICHLOOROBENZENE(P) 00108-88-3: TOLUENE 00111-76-2: ETHYLENGLYCOLMONBUTY 00120-82-1: TRICHCLORO BENZENE 00630-08-0: CARBON MONOXIDE 07446-09-5: SULFUR DIOXIDE 07664-41-7: AMMONIA 07732-18-5: WATER MIST 08002-05-9: PETROLEUM DISTILLATES 10102-43-9: NITROGEN OXIDE 10102-44-0: NITROGEN DIOXIDE 68476-39-1: HYDROCARBON MISC. NY075-00-0: PARTICULATES NY105-00-0: LIQUID MIST NEC NY210-00-0: OXIDES OF NITROGEN NY439-00-0: TOTAL AROMATIC HYDRO NY495-00-0: TOTAL HYDROCARBONS NY550-00-0: ALIPHATIC HYDROCARB NY920-00-0: PAINT THINNER	0.168 0.404 0.055 0.03 0.028 0.32 0.044 0.165 0.0702 0.02138 0.04888 18.416 0.16 0.48 0.006 0.032 0.06378 0.5 0.3845 0.00979 0.95225 3 0.004	336 16.14 110 60.5 5.5 375 88 330 131.7 22.84608 97.76 38920 763 998 92 66.6 121.34 800 620.8 30.88 1836.25 5880 3.2
<b>Use Group 11A</b>					
Book binding/tooling (by hand)	35	Dryers, spay booths, printing, sanding and paper treatment	00062-53-3: ANILINE 00064-19-7: ACETIC ACID 00067-63-0: ISOPROPYL ALCOHOL 00071-36-3: BUTYL ALCOHOL, N- 00071-55-6: METHYL CHLOROFORM 00075-09-2: DICHLOROMETHANE 00078-93-3: METHYL ETHYL KETONE 00100-41-4: ETHYL BENZENE 00108-05-4: VINYL ACETATE 00108-88-3: TOLUENE 00111-76-2: ETHYLENGLYCOLMONBUTY 00117-81-7: DIOCTYL PHTHALATE	0.001 0.001 0.06573 0.14 0.03 0.294 0.4251 0.012 0.001 0.7 0.106 0.07	0.03 0.5 105.42 224 23 588 665.28 24 6 140 210 112

**Gowanus Neighborhood Rezoning and Related Actions**

**Gowanus Rezoning - Industrial Source Analysis Emissions Profile**

Use	Number of Permits	Representative Processes Included	CAS No: Pollutant	Emissions (ST) (lb/hr) 93rd Percentile	Emissions (AN) (lb/yr) 93rd Percentile
			00123-31-9: HYDROQUINONE 00123-86-4: BUTYL ACETATE 01313-99-1: NICKEL OXIDE 01314-13-2: ZINC OXIDE 01330-20-7: XYLENE,M,O&P MIXT. 07664-93-9: SULFURIC ACID 07732-18-5: WATER MIST NY075-00-0: PARTICULATES NY103-00-0: ACID MIST NEC NY439-00-0: TOTAL AROMATIC HYDRO NY495-00-0: TOTAL HYDROCARBONS NY990-00-0: MISCELLANEOUS ORG	0.07447 0.22 0.001 0.006 0.06839 0.001 0.3 0.0712 0.001 1 0.001 0.28837	116.099 336 0.8 4.8 110.74 2 480 304.552 1.6 1 2 576.6525
Custom ceramics	4				
		Cermamic scrap processing, spray booth	00630-08-0: CARBON MONOXIDE 07446-09-5: SULFUR DIOXIDE 10102-43-9: NITROGEN OXIDE 68527-16-2: HYDROCARBONS C1-3 NY075-00-0: PARTICULATES NY909-00-0: TOTAL ORGANICS NY909-00-0: TOTAL ORGANICS	0.05 0.015 0.02 0.002 0.0902 0.02 0.02	26.25 0.078 10.5 1.05 47.67 40 40
Custom manufacturing/altering for retail	37				
		Laundry, drying, dyeing, silk screening, and painting of textiles	00064-19-7: ACETIC ACID 00074-82-8: METHANE 00092-52-4: BIPHENYL 00095-50-1: DICHLOBENZINE, ortho 00106-46-7: 1,4-DICHLOROBENZENE(P) 00108-88-3: TOLUENE 00111-76-2: ETHYLENGLYCOLMONBUTY 00120-82-1: TRICHCLORO BENZENE 00630-08-0: CARBON MONOXIDE 07446-09-5: SULFUR DIOXIDE 07664-41-7: AMMONIA 07732-18-5: WATER MIST 08002-05-9: PETROLEUM DISTILLATES 10102-43-9: NITROGEN OXIDE 10102-44-0: NITROGEN DIOXIDE 68476-39-1: HYDROCARBON MISC.	0.168 0.404 0.055 0.03 0.028 0.32 0.044 0.165 0.0702 0.02138 0.04888 18.416 0.16 0.48 0.006 0.032	336 16.14 110 60.5 5.5 375 88 330 131.7 22.84608 97.76 38920 763 998 92 66.6

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Use	Number of Permits	Representative Processes Included	CAS No: Pollutant	Emissions (ST) (lb/hr) 93rd Percentile	Emissions (AN) (lb/yr) 93rd Percentile
			NY075-00-0: PARTICULATES	0.06378	121.34
			NY105-00-0: LIQUID MIST NEC	0.5	800
			NY210-00-0: OXIDES OF NITROGEN	0.3845	620.8
			NY439-00-0: TOTAL AROMATIC HYDRO	0.00979	30.88
			NY495-00-0: TOTAL HYDROCARBONS	0.95225	1836.25
			NY550-00-0: ALIPHATIC HYDROCARB	3	5880
			NY920-00-0: PAINT THINNER	0.004	3.2
Custom hair product manufacturing	0				
			No permits identified	---	---
Precision instrument/jewelry manufacturing	243				
		Metal cleaning, metal polishing, soldering, acid hood, and stone cutting	00050-00-0: FORMADEHYDE	0.003	8.73
			00064-17-5: ETHANOL	0.001	0.5
			00067-56-1: METHANOL	0.001	0.5
			00074-82-8: METHANE	0.012	17.7
			00074-90-8: HYDROGEN CYANIDE	0.0764	1.125
			00078-83-1: ISOBUTYL ALCOHOL	6.48	10368
			00079-01-6: TRICHLOROETHYLENE	0.75	1500
			00141-78-6: ETHYL ACETATE	0.001	0.5
			00143-33-9: SODIUM CYANIDE	0.00269	2.23
			00544-92-3: COPPER CYANIDE	0.001	2
			00630-08-0: CARBON MONOXIDE	0.0878	125.84
			01309-60-0: LEAD OXIDE	0.001	0.004
			01310-73-2: SODIUM HYDROXIDE	0.00174	2
			01330-20-7: XYLENE,M,O&P MIXT.	1.08	1728
			01333-74-0: HYDROGEN	0.00193	3.832
			07439-92-1: LEAD	0.001	0.12733
			07440-31-5: TIN	0.001	1.73246
			07440-36-0: ANTIMONY	0.001	1.86364
			07440-43-9: CADMIUM	0.001	2
			07440-44-0: CARBON	0.001	1.6
			07446-09-5: SULFUR DIOXIDE	0.00353	5.648
			07647-01-0: HYDROGEN CHLORIDE	0.29726	127.36
			07664-39-3: HYDROGEN FLUORIDE	0.001	0.5
			07664-41-7: AMMONIA	0.6484	16.64
			07664-93-9: SULFURIC ACID	0.00172	2.864
			07697-37-2: NITRIC ACID	0.02088	96.56
			07732-18-5: WATER MIST	1	2400
			07782-50-5: CHLORINE	0.001	0.4
			10102-43-9: NITROGEN OXIDE	0.03916	66.2584
			64742-65-0: DISTILLATE HEAVY PARAFINIC	0.001	0.8

**Gowanus Neighborhood Rezoning and Related Actions**

**Gowanus Rezoning - Industrial Source Analysis Emissions Profile**

Use	Number of Permits	Representative Processes Included	CAS No: Pollutant	Emissions (ST) (lb/hr) 93rd Percentile	Emissions (AN) (lb/yr) 93rd Percentile
			68476-44-8: HYDROCARBONS 68527-16-2: HYDROCARBONS C1-3 NY075-00-0: PARTICULATES NY103-00-0: ACID MIST NEC NY104-00-0: BASIC MIST NEC NY105-00-0: LIQUID MIST NEC NY210-00-0: OXIDES OF NITROGEN NY439-00-0: TOTAL AROMATIC HYDRO NY495-00-0: TOTAL HYDROCARBONS	1.06654 0.06744 0.10686 0.03813 0.001 0.0523 0.4625 0.001 7.5292	169.742 120 221.25 52.876 2 83.68 630 0.13832 46.6
Musical instrument manufacturing (no pianos or organs)	58				
		Instrument manufacturing	00064-17-5: ETHANOL 00067-63-0: ISOPROPYL ALCOHOL 00067-64-1: ACETONE 00071-36-3: BUTYL ALCOHOL, N- 00078-83-1: ISOBUTYL ALCOHOL 00078-93-3: METHYL ETHYL KETONE 00093-43-6: LACTOL 00108-10-1: METHYL ISOBUTYL KETONE 00108-88-3: TOLUENE 00110-19-0: ISOBUTYL ACETATE 00111-15-9: CELLOSOLVE ACETATE 00117-81-7: DIOCTYL PHTHALATE 00123-86-4: BUTYL ACETATE 00141-78-6: ETHYL ACETATE 01330-20-7: XYLENE,M,O&P MIXT. 08030-30-6: NAPHTHA 08032-32-4: LIGROINE 09004-70-0: CELLULOSE NITRATE NY075-00-0: PARTICULATES	0.1258 1.02498 0.585 0.4594 3.8664 0.60814 0.104 1.36 1.7358 0.001 0.001 0.13034 0.51 1.03 0.61304 1.119 0.6 0.0113 0.1066	74.3 1911.496 439 780.32 2105.568 246.896 145.6 1020 1047.36 1.4 1.4 52.185 408 1808 983.16 1566.6 960 8.4288 415.3264
Custom medical appliance manufacturing	16				
		Metal working	07732-18-5: WATER MIST 08012-95-1: OIL MIST (MINERAL) NY075-00-0: PARTICULATES	0.019 0.002 0.00379	38 4 1.93
Custom printing (no limit in C6)	599				
		Printing and drying	00050-00-0: FORMADEHYDE 00056-81-5: GLYCERIN 00064-17-5: ETHANOL 00064-19-7: ACETIC ACID	0.003 0.01502 5.1912 0.0309	8.73 28.831 13761.92 129.715

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			00067-56-1: METHANOL	0.358	1405.46
			00067-63-0: ISOPROPYL ALCOHOL	4.555	12264
			00067-64-1: ACETONE	0.9597	491.04
			00071-36-3: BUTYL ALCOHOL, N-	1.1075	4095.65
			00071-55-6: METHYL CHLOROFORM	0.25	568.976
			00074-82-8: METHANE	0.004	2.97
			00075-09-2: DICHLOROMETHANE	1.1936	1138.58
			00078-93-3: METHYL ETHYL KETONE	0.00172	3.44
			00084-74-2: DIBUTYL PHALATE	0.013	52
			00093-43-6: LACTOL	1.1816	3241.12
			00100-41-4: ETHYL BENZENE	0.01158	27.055
			00107-21-1: ETHYLENE GLYCOL	0.09048	198.88
			00108-10-1: METHYL ISOBUTYL KETONE	0.001	4
			00108-21-4: ISOPROPYL ACETATE	0.06824	110.21
			00108-88-3: TOLUENE	0.30804	202.04
			00108-94-1: CYCLOHEXONE	0.8	1283
			00110-54-3: HEXANE	0.08026	31.71
			00111-76-2: ETHYLENGLYCOLMONBUTY	0.48226	304.16
			00112-34-5: BUTYL CARBITOL	0.1565	337.205
			00115-07-1: PROPYLENE	0.4	890
			00123-31-9: HYDROQUINONE	0.04005	6.156
			00123-86-4: BUTYL ACETATE	0.12111	323.13
			00124-38-9: CARBON DIOXIDE	142.2	62568
			00127-18-4: TETRACHLOROETHYLENE	1.1546	2107.4647
			00141-43-5: MONOETHANOLAMINE	0.4	1.9
			00141-78-6: ETHYL ACETATE	5.521	2591.5
			00142-82-5: N-HEPTANE	2.2924	7217.44
			00630-08-0: CARBON MONOXIDE	0.3072	801.12
			01310-73-2: SODIUM HYDROXIDE	0.001	4
			01327-53-3: ARSENIC TRIOXIDE	0.0000001	0.0000001
			01330-20-7: XYLENE,M,O&P MIXT.	0.06195	107.165
			01333-86-4: CARBON BLACK	0.00416	31.75512
			01335-25-7: LEAD OXIDE	0.00193	2.983
			02807-30-9: ETHYLENEGLYCOL MONOPROPYL ETHER	0.01737	9
			07439-42-1: LEAD	0.00574	2
			07446-09-5: SULFUR DIOXIDE	0.0252	56.59
			07664-38-2: PHOSPHORIC ACID	0.00186	4.0744
			07664-39-3: HYDROGEN FLUORIDE	0	0.01
			07664-41-7: AMMONIA	0.92863	1792.56
			07664-93-9: SULFURIC ACID	0.004	33.778
			07697-37-2: NITRIC ACID	0.019	8.36
			07732-18-5: WATER MIST	58.896	21499.2

**Gowanus Neighborhood Rezoning and Related Actions**

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			07758-97-6: LEAD CHROMATE 08002-05-9: PETROLEUM DISTILLATES 08030-30-6: NAPHTHA 08032-32-4: LIGROINE 10102-43-9: NITROGEN OXIDE 10102-44-0: NITROGEN DIOXIDE 68476-39-1: HYDROCARBON MISC. 68476-44-8: HYDROCARBONS 68527-16-2: HYDROCARBONS C1-3 NY075-00-0: PARTICULATES NY090-00-0: OIL MIST NY210-00-0: OXIDES OF NITROGEN NY439-00-0: TOTAL AROMATIC HYDRO NY495-00-0: TOTAL HYDROCARBONS NY550-00-0: ALIPHATIC HYDROCARB NY559-00-0: TOTAL ALIPHATIC HYD NY599-00-0: TOTAL ALIPHATIC ALC NY909-00-0: TOTAL ORGANICS NY990-00-0: MISCELLANEOUS ORG NY998-00-0: TOTAL ORGANIC SOLVE	0.001 0.268 0.23257 14.5014 0.37016 0.004 2.7234 0.03934 0.3124 0.12684 0.04727 0.19194 0.43312 18.4204 1 1.116 5.96 0.7744 3.7248 5.808	0.003 1278 36.41 3797.08 527.48 6.1 5999.18 45.44 992.1214 616.22 115.871 1543.032 692.992 17002.36 2016 3486.4 22352 3.35207 10045.56 4167.76
Watchmaking	12	Paint Dip, Polishing, Spray Booth, Drying	00064-17-5: ETHANOL 00067-56-1: METHANOL 00067-64-1: ACETONE 00108-88-3: TOLUENE 00141-78-6: ETHYL ACETATE NY075-00-0: PARTICULATES NY909-00-0: TOTAL ORGANICS	0.33 0.02 0.4192 0.12975 0.02 0.00686 0.225	1980 120 670.02 202.56 120 7.832 1350
<b>Use Group 12B</b>					
Commercial art gallery	49	Fiberglass Modling, Bronze Casting	00067-63-0: ISOPROPYL ALCOHOL 00067-64-1: ACETONE 00078-83-1: ISOBUTYL ALCOHOL 00078-93-3: METHYL ETHYL KETONE 00100-42-5: STYRENE	1.0248 0.9128 4.0274 0.693 1.22221	1377.84 1136.1 6428.496 898.422 2428.8595



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			00108-88-3: TOLUENE 00110-19-0: ISOBUTYL ACETATE 00123-86-4: BUTYL ACETATE 00630-08-0: CARBON MONOXIDE 01314-13-2: ZINC OXIDE 07446-09-5: SULFUR DIOXIDE NY075-00-0: PARTICULATES NY210-00-0: OXIDES OF NITROGEN NY559-00-0: TOTAL ALIPHATIC HYD	3.788 0.24 0.9359 0.008 0.0000001 0.001 0.10224 0.08 1.4	4600.3 224 1177.96 6.4 0.0000001 0.8 156.64 64 1529
Jewelry / art metal craft shops	243				
		Metal cleaning, metal polishing, soldering, acid hood, and stone cutting	00050-00-0: FORMADEHYDE 00064-17-5: ETHANOL 00067-56-1: METHANOL 00074-82-8: METHANE 00074-90-8: HYDROGEN CYANIDE 00078-83-1: ISOBUTYL ALCOHOL 00079-01-6: TRICHLOROETHYLENE 00141-78-6: ETHYL ACETATE 00143-33-9: SODIUM CYANIDE 00544-92-3: COPPER CYANIDE 00630-08-0: CARBON MONOXIDE 01309-60-0: LEAD OXIDE 01310-73-2: SODIUM HYDROXIDE 01330-20-7: XYLENE,M,O&P MIXT. 01333-74-0: HYDROGEN 07439-92-1: LEAD 07440-31-5: TIN 07440-36-0: ANTIMONY 07440-43-9: CADMIUM 07440-44-0: CARBON 07446-09-5: SULFUR DIOXIDE 07647-01-0: HYDROGEN CHLORIDE 07664-39-3: HYDROGEN FLUORIDE 07664-41-7: AMMONIA 07664-93-9: SULFURIC ACID 07697-37-2: NITRIC ACID 07732-18-5: WATER MIST 07782-50-5: CHLORINE 10102-43-9: NITROGEN OXIDE 64742-65-0: DISTILLATE HEAVY PARAFINIC	0.003 0.001 0.001 0.012 0.0764 6.48 0.75 0.001 0.00269 0.001 0.0878 0.001 0.00174 1.08 0.00193 0.001 0.001 0.001 0.001 0.00353 0.29726 0.001 0.6484 0.00172 0.02088 1 0.001 0.03916 0.001	8.73 0.5 0.5 17.7 1.125 10368 1500 0.5 2.23 2 125.84 0.004 2 1728 3.832 0.12733 1.73246 1.86364 2 1.6 5.648 127.36 0.5 16.64 2.864 96.56 2400 0.4 66.2584 0.8

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			68476-44-8: HYDROCARBONS 68527-16-2: HYDROCARBONS C1-3 NY075-00-0: PARTICULATES NY103-00-0: ACID MIST NEC NY104-00-0: BASIC MIST NEC NY105-00-0: LIQUID MIST NEC NY210-00-0: OXIDES OF NITROGEN NY439-00-0: TOTAL AROMATIC HYDRO NY495-00-0: TOTAL HYDROCARBONS	1.06654 0.06744 0.10686 0.03813 0.001 0.0523 0.4625 0.001 7.5292	169.742 120 221.25 52.876 2 83.68 630 0.13832 46.6
<b>Use Group 16A</b>					
Building material sales, open or enclosed (5k sf open storage limit)	0				
			No Permits Identified	---	---
Building contractor supply stores (5k sf open storage limit)	0				
			No Permits Identified	---	---
Household/office equipment or machinery repair shops	25				
		Metal working, Plastic working, Paint Bake Oven, Metal Cleaning, Ink Mixing, Welding	00064-17-5: ETHANOL 00067-64-1: ACETONE 00074-82-8: METHANE 00078-83-1: ISOBUTYL ALCOHOL 00109-86-4: METHYL CELLOSOLVE 00110-80-5: GLYCOL MONOETHYLETHER 00123-86-4: BUTYL ACETATE 00124-38-9: CARBON DIOXIDE 00630-08-0: CARBON MONOXIDE 01314-13-2: ZINC OXIDE 01330-20-7: XYLENE,M,O&P MIXT. 07446-09-5: SULFUR DIOXIDE 07732-18-5: WATER MIST NY075-00-0: PARTICULATES NY210-00-0: OXIDES OF NITROGEN NY559-00-0: TOTAL ALIPHATIC HYD NY998-00-0: TOTAL ORGANIC SOLVE	0.013 0.6 0.006 0.24 0.003 0.005 0.001 0.001 0.001 0.03 0.000001 0.001 0.001 0.001 0.04748 0.33 0.08 0.001	6 960 19 288 1.1 1.8 4 1.8 96 0.000001 4 3.2 0.81 75.52 1056 128 4
Machinery rental or sales establishments	0				
			No Permits Identified	---	---
<b>Use Group 17B</b>					
Apparel or other textile product manufacturing	37				
		Laundry, drying, dyeing, silk screening, and painting of	00064-19-7: ACETIC ACID 00074-82-8: METHANE 00092-52-4: BIPHENYL	0.168 0.404 0.055	336 16.14 110

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Use	Number of Permits	Representative Processes Included	CAS No: Pollutant	Emissions (ST) (lb/hr) 93rd Percentile	Emissions (AN) (lb/yr) 93rd Percentile
		textiles	00095-50-1: DICHLOROBENZINE, ortho 00106-46-7: 1,4-DICHLOROBENZENE(P) 00108-88-3: TOLUENE 00111-76-2: ETHYLENGLYCOLMONBUTY 00120-82-1: TRICHCLORO BENZENE 00630-08-0: CARBON MONOXIDE 07446-09-5: SULFUR DIOXIDE 07664-41-7: AMMONIA 07732-18-5: WATER MIST 08002-05-9: PETROLEUM DISTILLATES 10102-43-9: NITROGEN OXIDE 10102-44-0: NITROGEN DIOXIDE 68476-39-1: HYDROCARBON MISC. NY075-00-0: PARTICULATES NY105-00-0: LIQUID MIST NEC NY210-00-0: OXIDES OF NITROGEN NY439-00-0: TOTAL AROMATIC HYDRO NY495-00-0: TOTAL HYDROCARBONS NY550-00-0: ALIPHATIC HYDROCARB NY920-00-0: PAINT THINNER	0.03 0.028 0.32 0.044 0.165 0.0702 0.02138 0.04888 18.416 0.16 0.48 0.006 0.032 0.06378 0.5 0.3845 0.00979 0.95225 3 0.004	60.5 5.5 375 88 330 131.7 22.84608 97.76 38920 763 998 92 66.6 121.34 800 620.8 30.88 1836.25 5880 3.2
Bottling of all beverage types	2				
		Sanding and spray booth	01335-25-7: LEAD OXIDE NY075-00-0: PARTICULATES NY909-00-0: TOTAL ORGANICS NY930-00-0: ORGANIC SOLVENTS	0.01 0.00744 3.128 3.128	0.01 0.07719 6006 6006
Canvas or canvas product manufacturing	4				
		Woodworking and spray booth	00064-17-5: ETHANOL 00067-63-0: ISOPROPYL ALCOHOL 00067-64-1: ACETONE 00078-93-3: METHYL ETHYL KETONE 00107-98-2: PROPYLENE GLYCOL METHYL ET 00108-10-1: METHYL ISOBUTYL KETONE 00123-86-4: BUTYL ACETATE 07732-18-5: WATER MIST 34590-94-8: DIPROPYLENE GLYCOL METHYL ETHER 64742-89-8: NAPHTHA LIGHT ALIPHATIC NY075-00-0: PARTICULATES NY990-00-0: MISCELLANEOUS ORG	1.15 0.44 0.764 0.88 0.056 0.66 1.9 20 0.028 3.93 0.03465 1.32	400 110 87.847 220 14 165 30 100 7 7860 8.43093 330

# Gowanus Neighborhood Rezoning and Related Actions

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Use	Number of Permits	Representative Processes Included	CAS No: Pollutant	Emissions (ST) (lb/hr) 93rd Percentile	Emissions (AN) (lb/yr) 93rd Percentile
Cork product manufacturing	0				
			No Permits Identified	---	---
Fur good manufacturing (excl. tanning/dyeing)	41				
		Textile Drying, Printing, General Exhaust	00078-59-1: ISOPHORONE 00108-10-1: METHYL ISOBUTYL KETONE 00110-82-7: CYCLOHEXANE 00630-08-0: CARBON MONOXIDE 07446-09-5: SULFUR DIOXIDE 07732-18-5: WATER MIST 08002-05-9: PETROLEUM DISTILLATES NY075-00-0: PARTICULATES NY090-00-0: OIL MIST NY210-00-0: OXIDES OF NITROGEN NY550-00-0: ALIPHATIC HYDROCARB NY920-00-0: PAINT THINNER	0.126 0.14 0.707 0.12612 0.00458 1.1 1.9712 0.05978 0.2903 1.155 1.1 0.26	262.1 291.2 1470.5 270.769 9.1752 2560 9400.16 414.45 696.906 2522.8 2200 832
Glass product manufacturing	21				
		Spray booth, sandblasting, and glass forming oven	00078-83-1: ISOBUTYL ALCOHOL 00124-38-9: CARBON DIOXIDE 00630-08-0: CARBON MONOXIDE 07446-09-5: SULFUR DIOXIDE 07664-41-7: AMMONIA 07732-18-5: WATER MIST 08032-32-4: LIGROINE NY075-00-0: PARTICULATES NY210-00-0: OXIDES OF NITROGEN	0.293 1 0.82591 0.04097 0.5022 2.395 0.02965 0.04718 1.845	38.614 8760 1684.7562 217.818 803.52 8254.73 161.93 5444.62 3764.12
Hair, felt, feather product manufacturing (excl. washing, curing, dyeing)	2				
		General exhaust	NY075-00-0: PARTICULATES	0.002	3.2
Hosiery manufacturing	0				
			No Permits Identified	---	---
Dry ice/natural ice manufacturing	0				
			No Permits Identified	---	---
Jute, hemp, sisal, or oakum product manufacturing	18				
		Gluing, Bristle Processing, Woodworking			

## Gowanus Rezoning - Industrial Source Analysis Emissions Profile

Use	Number of Permits	Representative Processes Included	CAS No: Pollutant	Emissions (ST) (lb/hr) 93rd Percentile	Emissions (AN) (lb/yr) 93rd Percentile
			00078-93-3: METHYL ETHYL KETONE 00630-08-0: CARBON MONOXIDE 07446-09-5: SULFUR DIOXIDE 68527-16-2: HYDROCARBONS C1-3 NY075-00-0: PARTICULATES NY210-00-0: OXIDES OF NITROGEN NY439-00-0: TOTAL AROMATIC HYDRO NY495-00-0: TOTAL HYDROCARBONS	1.35 0.004 0.001 0.001 0.0597 0.04 0.001 0.096	2160 0.4 0.48 3.2 278.72 132 2.4 115.2
Mattress manufacturing	0		No Permits Identified	---	---
Scenery construction manufacturing	12				
		Spray booth	00108-88-3: TOLUENE NY075-00-0: PARTICULATES	2.16 0.08	1296 48
Shoddy (rag) manufacturing	0		No Permits Identified	---	---
Soap or detergent packaging	60				
		Acid mixing, wax mixing, grinding and blending of soaps	00064-17-5: ETHANOL 00151-50-8: POTASSIUM CYANIDE 00557-05-1: ZINC STEARATE 00630-08-0: CARBON MONOXIDE 01306-19-0: CADMIUM OXIDE 01310-73-2: SODIUM HYDROXIDE 07428-48-0: LEAD STEARATE 07446-09-5: SULFUR DIOXIDE 07647-01-0: HYDROGEN CHLORIDE 07664-41-7: AMMONIA 07664-93-9: SULFURIC ACID 07697-37-2: NITRIC ACID 07732-18-5: WATER MIST 08002-74-2: O NY075-00-0: PARTICULATES NY090-00-0: OIL MIST NY104-00-0: BASIC MIST NEC NY210-00-0: OXIDES OF NITROGEN NY550-00-0: ALIPHATIC HYDROCARB	0.001 0.001 0.001 0.002 0.004 0.001 0.001 0.00472 0.01 0.001 0.001 0.001 0.001 0.001 0.06 0.05794 0.001 0.006 0.00937 6.83	1.5 1.6 1.2 3.2 0.012 2 0.6 9.412 0.64 1.6 0.003 2 1.6 96 1056.47606 0.001 2.9 15.02 109
Textile spinning, weaving, manufacturing, dyeing, printing	41				
		Silk screening, drying	00078-59-1: ISOPHORONE	0.126	262.1

# Gowanus Neighborhood Rezoning and Related Actions

## Gowanus Rezoning - Industrial Source Analysis Emissions Profile

Use	Number of Permits	Representative Processes Included	CAS No: Pollutant	Emissions (ST) (lb/hr) 93rd Percentile	Emissions (AN) (lb/yr) 93rd Percentile
Upholstering in bulk	23	Woodworking and spray booth	00108-10-1: METHYL ISOBUTYL KETONE 00110-82-7: CYCLOHEXANE 00630-08-0: CARBON MONOXIDE 07446-09-5: SULFUR DIOXIDE 07732-18-5: WATER MIST 08002-05-9: PETROLEUM DISTILLATES NY075-00-0: PARTICULATES NY090-00-0: OIL MIST NY210-00-0: OXIDES OF NITROGEN NY550-00-0: ALIPHATIC HYDROCARB NY920-00-0: PAINT THINNER  00108-88-3: TOLUENE NY075-00-0: PARTICULATES	0.14 0.707 0.12612 0.00458 1.1 1.9712 0.05978 0.2903 1.155 1.1 0.26  4.32 0.08935	291.2 1470.5 270.769 9.1752 2560 9400.16 414.45 696.906 2522.8 2200 832  0 0
Wax product manufacturing	0				
			No Permits Identified	---	---
<b>Use Group 17C</b>					
Agriculture, incl. greenhouses, nurseries, and truck (produce) gardens	0				
			No Permits Identified	---	---
Docks for passenger vessels (no limit)	0				
			No Permits Identified	---	---
Docks for sightseeing, excursion, or sport fishing vessels (no limit)	0				
			No Permits Identified	---	---
Public transit, railroad, or electric utility substations (no limit)	0				
			No Permits Identified	---	---
Truck terminals (no limit)	0				
			No Permits Identified	---	---
<b>Use Group 18A</b>					
Breweries and alcoholic beverage manufacturing	N/A				
		Fermentation exhausts	00050-00-0: FORMADEHYDE 00064-17-5: ETHANOL 00075-07-0: ACETALDEHYDE 00141-78-6: ETHYL ACETATE NY075-00-0: PARTICULATES	0.0014 0.0014 0.0014 0.0014 0.0716	1.7 1.7 1.7 1.7 89.2

**Appendix H-2**  
**Project Industrial Sources - Air Toxic Concentrations**

Appendix H-2  
Gowanus Rezoning

Project Industrial Sources--Air Toxic Concentrations (ug/m3)

Use Groups & Pollutants	Short-Term Time Period																	Annual Time Period																													
	Industrial Emission Source Development Site																	Industrial Emission Source Development Site																													
	Facade Horizontal Exhaust Stack <sup>(1)</sup>																	Facade Horizontal Exhaust Stack <sup>(1)</sup>																													
SOC	Site 22	Site 29	Site 42	Site 44	Site 47	Site 48	Site P	Site AK	Site BI	Site BL	Site BO	Site 22	Site 29	Site 42	Site 44	Site 47	Site 48	Site P	Site AK	Site BI	Site BL	Site BO	Site 22	Site 29	Site 42	Site 44	Site 47	Site 48	Site P	Site AK	Site BI	Site BL	Site BO														
Colleges or universities																																															
College or university dormitories																																															
Libraries, museums, non-commercial art galleries																																															
Schools																																															
Custom tailor/dressmaker shops																																															
00064-19-7: ACETIC ACID	3,700	7.19E+02	2.89E+02	5.30E+02	3.28E+02	5.36E+02	6.61E+02	5.59E+02	1.03E+03	3.90E+02	3.47E+02	2.67E+02	1.62E+02	2.29E+01	2.42E+02	1.48E+01	3.80E+01	7.79E+00	1.85E+02	1.77E+02	4.10E+02	1.14E+02	4.41E+02	60	6.99E+00	2.47E+00	3.35E+00	4.01E+00	4.73E+00	6.21E+00	4.93E+00	1.32E+01	3.01E+00	2.83E+00	2.66E+00	1.04E+00	9.26E-02	3.12E+00	6.05E-02	2.59E-01	4.17E-02	2.16E+00	2.47E+00	4.38E+00	1.17E+00	4.42E+00	
00074-02-8: METHANE	*****	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	
00092-02-4: BIPHENYL	*****	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***		
00095-50-1: DICHLOROBENZENE, ortho	30,000	1.28E+02	5.17E+01	9.46E+01	5.85E+01	9.57E+01	1.18E+02	3.99E+01	1.84E+02	6.96E+01	6.20E+01	4.76E+01	2.89E+01	4.09E+00	4.31E+01	2.64E+00	6.78E+00	1.39E+00	3.31E+01	3.15E+01	7.32E+01	2.04E+01	7.88E+01	200	1.08E+00	4.45E-01	6.04E-01	7.23E-01	8.53E-01	1.12E+00	8.97E-01	2.38E+00	5.41E-01	5.10E-01	4.79E-01	1.88E-01	1.67E-02	5.63E-01	1.09E-02	4.67E-02	7.50E-03	3.90E-01	4.45E-01	7.98E-01	2.10E-01	7.96E-01	
00106-46-7: 1,4-DICHLOROBENZENE(P)	*****	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***		
00108-08-3: TOLUENE	37,000	1.37E+03	5.51E+02	1.01E+03	6.24E+02	1.02E+03	1.26E+03	1.07E+03	1.97E+03	7.43E+02	6.61E+02	5.08E+02	3.08E+02	4.36E+01	4.80E+02	2.62E+01	7.24E+01	1.48E+01	3.53E+02	3.36E+02	7.81E+02	2.17E+02	8.41E+02	5,000	6.08E+00	2.78E+00	3.74E+00	4.48E+00	5.28E+00	6.93E+00	5.50E+00	1.47E+01	3.35E+00	3.16E+00	2.97E+00	1.17E+00	1.03E-01	3.49E+00	6.75E-02	2.89E-01	4.65E-02	2.41E+00	2.76E+00	4.89E+00	1.30E+00	4.93E+00	
00111-76-2: ETHYLENYLCOLMONIBUTY	4,700	1.86E+02	7.58E+01	1.39E+02	8.59E+01	1.40E+02	1.73E+02	1.46E+02	2.70E+02	1.02E+02	9.08E+01	6.96E+01	4.24E+01	6.03E+00	6.33E+01	3.97E+00	9.95E+00	9.24E+00	4.85E+01	4.62E+01	1.07E+02	2.98E+01	1.16E+02	1,800	1.57E+00	6.47E-01	8.78E-01	1.05E+00	1.24E+00	1.63E+00	1.29E+00	3.40E+00	7.87E-01	1.24E-01	6.98E-01	2.74E-01	2.43E-02	8.18E-01	1.58E-02	8.78E-02	1.08E-02	5.67E-01	6.48E-01	1.15E+00	3.05E-01	1.16E+03	
00120-82-1: TRICHLORO BENZENE	3,700	7.06E+02	2.84E+02	5.20E+02	3.22E+02	5.26E+02	6.49E+02	5.49E+02	1.01E+03	3.83E+02	3.41E+02	2.62E+02	1.59E+02	2.25E+01	2.37E+02	1.45E+01	3.73E+01	7.65E+00	1.82E+02	1.78E+02	4.03E+02	1.12E+02	4.33E+02	35	5.88E+00	2.43E+00	3.29E+00	3.94E+00	4.65E+00	6.10E+00	4.84E+00	1.30E+01	2.99E+00	2.78E+00	2.61E+00	1.03E+00	9.10E-02	3.07E+00	5.94E-02	2.55E-01	4.09E-02	2.13E+00	2.43E+00	4.31E+00	1.14E+00	4.34E+00	
00630-08-0: CARBON MONOXIDE	40,000	3.00E+02	1.21E+02	2.21E+02	1.37E+02	2.24E+02	2.76E+02	2.34E+02	4.31E+02	1.63E+02	1.45E+02	1.11E+02	6.76E+01	9.57E+00	1.01E+02	6.18E+00	1.59E+01	3.25E+00	7.74E+01	7.98E+01	1.71E+02	4.76E+01	1.84E+02	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	
07446-04-5: SULFUR DIOXIDE	183	9.15E+01	3.68E+01	6.74E+01	4.17E+01	6.82E+01	8.41E+01	7.12E+01	1.31E+02	4.86E+01	4.42E+01	3.38E+01	2.09E+01	2.91E+00	3.07E+01	1.88E+00	4.83E+00	9.91E-01	2.36E+01	2.22E+01	5.22E+01	1.45E+01	5.62E+01	80	4.07E-01	1.68E-01	2.28E-01	2.73E-01	3.22E-01	4.22E-01	3.35E-01	8.98E-01	2.04E-01	1.92E-01	1.81E-01	7.73E-01	3.04E-01	2.69E-02	9.09E-01	1.76E-02	7.55E-02	1.21E-02	6.30E-01	7.20E-01	1.28E+00	3.39E-01	1.29E+00
07664-11-7: AMMONIA	2,400	2.09E+02	8.42E+01	1.54E+02	9.54E+01	1.56E+02	1.92E+02	1.63E+02	3.00E+02	1.13E+02	1.01E+02	7.76E+01	4.71E+01	6.66E+00	7.03E+01	4.30E+00	1.11E+01	2.27E+00	5.39E+01	5.14E+01	1.19E+02	3.32E+01	1.28E+02	500	1.74E+00	7.18E-01	9.76E-01	1.17E+00	1.38E+00	1.81E+00	1.43E+00	3.84E+00	8.74E-01	8.23E-01	7.73E-01	3.04E-01	2.69E-02	9.09E-01	1.76E-02	7.55E-02	1.21E-02	6.30E-01	7.20E-01	1.28E+00	3.39E-01	1.29E+00	
07732-18-5: WATER MIST	*****	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***		
08002-05-0: PETROLEUM DISTILLATES	*****	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***		
10102-43-8: NITROGEN OXIDE	*****	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***		
10102-44-0: NITROGEN DIOXIDE	84	2.53E+02	1.03E+01	1.89E+01	1.17E+01	1.91E+01	2.36E+01	2.00E+01	3.68E+01	1.39E+01	1.24E+01	9.53E+00	5.68E+01	8.18E-01	8.63E+00	5.28E-01	1.36E+00	2.78E-01	6.82E+00	6.31E+00	1.46E+01	4.07E+00	1.58E+01	74	1.78E+01	7.33E+00	9.96E+00	1.19E+01	1.41E+01	1.84E+01	1.46E+01	3.92E+01	8.93E+00	8.41E+00	7.90E+00	3.10E+00	2.75E-01	9.28E+00	1.80E+01	7.70E-01	1.24E-01	6.43E+00	7.35E+00	1.30E+01	3.48E+00	1.31E+01	
08476-39-1: HYDROCARBON MISC.	*****	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	
NY075-00-8: PARTICULATES	17	2.14E+01	7.58E+00	1.12E+01	1.14E+01	1.36E+01	1.78E+01	1.52E+01	4.30E+01	3.59E+00	9.28E+00	7.70E+00	8.13E+00	6.99E-01	1.39E+01	2.99E-01	1.04E+00	2.86E-01	9.11E+00	8.73E+00	1.97E+01	7.81E+00	2.50E+01	4.40	2.16E+00	8.92E-01	1.21E+00	1.45E+00	1.71E+00	2.24E+00	1.78E+00	4.77E+00	1.09E+00	1.02E+00	9.60E-01	3.77E-01	3.34E-02	1.13E+00	2.18E-02	9.37E-02	1.50E-02	7.81E-01	8.93E-01	1.58E+00	4.21E-01	1.60E+00	
NY105-00-0: LIQUID MIST NEC	*****	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	
NY210-00-0: OXIDES OF NITROGEN	*****	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	
NY438-00-0: TOTAL AROMATIC HYDRO	*****	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***</								



Appendix H-2

Gowanus Rezoning

Project Industrial Sources--Air Toxic Concentrations (ug/m3)

Use Groups & Pollutants	SOC	Short-Term Time Period																		Annual Time Period																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
		Industrial Emission Source Development Site										Rooftop Vertical Exhaust Stack										Industrial Emission Source Development Site										Rooftop Vertical Exhaust Stack																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		Site 22	Site 29	Site 42	Site 44	Site 47	Site 48	Site P	Site AR	Site BI	Site BL	Site BO	Site 22	Site 29	Site 42	Site 44	Site 47	Site 48	Site P	Site AR	Site BI	Site BL	Site BO	Site 22	Site 29	Site 42	Site 44	Site 47	Site 48	Site P	Site AR	Site BI	Site BL	Site BO	Site 22	Site 29	Site 42	Site 44	Site 47	Site 48	Site P	Site AR	Site BI	Site BL	Site BO																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
Business schools / colleges																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

### Project Industrial Sources--Air Toxic Concentrations (ug/m3)

[illegible]

## concentrations (ug/m3)

Watchmaking						

### Project Industrial Sources--Air Toxic Concentrations (ug/m3)

[illegible]

Appendix H-2  
Gowanus Rezoning

### Project Industrial Sources--Air Toxic Concentrations (ug/m3)

[illegible]

### Project Industrial Sources--Air Toxic Concentrations (ug/m3)

[illegible]

## Appendix H-2

### Gowanus Rezoning

**Project Industrial Sources--Air Toxic Concentrations (ug/m3)**

[illegible]

## Gowanus Rezoning

Time Period \_\_\_\_\_  
 Location Source Development Site \_\_\_\_\_

Exceedances of SG/AGC threshold in **bold**.

**Notes:**

(1) Based on modeled results for façade horizontal exhaust stacks, development sites were restricted to exclusively utilize exhaust designs with rooftop vertical exhaust stacks.



**Appendix H-3**  
**Proposed Air Quality (E) Designations**

**A. INTRODUCTION**

Under the proposed zoning, (E) Designations are proposed to avoid impacts on privately owned parcels on projected or potential development sites with respect to air quality (heating and hot water systems and potential industrial uses). A description of the requirements of those (E) Designations follows. A list of the sites, blocks, and lots affected by the (E) Designations is presented in **Tables H-3-1** through **H-3-3**.

**B. PROPOSED (E) DESIGNATIONS****HEATING AND HOT WATER SYSTEM (E) DESIGNATIONS**

Under the Proposed Actions, for each of the 79 projected and potential development sites (31 projected and 48 potential development sites) development sites that failed the heating and hot water system screening analysis, a refined analysis was performed utilizing the AERMOD dispersion model (see Chapter 15, "Air Quality"). The results indicated that all but seven of the 79 sites that failed the screening analysis for No. 2 oil also failed the refined analysis, and 60 of 66 sites that failed the screening analysis for natural gas also failed the refined analysis.

To preclude the potential for significant adverse air quality impacts on other projected and potential developments from the heating and hot water system emissions, an (E) Designation would be incorporated into the proposed rezoning for each of the affected sites. The descriptions and requirements of the proposed (E) Designations for these sites with respect to heating and hot water systems are presented in **Tables H-3-1** and **H-3-2**.

**Table H-3-1**  
**(E) Designations for Projected Development Sites**  
**(Heating and Hot Water System Restrictions)**

<b>Development Site</b>	<b>Block</b>	<b>Lots</b>	<b>Proposed (E) Designation</b>
1	395	30, 32, 33, 34, 35, 36, 37	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, to avoid any potential significant air quality impacts.
4	399	58, 59, 60	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, and ensure that heating and hot water stack(s) is located at least 85 feet above grade, to avoid any potential significant air quality impacts.

**Table H-3-1 (cont'd)**  
**(E) Designations for Projected Development Sites**  
**(Heating and Hot Water System Restrictions)**

Development Site	Block	Lots	Proposed (E) Designation
6	405	12, 63, 64	Any new residential and/or commercial development must ensure that heating and hot water system stack(s) is located at least 88 feet above grade, to avoid any potential significant air quality impacts.
5	405	13, 14, 15, 16	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, to avoid any potential significant air quality impacts.
7	405	27	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water system stack(s) is located at least 85 feet above grade, to avoid any potential significant air quality impacts.
9	407	8, 9	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water systems stack(s) is located at least 12 feet away from the lot line facing 3rd Avenue, to avoid any potential significant air quality impacts.
13	412	18, 19, 20, 45, 48	Any new residential and/or commercial development must <b>EITHER</b> be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water systems stack(s) is located at the highest tier and least 45 feet away from the lot line facing Nevins Street; <b>OR</b> must be fitted with low NOx (30 ppm) burners firing natural gas for heating and hot water systems, and ensure that heating and hot water stack(s) is located at least 128 feet above grade, to avoid any potential significant air quality impacts.
14	413	1, 2, 7	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, and ensure that the heating and hot water system stack(s) is located at least 125 feet above grade, to avoid any potential significant air quality impacts.
15	417	1, 10, 14, 21	Any new residential and/or commercial development must ensure that heating and hot water system stack(s) is located at least 213 feet above grade, to avoid any potential significant air quality impacts.

**Table H-3-1 (cont'd)**  
**(E) Designations for Projected Development Sites**  
**(Heating and Hot Water System Restrictions)**

Development Site	Block	Lots	Proposed (E) Designation
18	424	1, 20	Any new residential and/or commercial development must be fitted with low NO <sub>x</sub> (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that heating and hot water system stack(s) is located at least 191 feet above grade, to avoid any potential significant air quality impacts. <sup>1</sup>
19	426	17, 44, 49	Any new residential and/or commercial development must be fitted with low NO <sub>x</sub> (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that the heating and hot water systems stack(s) is located at least 10 feet away from the lot line facing Nevins Street and ensure that the heating and hot water system stack(s) is located at least 123 feet above grade, to avoid any potential significant air quality impacts. <sup>2</sup>
20	426	1	Any new residential and/or commercial development must be fitted with low NO <sub>x</sub> (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that the heating and hot water systems stack(s) is located at least 15 feet away from the lot line facing Nevins Street, and ensure that the heating and hot water system stack(s) is located at least 128 feet above grade, to avoid any potential significant air quality impacts. <sup>3</sup>
21	427	1, 7, 10	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, to avoid any potential significant air quality impacts.
22	431	7, 12, 17, 43	Any new residential and/or commercial development must be fitted with low NO <sub>x</sub> (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that heating and hot water system stack(s) is located at least 198 feet above grade, to avoid any potential significant air quality impacts. <sup>4</sup>
24	433	28, 46	Any new residential and/or commercial development must be fitted with low NO <sub>x</sub> (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water systems stack(s) is located at least 42 feet away from the lot line facing Sackett Street, to avoid any potential significant air quality impacts.

<sup>1</sup> Fuel type and low NO<sub>x</sub> burner restriction required as a result of the cluster analysis.

<sup>2</sup> Low NO<sub>x</sub> burners and stack location restriction required as a result of the cluster analysis.

<sup>3</sup> Stack location restriction required as a result of the cluster analysis.

<sup>4</sup> Fuel type and low NO<sub>x</sub> burner restriction required as a result of the cluster analysis.

**Table H-3-1 (cont'd)**  
**(E) Designations for Projected Development Sites**  
**(Heating and Hot Water System Restrictions)**

<b>Development Site</b>	<b>Block</b>	<b>Lots</b>	<b>Proposed (E) Designation</b>
25	434	1, 12	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water system stack(s) is located at least 91 feet above grade, to avoid any potential significant air quality impacts. <sup>5</sup>
26	434	24	Any new commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, to avoid any potential significant air quality impacts. <sup>6</sup>
27	434	35	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, to avoid any potential significant air quality impacts.
28 North	438	1, 2, 3, 8, 11, 20, 50	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems and ensure that heating and hot water system stack(s) is located at least 218 feet above grade, to avoid any potential significant air quality impacts. <sup>7</sup>
28 South	438	1, 2, 3, 8, 11, 20, 50	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that the heating and hot water systems stack(s) is located at least 40 feet away from the lot line facing President Street, and ensure that heating and hot water system stack(s) is located at least 213 feet above grade, to avoid any potential significant air quality impacts.
29 North	439	1	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems and ensure that heating and hot water systems stack(s) is located at least 203 feet above grade, to avoid any potential significant air quality impacts. <sup>8</sup>

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<sup>5</sup> Stack height restriction required as a result of the cluster analysis.

<sup>6</sup> (E) Designation is required as a result of the cluster analysis.

<sup>7</sup> (E) Designation is required as a result of the cumulative analysis on Site 28.

<sup>8</sup> (E) Designation is required as a result of the cumulative analysis for Site 29.

**Table H-3-1 (cont'd)**  
**(E) Designations for Projected Development Sites**  
**(Heating and Hot Water System Restrictions)**

Development Site	Block	Lots	Proposed (E) Designation
29 South	439	1	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems and ensure that heating and hot water systems stack(s) is located at least 203 feet above grade, to avoid any potential significant air quality impacts. <sup>8</sup>
30	440	1, 12	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water stack(s) is located no more than 209 feet away from the lot line facing Nevins Street, and ensure that heating and hot water system stack(s) is at least 90 feet above grade, to avoid any potential significant air quality impacts.
31	441	24, 33, 35	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, and ensure that heating and hot water stack(s) is located at least 113 feet above grade, to avoid any potential significant air quality impacts.
33	447	32	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water systems stack(s) is located at least 10 feet away from the lot line facing President Street, to avoid any potential significant air quality impacts.
37 B	453	21	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, to avoid any potential significant air quality impacts.
38	456	1, 6, 34	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems and ensure that heating and hot water system stack(s) is located at least 158 feet above grade, to avoid any potential significant air quality impacts.
40	462	12, 14	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that the heating and hot water systems stack(s) is located at least 53 feet away from the lot line facing 3rd Street, and ensure that heating and hot water system stack(s) is located at least 193 feet above grade, to avoid any potential significant air quality impacts.
41	972	1, 43, 58	Any new residential and/or commercial development must ensure that heating and hot water stack(s) is located at least 223 feet above grade, to avoid any potential significant air quality impacts.

**Table H-3-1 (cont'd)**  
**(E) Designations for Projected Development Sites**  
**(Heating and Hot Water System Restrictions)**

<b>Development Site</b>	<b>Block</b>	<b>Lots</b>	<b>Proposed (E) Designation</b>
42	465	27, 28, 29, 33, 46, 47, 48, 49, 50	Any new residential development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water systems stack(s) is located at least 55 feet away from the lot line facing Bond Street, at least 40 feet away from the lot line facing Hoyt Street, and at least 10 feet away from the lot line facing 3rd Street, to avoid any potential significant air quality impacts.
46	468	25	Any new commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, to avoid any potential significant air quality impacts.
47 Northwest <sup>9</sup>	471	1, 100	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, and ensure that the heating and hot water systems stack(s) is located at least 268 feet above grade, to avoid any potential significant air quality impacts.
47 Southwest <sup>10</sup>	471	1, 100	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that the heating and hot water systems stack(s) is located at least 143 feet away from the tallest tiers of 47 Northwest, and that heating and hot water system stack(s) is located at least 275 feet above grade, to avoid any potential significant air quality impacts.

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<sup>9</sup> For the City-owned parcel located within Projected Development Site 47 Northwest (Block 471, Lots 1, 100), the implementation of the restrictions would be required through the Land Disposition Agreement between HPD and future developer with oversight provided through HPD. This agreement would require that any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems and ensure that heating and hot water system stack(s) is located at least 268 feet above grade, to avoid any potential significant air quality impacts.

<sup>10</sup> For the City-owned parcel located within Projected Development Site 47 Southwest (Block 471, Lots 1, 100), the implementation of the restrictions would be required through the Land Disposition Agreement between HPD and future developer with oversight provided through HPD. This agreement would require that any new residential and/or commercial development must be fitted with low NO<sub>x</sub> (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that the heating and hot water systems stack(s) is located at least 143 feet away from the tallest tiers of 47 Northwest, and that heating and hot water system stack(s) is located at least 275 feet above grade, to avoid any potential significant air quality impacts.

**Table H-3-1 (cont'd)**  
**(E) Designations for Projected Development Sites**  
**(Heating and Hot Water System Restrictions)**

Development Site	Block	Lots	Proposed (E) Designation
47 Northeast <sup>11</sup>	471	1, 100	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that heating and hot water systems stack(s) is located at least 106 feet from the tallest tiers of 47 Northwest, and ensure that heating and hot water system stack(s) is located at least 233 feet above grade, to avoid any potential significant air quality impacts.
47 Southwest <sup>12</sup>	471	1, 100	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that the heating and hot water systems stack(s) is located at least 102 feet away from the tallest tiers of 48 North, and that heating and hot water system stack(s) is located at least 255 feet above grade, to avoid any potential significant air quality impacts.
48 North	471	200	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that heating and hot water systems stack(s) is located at least 248 feet above grade, to avoid any potential significant air quality impacts. <sup>13</sup>

<sup>11</sup> For the City-owned parcel located within Projected Development Site 47 Northeast (Block 471, Lots 1, 100), the implementation of the restrictions would be required through the Land Disposition Agreement between HPD and future developer with oversight provided through HPD. This agreement would require that any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems and ensure that heating and hot water systems stack(s) is located at least 106 feet from the tallest tiers of 47 Northwest, to avoid any potential significant air quality impacts.

<sup>12</sup> For the City-owned parcel located within Projected Development Site 47 Southwest (Block 471, Lots 1, 100), the implementation of the restrictions would be required through the Land Disposition Agreement between HPD and future developer with oversight provided through HPD. This agreement would require that any new residential and/or commercial development must be fitted with low NO<sub>x</sub> (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that the heating and hot water systems stack(s) is located at least 102 feet away from the tallest tiers of 48 Northwest, and that heating and hot water system stack(s) is located at least 255 feet above grade, to avoid any potential significant air quality impacts.

<sup>13</sup> (E) Designation is required as a result of the cumulative analysis on Site 48.



**Table H-3-1 (cont'd)**  
**(E) Designations for Projected Development Sites**  
**(Heating and Hot Water System Restrictions)**

<b>Development Site</b>	<b>Block</b>	<b>Lots</b>	<b>Proposed (E) Designation</b>
48 Middle	427	200	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that the heating and hot water systems stack(s) is located at least 88 feet away from the tallest tiers of 48 South and must be no more than 200 feet from the lot line facing Huntington Street, and ensure that heating and hot water systems stack(s) is located at least 230 feet above grade, to avoid any potential significant air quality impacts.
48 South	471	200	Any new residential and/or commercial development must ensure that heating and hot water system stack(s) is located at least 303 feet above grade, to avoid any potential significant air quality impacts.
49	980	77	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, to avoid any potential significant air quality impacts.
54	427	47	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water systems stack(s) is located at least 6 feet away from the lot line facing Degraw Street, to avoid any potential significant air quality impacts.
56	445	1	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water systems stack(s) is located no more than 52 feet away from the lot line facing Bond Street, to avoid any potential significant air quality impacts.
58	399	6	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, to avoid any potential significant air quality impacts.
59	471	125	Any new commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water systems stack(s) is located at least than 7 feet away from the lot line facing Hoyt Street, to avoid any potential significant air quality impacts.
62	464	41, 45	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, to avoid any potential significant air quality impacts.

**Table H-3-2**  
**(E) Designations for Potential Development Sites**  
**(Heating and Hot Water System Restrictions)**

Development Site	Block	Lots	Proposed (E) Designation
D	399	47, 49	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water system stack(s) is located at least 85 feet above grade, to avoid any potential significant air quality impacts.
E	399	51, 53	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, and ensure that heating and hot water stack(s) is located at least 83 feet above grade, to avoid any potential significant air quality impacts.
F	399	55	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, and ensure that heating and hot water stack(s) is located at least 83 feet above grade, to avoid any potential significant air quality impacts.
G	399	62	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, to avoid any potential significant air quality impacts.
H	405	24	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, and ensure that heating and hot water stack(s) is located at least 83 feet above grade, to avoid any potential significant air quality impacts.
J	406	25, 27, 50, 52, 69, 71	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that the heating and hot water systems stack(s) is located at least 70 feet away from the lot line facing Butler Street, and at least 98 feet away from the lot line facing Nevins Street, to avoid any potential significant air quality impacts.
L	407	41	Any new commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that the heating and hot water systems stack(s) is located at least 20 feet away from the lot line facing 4th Avenue, and ensure that heating and hot water systems stack(s) is located at least 98 feet above grade, to avoid any potential significant air quality impacts.

**Table H-3-2 (cont'd)**  
**(E) Designations for Potential Development Sites**  
**(Heating and Hot Water System Restrictions)**

Development Site	Block	Lots	Proposed (E) Designation
M	407	1	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that the heating and hot water systems stack(s) is located at least 146 feet away from the lot line facing Butler Street, and that heating and hot water system stack(s) is located at least 100 feet above grade, to avoid any potential significant air quality impacts.
O	411	1, 2, 3	Any new residential and/or commercial development must exclusively use natural gas for heating and hot water systems, and ensure that the heating and hot water systems stack(s) is located no more than 32 feet away from the lot line facing Bond Street, to avoid any potential significant air quality impacts.
Q	412	21	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that the heating and hot water systems stack(s) is located at least 70 feet away from the lot line facing 3rd Avenue and at least 48 feet away from the lot line facing Nevins Street, and that heating and hot water system stack(s) is located at least 85 feet above grade, to avoid any potential significant air quality impacts.
S	413	21	Any new commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water system stack(s) is located at least 83 feet above grade, to avoid any potential significant air quality impacts.
T	413	58	Any new commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water system stack(s) is located at least 85 feet above grade, to avoid any potential significant air quality impacts.
U	420	1	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, and ensure that heating and hot water stack(s) is located at least 110 feet above grade, to avoid any potential significant air quality impacts.
W	425	1	Any new residential and/or commercial development must ensure that heating and hot water systems stack(s) be located at least 208 feet above grade, to avoid any potential significant air quality impacts.

**Table H-3-2 (cont'd)**  
**(E) Designations for Potential Development Sites**  
**(Heating and Hot Water System Restrictions)**

Development Site	Block	Lots	Proposed (E) Designation
X	426	36, 41	Any new residential and/or commercial development must <b>EITHER</b> be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water systems stack(s) is located no more than 36 feet away from the lot line facing Sackett Street <b>OR</b> must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water system stack(s) is located at least 128 feet above grade, to avoid any potential significant air quality impacts.
Y	427	12, 15	Any new commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water systems stack(s) is located at least 50 feet away from the lot line facing 3rd Avenue and at least 20 feet away from the lot line facing Degraw Street, to avoid any potential significant air quality impacts.
Z	427	37, 38, 40	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that the heating and hot water systems stack(s) is located at least 41 feet away from the lot line facing Sackett Street, and that heating and hot water system stack(s) is located at least 120 feet above grade, to avoid any potential significant air quality impacts.
AA	427	21	Any new commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water system stack(s) is located at least 85 feet above grade, to avoid any potential significant air quality impacts.
AB	427	31	Any new commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water systems stack(s) is located at least 65 feet away from the lot line facing 4th Avenue, to avoid any potential significant air quality impacts. <sup>14</sup>

<sup>14</sup> Additional stack location restriction required as a result of the cluster analysis.

**Table H-3-2 (cont'd)**  
**(E) Designations for Potential Development Sites**  
**(Heating and Hot Water System Restrictions)**

Development Site	Block	Lots	Proposed (E) Designation
AD	427	52	Any new commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, and ensure that the heating and hot water system stack(s) is located at least 88 feet above grade, to avoid any potential significant air quality impacts.
AF	432	25	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water systems stack(s) is located at least 40 feet away from the lot line facing Sackett Street, at least 30 feet away from the lot line facing the Gowanus Canal (or Bond Street), and at least 40 feet away from the lot line facing Union Street, to avoid any potential significant air quality impacts.
AG	432	7501	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water system stack(s) is located at least 54 feet above grade, to avoid any potential significant air quality impacts.
AH	433	8, 9, 10, 12, 13	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, to avoid any potential significant air quality impacts.
AI	453	26	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that the heating and hot water systems stack(s) is located at least 54 feet away from the western lot line facing the Gowanus Canal and that heating and hot water system stack(s) is located at least 68 feet above grade, to avoid any potential significant air quality impacts.
AJ	433	14	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, and ensure that heating and hot water stack(s) is located at least 83 feet above grade, to avoid any potential significant air quality impacts.
AK	433	21	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, to avoid any potential significant air quality impacts.

**Table H-3-2 (cont'd)**  
**(E) Designations for Potential Development Sites**  
**(Heating and Hot Water System Restrictions)**

Development Site	Block	Lots	Proposed (E) Designation
AL	434	16	Any new commercial development must be fitted with low NO <sub>x</sub> (30 ppm) burners firing only natural gas for heating and hot water systems and ensure that heating and hot water systems stack(s) is located at least 88 feet above grade, to avoid any potential significant air quality impacts <sup>15</sup> .
AM	434	52	Any new residential and/or commercial development must be fitted with low NO <sub>x</sub> (30 ppm) burners firing only natural gas for heating and hot water systems, to avoid any potential significant air quality impacts.
AN	434	55	Any new residential and/or commercial development must be fitted with low NO <sub>x</sub> (30 ppm) burners firing only natural gas for heating and hot water systems, to avoid any potential significant air quality impacts.
AO	438	7	Any new residential and/or commercial development must be fitted with low NO <sub>x</sub> (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that the heating and hot water systems stack(s) is located at least 30 feet away from the lot line facing President Street, and that heating and hot water system stack(s) is located at least 208 feet above grade, to avoid any potential significant air quality impacts.
AQ	440	21, 23, 24, 25, 26, 47, 48	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, and ensure that heating and hot water stack(s) is located at least 93 feet above grade, to avoid any potential significant air quality impacts.
AR	441	21	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, ensure that the heating and hot water systems stack(s) is located at least 25 feet away from the lot line facing 4th Avenue, and that heating and hot water system stack(s) is located at least 103 feet above grade, to avoid any potential significant air quality impacts.

<sup>15</sup> Fuel restriction and low NO<sub>x</sub> burners required as a result of the cluster analysis.

**Table H-3-2 (cont'd)**  
**(E) Designations for Potential Development Sites**  
**(Heating and Hot Water System Restrictions)**

Development Site	Block	Lots	Proposed (E) Designation
AS	441	50, 53	Any new commercial development must <b>EITHER</b> exclusively use natural gas for heating and hot water systems, and ensure that the heating and hot water systems stack(s) is located at least than 40 feet away from the lot line facing Union Street and at least 45 feet from the lot line facing 3rd Avenue <b>OR</b> ensure that heating and hot water systems be fitted with low NOx (30 ppm) burners firing only natural gas, and that the heating and hot water system stack(s) is located at least 83 feet above grade, to avoid any potential significant air quality impacts.
AV	441	14	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, to avoid any potential significant air quality impacts.
AY	447	3, 4, 7	Any new residential and/or commercial development must <b>EITHER</b> be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water systems stack(s) is located at least 70 feet away from the lot line facing Carroll Street <b>OR</b> ensure that heating and hot water systems be fitted with low NOx (30 ppm) burners firing only natural gas, and ensure that the heating and hot water system stack(s) be located at least 83 feet above grade, to avoid any potential significant air quality impacts.
AZ	447	13	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, to avoid any potential significant air quality impacts.
BE	448	34	Any new residential and/or commercial development must <b>EITHER</b> ensure that heating and hot water system stack(s) is located at least 113 feet above grade <b>OR</b> exclusively use natural gas as the type of fuel for heating and hot water systems, to avoid any potential significant air quality impacts.
BF	448	31	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, to avoid any potential significant air quality impacts.
BG	448	52, 53	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, to avoid any potential significant air quality impacts.
BI	453	36	Any new commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, to avoid any potential significant air quality impacts.

**Table H-3-2 (cont'd)**  
**(E) Designations for Potential Development Sites**  
**(Heating and Hot Water System Restrictions)**

Development Site	Block	Lots	Proposed (E) Designation
BJ	453	54	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that the heating and hot water systems stack(s) is located at least 70 feet away from the lot line facing 1st Street, and that heating and hot water system stack(s) is located at least 98 feet above grade, to avoid any potential significant air quality impacts.
BN	967	24	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that the heating and hot water system stack(s) is located at least 150 feet above grade, to avoid any potential significant air quality impacts.
BO	462	6, 8, 9, 42, 44, 50	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, and ensure that on the south tower, the heating and hot water systems stack(s) is at least 93 feet above grade and located no more than 115 feet away from the lot line facing the Bond Street and on the north tower, the heating and hot water systems stack(s) is at least 93 feet above grade and located no more than 44 feet away from the lot line facing Bond Street, to avoid any potential significant air quality impacts.
BT	980	23, 49	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, and ensure that the heating and hot water system stack(s) is located at least 185 feet above grade, to avoid any potential significant air quality impacts.
BV	992	1	Any new residential and/or commercial development must be fitted with low NOx (30 ppm) burners firing only natural gas for heating and hot water systems, ensure that the heating and hot water systems stack(s) is located at least 70 feet away from the lot line facing 6th Street, and ensure that heating and hot water systems stack(s) is located at least 68 feet above grade, to avoid any potential significant air quality impacts.
BY	1040	46, 47	Any new residential and/or commercial development must exclusively use natural gas as the type of fuel for heating and hot water systems, and ensure that heating and hot water stack(s) is located at least 113 feet above grade, to avoid any potential significant air quality impacts.



*CITY-OWNED PARCELS*

For the City-owned parcels located within Projected Development Site 47 (Block 215, Lot 471) the implementation of the restrictions would be required through the Land Disposition Agreement between HPD and future developer with oversight provided through HPD.

**INDUSTRIAL USE (E) DESIGNATIONS**

Under the proposed zoning, (E) Designations are proposed to avoid impacts on privately owned parcels on projected or potential development sites with respect to industrial uses. A refined analysis was performed utilizing the AERMOD dispersion model (see Chapter 15, "Air Quality"). The results indicated that all eleven sites that are anticipated to include industrial uses in the reasonable worst case scenario would require restrictions in order to provide an adequate level of protection. A description of the requirements of those (E) Designations are found in **Table H-3-3** and **H-3-4**.

**Table H-3-3**  
**Proposed Industrial Use (E) Designations**

<b>Development Site</b>	<b>Block</b>	<b>Lots</b>	<b>Proposed (E) Designation</b>
<i>Projected Development Sites</i>			
22	431	7, 12, 17, 43	Exhaust stacks for industrial processes must be located to the tallest portion of the roof. Any new industrial development must ensure pollutant emissions are below the air pollutant emission limits listed in <b>Table H-3-4</b> .
29	439	1	Exhaust stacks for industrial processes must be located to the tallest portion of the roof.
41	972	1, 43, 58	Exhaust stacks for industrial processes must be located to the tallest portion of the roof. Any new industrial development must ensure pollutant emissions are below the air pollutant emission limits listed in <b>Table H-3-4</b> .
44	466	19	Exhaust stacks for industrial processes must be located to the tallest portion of the roof. Any new industrial development must ensure pollutant emissions are below the air pollutant emission limits listed in <b>Table H-3-4</b> .
47 <sup>(1)</sup>	471	1, 100	Exhaust stacks for industrial processes must be located to the tallest portion of the roof.
48	471	200	Exhaust stacks for industrial processes must be located to the tallest portion of the roof.
<i>Potential Development Sites</i>			
P	411	58, 56	Exhaust stacks for industrial processes must be located to the tallest portion of the roof. Any new industrial development must ensure pollutant emissions are below the air pollutant emission limits listed in <b>Table H-3-4</b> .
AK	433	21	Exhaust stacks for industrial processes must be located to the tallest portion of the roof. Any new industrial development must ensure pollutant emissions are below the air pollutant emission limits listed in <b>Table H-3-4</b> .

**Table H-3-3  
Proposed Industrial Use (E) Designations**

Development Site	Block	Lots	Proposed (E) Designation
<i>Potential Development Sites continued</i>			
BI	453	36	Exhaust stacks for industrial processes must be located to the tallest portion of the roof. Any new industrial development must ensure pollutant emissions are below the air pollutant emission limits listed in <b>Table H-3-4</b> .
BL	454	31, 33	Exhaust stacks for industrial processes must be located to the tallest portion of the roof. Any new industrial development must ensure pollutant emissions are below the air pollutant emission limits listed in <b>Table H-3-4</b> .
BO	462	6, 8, 9, 42, 44, 50	Exhaust stacks for industrial processes must be located to the tallest portion of the roof. Any new industrial development must ensure pollutant emissions are below the air pollutant emission limits listed in <b>Table H-3-4</b> .
<b>Notes:</b> <sup>(1)</sup> For the City-owned parcel located within Projected Development Site 47 (Block 471, Lots 1, 100), the implementation of the restrictions would be required through the Land Disposition Agreement between HPD and future developer with oversight provided through HPD.			

**Table H-3-4  
Air Pollutant Emissions Limits**

Air Pollutant	CAS Number	Short-Term Emission Limit (lb/hr)	Annual Emission Limit (lb/yr)
Formaldehyde	00050-00-0	N/A	2
<u>Dichloromethane</u>	<u>00075-09-2</u>	<u>0.53</u>	<u>N/A</u>
Trichloroethylene	00079-01-6	0.01	7
Butyl carbitol	00112-34-5	0.14	N/A
Diethyl phthalate	00117-81-7	N/A	16
Tetrachloroethylene	00127-18-4	0.11	<u>144</u>
Nickel oxide	01313-99-1	0.00008	0.2
Cadmium	07440-43-9	N/A	0.01
<u>Nitrogen Dioxide</u>	<u>10102-44-0</u>	<u>0.03</u>	<u>N/A</u>
<u>Particulates</u>	<u>NY075-00-0</u>	<u>0.04</u>	<u>N/A</u>
<b>Notes:</b> N/A No applicable emission limit is required in order to avoid potential impacts.			

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