Appendix F: Air Quality

APPENDIX F: HVAC E-DESIGNATIONS

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 F-1 through F-2. No (E) Designations are required for industrial sites.

PROPOSED E-DESIGNATIONS

Heating and Hot Water E-designations

The screening analysis was performed to evaluate whether potential air quality impacts from the heat and hot water systems associated with the projected and potential development sites could potentially impact other projected and potential development sites, or existing or other proposed buildings. Additional sites were screened out by applying a setback to the screening distance (these sites subsequently require an E-Designation).

A total of 17 projected and 5 potential development sites failed the refined screening analysis using Figure 17-2 from the CEQR Technical Manual. Each of these development sites required a refined modeling analysis, using AERMOD, for the use of natural gas.

Overall, to preclude the potential for significant adverse air quality impacts on other projected and potential development sites, or existing buildings, from the heat and hot water emissions, an (E) Designation (E-601) would be assigned as part of the Proposed Actions for 44 projected and potential development sites (including 34 projected and 10 potential development sites). These designations specify the various restrictions, such as the use of low NO_x burners or the distance that the vent stack on the building roof must be from its lot line(s).

Table F-1
Heating and Hot Water System Analysis – E-Designations for Projected Development Sites

Site	Block	Lots	Proposed (E) Designation
1	1124	4,10	Any new residential and/or commercial development must be fitted with 30 ppm Low NOx burner and ensure that stack location is at least 62 feet from east lot line.
3	1124	29	Any new residential and/or commercial development must be fitted with 30 ppm Low NOx burner and ensure that stack location is at least 46 feet from west lot line.
4	1125	10,80,81	Any new residential and/or commercial development must be fitted with 30 ppm Low NOx burner and ensure that stack location is at least 65 feet from east lot line.
6	1125	25	Any new residential and/or commercial development must be fitted with 30 ppm Low NOx burner and ensure that stack location is at least 22 feet from west lot line.
7	1125	72	Any new residential and/or commercial development must ensure that stack is set back 22 feet from nearest receptor.
8	1125	52,53	Any new residential and/or commercial development must ensure that stack is set back 164 feet from nearest receptor.
9	1126	7,8,13	Any new residential and/or commercial development must be fitted with 30 ppm Low NOx burner and ensure that stack location is at least 75 feet from east lot line.
10	1126	57	Any new residential and/or commercial development must ensure that stack is set back 165 feet from nearest receptor.
11	1126	3,4,105	Any new residential and/or commercial development must ensure that stack is set back 24 feet from nearest receptor.
12	1126	81,82,83,84,85,86	Any new residential and/or commercial development must be fitted with 30 ppm Low NOx burner and ensure that stack location is at least 60 feet from the north lot line,
15	2022	1	Any new residential and/or commercial development must ensure that stack is set back 240 feet from nearest receptor.
17	1865	87,90	Any new residential and/or commercial development must ensure that stack is set back 45 feet from nearest receptor.
19	1866	1,7	Any new residential and/or commercial development must be fitted with 30 ppm Low NOx burner and ensure that stack location is in the area between at least 20 feet from the east lot line and 12 feet from the west lot line.

Table F-1
Heating and Hot Water System Analysis – E-Designations for Projected Development Sites

Site	Block	Lots	Proposed (E) Designation
21	1132	34,37	Any new residential and/or commercial development must ensure that stack is set back 20 feet from nearest receptor.
22	1133	13	Any new residential and/or commercial development must be fitted with 30 ppm Low NOx burner and ensure that stack location is in the area at least 26 feet from the north lot line.
23	1133	48,49	Any new residential and/or commercial development must be fitted with 30 ppm Low NOx burner and ensure that the stack location is in the area at least 35 feet from the south lot line.
24	1133	51,52,53,54,55,57	Any new residential and/or commercial development must be fitted with 30 ppm Low NOx burner and ensure that stack location is in the area at least 13 feet from the south lot line.
26	1133	67	Any new residential and/or commercial development must ensure that the stack is set back 55 feet from nearest receptor.
27	1133	7172,74,75,76	Any new residential and/or commercial development must ensure that the stack is set back 65 feet from nearest receptor.
28	1133	80,89,90,91	Any new residential and/or commercial development must be fitted with 30 ppm Low NOx burner and ensure that stack location is in the area at least 25 feet from the north lot line.
29	1133	1,3	Any new residential and/or commercial development must ensure that the stack is set back 50 feet from nearest receptor.
30	1133	4	Any new residential and/or commercial development must be fitted with 30 ppm Low NOx burner and ensure that the stack location is in the area between at least 50 feet from the east lot line and 27 feet from the south lot line.
32	1134	17	Any new residential and/or commercial development must ensure that the stack is set back 10 feet from nearest receptor.
36	1141	33,37,38,39,40	Any new residential and/or commercial development must be fitted with 30 ppm Low NOx burner and ensure that the stack location is in the area at least 70 feet from the south lot line.
37	1141	55,56,57,58	Any new residential and/or commercial development must ensure that the stack is set back 60 feet from nearest receptor.
41	1141	59,61	Any new residential and/or commercial development must be fitted with 30 ppm Low NOx burner and ensure that the stack location is in the area between at least 50 feet from the north lot line, 44 feet from the west lot line, and 48 feet from the east lot line.

Table F-1
Heating and Hot Water System Analysis – E-Designations for Projected Development Sites

Site	Block	Lots	Proposed (E) Designation
38	1141	62,128	Any new residential and/or commercial development must ensure that the stack is set back 48 feet from nearest receptor.
40	1142	10	Any new residential and/or commercial development must ensure that the stack is set back 60 feet from nearest receptor.
42	1125	61	Any new residential and/or commercial development must be fitted with 30 ppm Low NOx burner and ensure that the stack location is in the area at least 11 feet from the west lot line.
43	1141	18,19	Any new residential and/or commercial development must ensure that the stack is set back 55 feet from nearest receptor.
44	1134	44	Any new residential and/or commercial development must ensure that the stack is set back 48 feet from nearest receptor.
45	1126	32	Any new residential and/or commercial development must be fitted with 15 ppm Low NOx burner and ensure that the stack location is in the area between at least 13 feet from the east lot line and 73 feet from the west lot line.
50	1866	29	Any new residential and/or commercial development must ensure that the stack is set back 33 feet from nearest receptor.
55	2088	1	Any new residential and/or commercial development must be fitted with 30 ppm Low NOx burner and ensure that the stack location is at least 40 feet from the west lot line.

Table F-2
Heating and Hot Water System Analysis – E-Designations for Potential Development Sites

Site	Block	Lots	Proposed (E) Designation
C	1124	37,46,47	Any new residential and/or commercial development must ensure that the stack is set back 125 feet from nearest receptor.
D	1125	2,4,5,6	Any new residential and/or commercial development must be fitted with 30 ppm Low NOx burner and ensure that stack location is in the area at least 14 feet from the east lot line.
E	1125	7,8,9	Any new residential and/or commercial development must be fitted with 30 ppm Low NOx

Table F-2
Heating and Hot Water System Analysis – E-Designations for Potential Development Sites

Site	Block	Lots	Proposed (E) Designation
			burner and ensure that the stack location is at least 32 feet from the west lot line.
F	1125	40	Any new residential and/or commercial development must ensure that the stack is set back 27 feet from nearest receptor.
G	2020	1,92	Any new residential and/or commercial development must ensure that the stack is set back 85 feet from nearest receptor.
L	1126	78,79,80	Any new residential and/or commercial development must be fitted with 30 ppm Low NOx burner and ensure that the stack location is in the northwest corner of the lot or in the area between 12 feet from the west lot line and 71 feet from the south lot line.
M	1865	**10**	Any new residential and/or commercial development must ensure that the stack is set back 75 feet from nearest receptor.
N	1865	**3**	Any new residential and/or commercial development must be fitted with 30 ppm Low NOx burner and ensure that the stack location is in the northwest corner of the lot.
O	1134	28,78,81	Any new residential and/or commercial development must ensure that the stack is set back 105 feet from nearest receptor.
P	1141	21,69	Any new residential and/or commercial development must be fitted with 30 ppm Low NOx burner and ensure that the stack location is in the area between at least 86 feet from the west lot line and 153 feet from the south lot line.

Safety Data Sheet

1. Identification

Product Information: M102-0419

Product Name: TONE FINISH CLEAR LACQUER SEMI GLOSS

Recommended Use: Surface Preparation or Protection

Supplied by:
Mohawk Finishing Products
Division of RPM Industrial Coatings Group
2220 US Hwy 70 SE Suite 100
Hickory, NC 28602
USA

Company Phone No: (800) 522-8266

Emergency Phone No. CHEMTREC: (800) 424-9300

International Emergency No. CHEMTREC: (703) 527-3887 (Collect calls are accepted)

2. Hazards Identification

GHS Classification
Comp. Gas, Eye Dam. 1, Fl Aer, 1, Skin Irrit. 2, STOT RE 2, STOT SE 3 NE

Symbol(s) of Product



Signal Word
Danger

Possible Hazards
6% of the mixture consists of ingredients of unknown acute toxicity

GHS HAZARD STATEMENTS

Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
Skin Irritation, category 2	H315	Causes skin irritation.
Acute Toxicity, Inhalation, category 4	H332	Harmful if inhaled.
STOT, single exposure, category 3, NE	H336	May cause drowsiness or dizziness.
STOT, repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Serious Eye Damage, category 1	H318	Causes serious eye damage.
Compressed Gas	H280	Contains gas under pressure; may explode if heated.

GHS LABEL PRECAUTIONARY STATEMENTS

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P405	Store locked up.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P362+P364	Take off contaminated clothing and wash it before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C/ 122°F.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P310	Immediately call a POISON CENTER or doctor/physician.

3. Composition/Information on ingredients

Chemical Name	CAS-No.	Wt. %	GHS Symbols	GHS Statements
isobutyl acetate	110-19-0	25-40	GHS02-GHS07	H225-332
ethyl acetate	141-78-6	10-25	GHS02-GHS07	H225-319-332-336
propane	74-98-6	10-25	GHS04	H280
acetone	67-64-1	10-25	GHS02-GHS07	H225-302-319-332-336
n-butane	106-97-8	2.5-10	GHS04	H280
toluene	108-88-3	2.5-10	GHS02-GHS07-GHS08	H225-304-315-332-336-373
butanol	71-36-3	2.5-10	GHS02-GHS05-GHS07	H226-302-315-318-332-335-336
cellulose nitrate, cellulose ester	9004-70-0	2.5-10	GHS01	H201
butyl cellosolve	111-76-2	1.0-2.5	GHS06-GHS07	H302-315-319-330
isopropanol	67-63-0	1.0-2.5	GHS02-GHS07	H225-302-319-336
n-butyl acetate	123-86-4	0.1-1.0	GHS02-GHS07	H226-336

The exact percentage (concentration) of ingredients is being withheld as a trade secret.

The text for GHS Hazard Statements shown above (if any) is given in the "Other information" Section.

4. First-aid Measures



FIRST AID - EYE CONTACT: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

FIRST AID - SKIN CONTACT: IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

FIRST AID - INGESTION: IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

FIRST AID - INHALATION: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

5. Fire-fighting Measures

SPECIAL FIREFIGHTING PROCEDURES: Evacuate all persons from the fire area to a safe location. Move non-burning material, as feasible, to a safe location as soon as possible. Fire fighters should be protected from potential explosion hazards while extinguishing the fire. Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing. Thoroughly decontaminate all protective equipment after use. Containers of this material may build up pressure if exposed to heat (fire). Use water spray to cool fire-exposed containers. Use water spray to disperse vapors if a spill or leak has not ignited. DO NOT extinguish a fire resulting from the flow of flammable liquid until the flow of the liquid is effectively shut off. This precaution will help prevent the accumulation of an explosive vapor-air mixture after the initial fire is extinguished.

FIREFIGHTING EQUIPMENT: This is a NFPA/OSHA Category 1 flammable aerosol. Follow NFPA 30B, Chapter 4 for fire protection and fire suppression. Use a dry chemical, carbon dioxide, or similar ABC fire extinguisher for incipient fires. Water may be used to cool and prevent rupture of containers that are exposed to heat from fire

6. Accidental Release Measures

ENVIRONMENTAL MEASURES: No Information

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Follow personal protective equipment recommendations found in Section VIII. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the training and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits. Shut off ignition sources; including electrical equipment and flames. Do not allow smoking in the area. Do not allow the spilled product to enter public drainage system or open waterways.

7. Handling and Storage




HANDLING: Avoid inhalation and contact with eyes, skin, and clothing. Wash hands thoroughly after handling and before eating or drinking. In keeping with safe handling practices, avoid ignition sources (smoking, flames, pilot lights, electrical sparks); ground and bond containers when transferring the material to prevent static electricity sparks that could ignite vapor and use spark proof tools and explosion proof equipment. Empty containers may retain product residue or vapor. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose container to heat, flame, sparks, static electricity, or other sources of ignition. Any of these actions can potentially cause an explosion that may lead to injury.

STORAGE: Keep containers closed when not in use. Store in cool well ventilated space away from incompatible materials.

8. Exposure Controls/Personal Protection

Ingredients with Occupational Exposure Limits

Chemical Name	ACGIH TLV-TWA	ACGIH-TLV STEL	OSHA PEL-TWA	OSHA PEL-CEILING
isobutyl acetate	50 ppm	150 ppm	150 ppm	N.D.
ethyl acetate	400 ppm	N.D.	400 ppm	N.D.
propane	N.D.	N.D.	1000 ppm	N.D.
acetone	250 ppm	500 ppm	1000 ppm	N.D.
n-butane	N.D.	1000 ppm	N.D.	N.D.
toluene	20 ppm	N.D.	200 ppm	300 ppm
butanol	20 ppm	N.D.	100 ppm	N.D.
cellulose nitrate, cellulose ester	N.D.	N.D.	N.D.	N.D.
butyl cellosolve	20 ppm	N.D.	50 ppm	N.D.
isopropanol	200 ppm	400 ppm	400 ppm	N.D.
n-butyl acetate	50 ppm	150 ppm	150 ppm	N.D.

Further Advice: MEL = Maximum Exposure Limit OES = Occupational Exposure Standard SUP = Supplier's Recommendation Sk = Skin Sensitizer N.E. = Not Established N.D. = Not Determined

Personal Protection



RESPIRATORY PROTECTION: Use adequate engineering controls and ventilation to keep levels below recommended or statutory exposure limits. If exposure levels exceed limits use appropriate approved respiratory protection equipment.



SKIN PROTECTION: Wear chemical resistant footwear and clothing such as gloves, an apron or a whole body suit as appropriate.



EYE PROTECTION: Wear chemical-resistant glasses and/or goggles and a face shield when eye and face contact is possible due to splashing or spraying of material.



OTHER PROTECTIVE EQUIPMENT: No Information



HYGIENIC PRACTICES: It is good practice to avoid contact with the product and/or its vapors, mists or dust by using appropriate protective measures. Wash thoroughly after handling and before eating or drinking.

9. Physical and Chemical Properties

Appearance:	Clear Liquid	**Physical State:**	Aerosol
Odor:	Strong Solvent	**Odor Threshold:**	Not determined
Density, g/cm3:	0.780	**pH:**	Not determined
Freeze Point, °F:	Not determined	**Viscosity:**	Not determined
Solubility in Water:	Not determined	**Partition Coefficient, n-octanol/ water:**	Not determined
Decomposition temperature, °F:	Not determined	**Explosive Limits, %:**	Not determined
Boiling Range, °F:	Not determined	**Flash Point, °F:**	-76 ° F
Combustibility:	Supports Combustion	**Auto-Ignition Temperature, °F:**	Not determined
Evaporation Rate:	Faster than Diethyl Ether	**Vapor Pressure, mmHg:**	Not determined
Vapor Density:	Not determined		

N.I. = No Information

10. Stability and reactivity

STABILITY: Stable under normal conditions.

CONDITIONS TO AVOID: Heat, flames and sparks.

INCOMPATIBILITY: Acids, Bases, Oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS: Not determined.

11. Toxicological information



Practical Experiences

EMERGENCY OVERVIEW: No Information

EFFECT OF OVEREXPOSURE - EYE CONTACT: No Information

EFFECT OF OVEREXPOSURE - INGESTION: No Information

EFFECT OF OVEREXPOSURE - INHALATION: No Information

EFFECT OF OVEREXPOSURE - SKIN CONTACT: No Information

CARCINOGENICITY: No Information

PRIMARY ROUTE(S) OF ENTRY:

Eye Contact, Skin Contact, Inhalation

Acute Toxicity Values
The acute effects of this product have not been tested. Data on individual components are tabulated below

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
110-19-0	isobutyl acetate	15400 mg/kg Rat	>17400 mg/kg Rabbit	>20 mg/l
141-78-6	ethyl acetate	5620 mg/kg Rat	>18000 mg/kg Rabbit	200 mg/l Rat
74-98-6	propane	N.I.	N.I.	658 mg/L Rat
67-64-1	acetone	1800 mg/kg Rat	20000 mg/kg Rabbit	50.1 mg/L Rat
108-88-3	toluene	2600 mg/kg Rat	12000 mg/kg Rabbit	12.5 mg/L Rat
71-36-3	butanol	700 mg/kg Rat	3402 mg/kg Rabbit	8000 mg/l Rat
9004-70-0	cellulose nitrate, cellulose ester	>5000 mg/kg Rat	>5000 mg/kg	>20 mg/l
111-76-2	butyl cellosolve	470 mg/kg Rat	>2000 mg/kg Rabbit	>4.9 mg/l
67-63-0	isopropanol	1870 mg/kg Rat	4059 mg/kg Rabbit	72.6 mg/L Rat
123-86-4	n-butyl acetate	14130 mg/kg Rat	>17600 mg/kg Rabbit	23.4 mg/l Rat

N.I. = No Information

12. Ecological information

ECOLOGICAL INFORMATION: Ecological evaluation of this material has not been performed; however, do not allow the product to be released to the environment without governmental approval/permits.

13. Disposal Information



Product

DISPOSAL METHOD: Waste from this material may be a listed and/or characteristic hazardous waste. Dispose of material, contaminated absorbent, container and unused contents in accordance with local, state, and federal regulations.

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Follow personal protective equipment recommendations found in Section VIII. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the training and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits. Shut off ignition sources; including electrical equipment and flames. Do not allow smoking in the area. Do not allow the spilled product to enter public drainage system or open waterways.

14. Transport Information

SPECIAL TRANSPORT PRECAUTIONS: No Information

DOT:	LIMITED QUANTITY
IATA:	ID8000, CONSUMER COMMODITY, 9
IMDG:	LIMITED QUANTITY UN1950

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

SARA SECTION 313

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.	Wt. %
toluene	108-88-3	5.23
butanol	71-36-3	4.17

TOXIC SUBSTANCES CONTROL ACT

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

Chemical Name	CAS-No.
octamethylcyclotetrasiloxane	556-67-2

U.S. State Regulations:

CALIFORNIA PROPOSITION 65

⚠ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

Ethylbenzene, Cancer, 0.0465%
Toluene, Reproductive Harm, 5.2327%

16. Other Information

Revision Date: 12/18/2023 **Supersedes Date:** 8/18/2023

Reason for revision: Substance and/or Product Properties Changed in Section(s):
08 - Exposure Controls/Personal Protection

Datasheet produced by: Regulatory Department

HMIS Ratings:

Health:	2	Flammability:	4	Reactivity:	0	Personal Protection:	X

Volatile Organic Compounds, gr/ltr: 708

Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

H201	<undefined>
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

H330	Fatal if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.

Icons for GHS Pictograms shown in Section 3 describing each ingredient:

GHS01



GHS02



GHS04



GHS05



GHS06



GHS07



GHS08



The information on this sheet corresponds to our present knowledge. It is not a specification and it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage, and use of the product. It is not applicable to unusual or non-standard uses of the product where instructions and recommendations are not followed.

Only the original U.S. - English version is authoritative.

Project Name: Atlantic Avenue Mixed-Use Plan, NYC

Table-1 List of Industrial Sources

Facility No.	Permit ID No.	Borough	Facility Name	Street Address	Permit Status	Expiration Date	Type	Description 1	Description 2	Analyzed	Screen Out Reason
City Permits in Project Zone											
1	PB041607	Brooklyn		1010 PACIFIC STREET	EXPIRED	11/28/2016	CERTIFICATE TO OPERATE	Industrial/WoodWorking		No	Expired/Not Operational
2	PA008596	Brooklyn		868 DEAN STREET	EXPIRED	10/4/2002	CERTIFICATE TO OPERATE	Industrial/other	No.4 Fuel Oil	No	Boiler
3	PA020179	Brooklyn		1260 ATLANTIC AVENUE	EXPIRED	5/2/1994	CERTIFICATE TO OPERATE	Industrial/other		No	Emergency Generator/Not Operational
4	PA025892	Brooklyn		835 BERGEN STREET	EXPIRED	10/6/2001	CERTIFICATE TO OPERATE	Industrial/Spraybooth		No	Expired/Not Operational
5	PA044099	Brooklyn		870 DEAN STREET	EXPIRED	5/24/2000	WORK PERMIT	Industrial/other		No	Expired/Not Operational
6a	PB021715	Brooklyn	ALCHEMY PAINT WORKS, LLC	1102 ATLANTIC AVENUE	EXPIRED	11/30/2022	CERTIFICATE TO OPERATE	Industrial/Spraybooth		Yes	
6b	PB014015	Brooklyn	ALCHEMY PAINT WORKS, LLC	1102 ATLANTIC AVENUE	EXPIRED	11/30/2022	CERTIFICATE TO OPERATE	Industrial/Spraybooth		Yes	
7	PB021815	Brooklyn		1093 PACIFIC STREET	EXPIRED	8/17/2017	WORK PERMIT	Industrial/Spraybooth		No	Expired/Not Operational
8	PB406803	Brooklyn	G & B COLLISION CENTER	565 GRAND AVENUE	EXPIRED	4/30/2020	CERTIFICATE TO OPERATE	Industrial/Spraybooth		No	Expired/Not Operational/Projected Site
9	PB425403	Brooklyn		1025 ATLANTIC AVENUE	EXPIRED	4/21/2011	CERTIFICATE TO OPERATE	Industrial/Spraybooth		No	Expired/Not Operational
10	PB426303	Brooklyn	G & B COLLISION CENTER INC.	565 GRAND AVENUE	EXPIRED	4/30/2023	CERTIFICATE TO OPERATE	Industrial/Spraybooth		No	Expired/Not Operational/ Projected Site
11	PB031411	Brooklyn	VERIZON WIRELESS	976 ATLANTIC AVENUE	EXPIRED	11/9/2017	REGISTRATION	Generator	Natural gas	No	Expired Emergency Generator
12	PB012206	Brooklyn	G & B COLLISION CENTER INC.	773 BERGEN STREET	EXPIRED	4/30/2023	CERTIFICATE TO OPERATE	Industrial/Spraybooth		No	Expired/Not Operational
13	PB014015	Brooklyn	ALCHEMY PAINT WORKS, LLC	1102 ATLANTIC AVENUE	EXPIRED	11/30/2022	CERTIFICATE TO OPERATE	Industrial/Spraybooth		No	Identical duplicate to PB021715
14	PR027618	Brooklyn	VZW BREVOORT PLACE	557 FRANKLIN AVENUE	CURRENT	10/3/2024	REGISTRATION	Generator	Natural gas	No	Emergency Generator
15	PR030018	Brooklyn	VZW PROSPECT HEIGHTS 3	73 6 AVENUE	CURRENT	10/18/2024	REGISTRATION	Generator	Natural gas	Yes	Emergency Generator
16a	PW000320	Brooklyn	BJORK CARLE WOODWORKING	1093 PACIFIC STREET	CURRENT	8/10/2024	CERTIFICATE TO OPERATE	Industrial/WoodWorking		Yes	Projected Site with Industrial site to be active
16b	PB021815	Brooklyn	BJORK CARLE WOODWORKING	1093 PACIFIC STREET	CURRENT	8/17/2017	CERTIFICATE TO OPERATE	Industrial/WoodWorking		Yes	Projected Site with Industrial site to be active
17	PW004418	Brooklyn	G&B COLLISION CENTER INC.	773 BERGEN STREET	CURRENT	1/6/2024	CERTIFICATE TO OPERATE	Industrial/Spraybooth		No	Projected Site
18	PW008618	Brooklyn	ALCON BODY REPAIR	1154 ATLANTIC AVENUE	EXPIRED	4/23/2022	CERTIFICATE TO OPERATE	Industrial/Spraybooth		Yes	In Operation, verified
19	PR004817	Brooklyn		980 ATLANTIC AVENUE	CURRENT	2/4/2026	REGISTRATION	Generator	No2Fuel	No	Emergency Generator

City Permits outside the Project zone but within 400ft											
20	CW015018	Brooklyn		550 VANDERBILT AVENUE	CURRENT	12/6/2024	CERTIFICATE TO OPERATE	Boiler	Natural gas	No	Boiler
21	CW003022	Brooklyn		595 DEAN STREET	CURRENT	2/9/2026	CERTIFICATE TO OPERATE	Boiler	Natural gas	No	Boiler
22	PA088886	Brooklyn		696 PACIFIC STREET	EXPIRED	3/18/1999	CERTIFICATE TO OPERATE	Industrial/others		No	Expired/Not Operational
23	PA088986	Brooklyn		696 PACIFIC STREET	EXPIRED	3/18/1999	CERTIFICATE TO OPERATE	Industrial/others		No	Expired/Not Operational
24	PA042194	Brooklyn	BRAGLEY SHIPPING & CARRYING	924 BERGEN STREET	CURRENT	12/12/2024	CERTIFICATE TO OPERATE	Industrial/Spraybooth		Yes	
25	PA042294	Brooklyn	BRAGLEY SHIPPING & CARRYING	924 BERGEN STREET	CURRENT	12/12/2024	CERTIFICATE TO OPERATE	Industrial/Woodwork		Yes	
26	PB085403	Brooklyn	K022	443 ST. MARKS AVENUE	CURRENT	5/27/2025	REGISTRATION	Generator	No2Fuel	No	Emergency Generator
27	PB477603	Brooklyn	Pranayama Art Inc	365 ST MARKS AVENUE	EXPIRED	2/7/2020	CERTIFICATE TO OPERATE	Industrial/Woodwork		Yes	
28	PB004515	Brooklyn		505 ST. MARKS AVENUE	CURRENT	2/26/2024	REGISTRATION	Heater	No2Fuel	No	Boiler/HVAC
29	PB010811	Brooklyn	VERIZON	547 CLINTON AVENUE	CURRENT	4/1/2026	REGISTRATION	Generator	No2Fuel	No	Emergency Generator
30	PB047913	Brooklyn	H. O. PENN MACHINERY	547 CLINTON AVENUE	EXPIRED	12/31/2016	REGISTRATION	Generator	No2Fuel	No	Emergency Generator
31	PB054902	Brooklyn	ISRAEL BEIGEL BAKING CO.	551 WAVERLY AVE.	EXPIRED	1/26/2016	REGISTRATION	Industrial/oven	Natural gas	No	Expired/Not Operational
32	PB025110	Brooklyn	K508	510 WAVERLY AVENUE	CURRENT	8/20/2025	REGISTRATION	Generator	No2Fuel	No	Emergency Generator
33	PG004819	Brooklyn	BURGER KING	1297 FULTON STREET	EXPIRED	12/24/2022	REGISTRATION	Boiler		No	Boiler
34	PR000323	Brooklyn		550 VANDERBILT AVENUE	CURRENT	2/2/2026	REGISTRATION	Generator	Natural gas	No	Emergency Generator
35	PR002521	Brooklyn		662 PACIFIC STREET	CURRENT	3/25/2024	REGISTRATION	Generator	No2Fuel	No	Emergency Generator
36	PR015922	Brooklyn		595 DEAN STREET	CURRENT	6/24/2025	REGISTRATION	Generator	Natural gas	No	Emergency Generator
37	PR024521	Brooklyn		595 DEAN STREET	CURRENT	2/2/2025	REGISTRATION	Generator	Natural gas	No	Emergency Generator
38	PR030018	Brooklyn	VZW PROSPECT HEIGHTS 3	73 6TH AVENUE	CURRENT	10/18/2024	REGISTRATION	Generator	Natural gas	No	Emergency Generator
39	CA166187	Brooklyn	CATHEDRAL CONDOMINIUMS	555 WASHINGTON AVENUE	CURRENT	2/18/2024	CERTIFICATE TO OPERATE	Boiler	Natural gas	No	Boiler
40	CR077223	Brooklyn		850 ST. MARKS AVENUE	CURRENT	8/15/2024	CERTIFICATE TO OPERATE	Boiler	Natural gas	No	Boiler
41	CB031412	Brooklyn	JULIUS NOWAK	925 PROSPECT PLACE	CURRENT	11/6/2023	CERTIFICATE TO OPERATE	Boiler	Natural gas	No	Boiler
42	CB376200	Brooklyn	ATLANTIC TERMINAL	491 CARLTON AVENUE	CURRENT	6/3/2024	CERTIFICATE TO OPERATE	Boiler	Natural gas	No	Boiler

State Permits

Number	Registration ID	Borough	Facility Name	Street Address	Permit Status	Expiration Date	Type	Description	Description 2	Analyzed	Screen Out Reasoning
43	2-6102-00496/00001	Brooklyn	Verizon	547 Clinton Avenue			Registration	Generator	Diesel	No	Source is beyond 400ft
44	2-6103-00308/00002	Brooklyn	NYC Housing Authority	483 Carlton Avenue			Registration	Boiler	No2Fuel oil	No	Boiler
45	2-6103-00366/00001	Brooklyn	NYC Dept of Education	80 Underhill Avenue			Registration	Boiler	No4Fuel oil	No	Boiler
46	2-6103-00705/00001	Brooklyn	G&B Collision Center Inc	565 Grand Avenue			Registration	Spraybooth	Autobody	No	Projected Site
47	2-6103-00727/00001	Brooklyn	G&B Collision Center Inc	773 Bergen St			Registration	Spraybooth	Autobody	No	Projected Site

Project Name: Atlantic Avenue Mixed-Use Plan, NYC

Table 2. Industrial Sources Emission Rate Estimations

Facility No.	Permit ID No.	Borough	Block	Lot	Facility Name	Street Address	Permit Status	Expiration Date	Type	Description	Description 2	Used Hrs/Day	Used Days/Yr	Number of Pollutants	Pollutant No	Pollutant Name*	CAS No	Provided Hourly Emissions (Lbs/Hr)	Provided Annual Emissions (Lbs/Yr)	Avg 1-hr Emissions (g/sec)^	Avg Annual Emissions (g/sec)^	Site within 400 ft	Distance to X (ft)	Maximum Short-Term Concentration (Calculated)"	Annual Concentration (Calculated)	SGC NYSDEC Criteria/ NAAQS" (µg/m3)	AGC NYSDEC Criteria/ NAAQS" (µg/m3)
18	PW008618	Brooklyn	01199	12	ALCON BODY REPAIR	1154 ATLANTIC AVENUE	Expired but in Operation	4/23/2022	CERTIFICATE TO OPERATE	Autobody Spray booth	Autobody	4	200	5	1	Particulates/pigments*	NY075-02-5	0.012	10	6.30E-05	1.44E-04	Yes	30	31.9	0.76	150"	N/A"
															2	Xylene	01330-20-7	1	800	5.25E-03	1.15E-02	Yes	30	655.4	60.42	22000	100
															3	Ethylbenzene	00100-41-4	0.12	96	6.30E-04	1.38E-03	Yes	30	78.7	7.25	N/A	1000
															4	Butanone	00078-93-3	0.062	52	3.25E-04	7.48E-04	Yes	30	40.6	3.93	13000	5000
															5	Toluene	00108-88-3	0.015	12	7.87E-05	1.73E-04	Yes	30	9.8	0.91	37000	5000
16a	PW000320	Brooklyn	1126	75	BJORK CARLE WOODWORKING	1093 PACIFIC STREET	Expired but in Operation	2/12/2021	Industrial Work Permit	Wood Working, Sawdust	Dust Collector with 99% efficiency, https://www.agetmfg.com/baghouse	1	220	2	1	Particulates (PM2.5)+	NY075-02-5	5.000	1100	7.43E-05	4.48E-05	Yes	30	27.2	0.235	35"	12
															2	Particulate (PM10)++	NY075-00-5	5.000	1100	1.05E-04	6.33E-05	Yes	30	37.1	0.33	150"	N/A
16b	PB021815	Brooklyn	1126	75	BJORK CARLE WOODWORKING	1093 PACIFIC STREET	Expired but in Operation	8/17/2017	Industrial Work Permit	Wood Working, Spraybooth	fiberglass filters	5	300	18	1	N-Butyl acetate	123-86-4	0.04123875	61.858125	2.16E-04	8.90E-04	Yes	30	27.0	4.67	71300	565
															2	Titanium Dioxide	13463-67-7	0.04750025	71.250375	2.49E-04	1.02E-03	Yes	30	31.1	5.38	N/A	24
															3	Formaldehyde	50-00-0	9.47E-05	0.14205	4.97E-07	2.04E-06	Yes	30	0.1	0.01	30	6.00E-02
															4	Xylene	1330-20-7	0.021254625	31.8819375	1.12E-04	4.59E-04	Yes	30	13.9	2.41	22000	100
															5	1-Butanol	71-36-3	0.006594	9.891	3.46E-05	1.42E-04	Yes	30	4.3	0.75	N/A	1500
															6	Ethanol	64-17-5	0.028084875	42.1273125	1.47E-04	6.06E-04	Yes	30	18.4	3.18	N/A	45000
															7	Ethylbenzene	100-41-4	0.00189525	2.842875	9.95E-06	4.09E-05	Yes	30	1.2	0.21	N/A	1000
															8	Amorphous Silica	7631-86-9	0.002842875	4.2643125	1.49E-05	6.13E-05	Yes	30	1.9	0.32	N/A	N/A
															9	Talc	14807-96-6	0.009662625	14.4939375	5.07E-05	2.08E-04	Yes	30	6.3	1.09	N/A	4.8
															10	Ethylbenzene	100-41-4	0.002386125	3.5791875	1.25E-05	5.15E-05	Yes	30	1.6	0.27	N/A	1000
															11	2-Propanol	67-63-0	0.009205875	13.8088125	4.83E-05	1.99E-04	Yes	30	6.0	1.04	98000	7000
															12	Ethyl Acetate	141-78-6	0.0034125	5.11875	1.79E-05	7.36E-05	Yes	30	2.2	0.39	N/A	3400
															13	Toluene	108-88-3	0.024073	36.1095	1.26E-04	5.19E-04	Yes	30	15.8	2.73	37000	5000
															14	4-Methylbenzenesulfonic acid	104-15-4	0.0069685	10.45275	3.66E-05	1.50E-04	Yes	30	4.6	0.79	N/A	N/A
															15	Sulfuric Acid	7664-93-9	0.001267	1.9005	6.65E-06	2.73E-05	Yes	30	0.8	0.14	120	1
															16	1-(2-Butoxymethylethoxy)-Propone	29911-28-2	0.0021875	3.28125	1.15E-05	4.72E-05	Yes	30	1.4	0.25	N/A	N/A
															17	Butoxy propanol	5131-66-8	0.00546875	8.203125	2.87E-05	1.18E-04	Yes	30	3.6	0.62	N/A	N/A
															18	Barium Sulfate	7727-43-7	0.02734375	41.015625	1.44E-04	5.90E-04	Yes	30	17.9	3.10	N/A	12
6a	PB021715	Brooklyn	1126	75	Alchemy Paint Works	1102 Atlantic Avenue	Expired but in Operation	11/30/2022	CERTIFICATE TO OPERATE	Spray Booth	Artistic products paint works	1	300	6	1	HDI Homopolymer	28182-81-2	0.029	9	1.53E-04	1.26E-04	Yes	30	19.1	0.66	4.5	0.4
															2	N-Butylacteare	123-86-4	0.015	4	7.66E-05	6.30E-05	Yes	30	9.6	0.33	71300	565
															3	Etyle3-ethoxypropionate	763-69-9	0.011	3	5.77E-05	4.75E-05	Yes	30	7.2	0.25	140	64
															4	Butylglycol Acetate	112-07-2	0.007	2	3.67E-05	3.02E-05	Yes	30	4.6	0.16	N/A	310
															5	Ethylbenzene	100-41-4	0.002	1	9.45E-06	7.77E-06	Yes	30	1.2	0.04	N/A	1000
															6	Xylene	1330-20-7	0.004	1	1.94E-05	1.60E-05	Yes	30	2.4	0.08	22000	100

6b	PB014015	Brooklyn	1126	75	Alchemy Paint Works	1102 Atlantic Avenue	Expired but in Operation	44895	CERTIFICATE TO OPERATE	Spray Booth	Artistic products paint works	1	300	47	1	n-butylacetate	123-86-4	0.0696	20.88	3.65E-04	3.00E-04	Yes	30	45.6	1.58	71300	565
															2	Kaolin	1332-58-7	0.0101	3.03	5.30E-05	4.36E-05	Yes	30	6.6	0.23	N/A	4.8
															3	Titanium Dioxide	13463-67-7	0.05	15	2.62E-04	2.16E-04	Yes	30	32.8	1.13	N/A	24
															4	Barium Sulphate	7727-43-7	0.0101	3.03	5.30E-05	4.36E-05	Yes	30	6.6	0.23	N/A	12
															5	Talc	14807-96-6	0.0051	1.53	2.68E-05	2.20E-05	Yes	30	3.3	0.12	N/A	4.8
															6	Xylene	1330-20-7	0.0123	3.69	6.46E-05	5.31E-05	Yes	30	8.1	0.28	22000	100
															7	1,2,4-trimethylbenzene	95-63-6	0.0103	3.09	5.41E-05	4.44E-05	Yes	30	6.8	0.23	N/A	60
															8	solvent naphtha, light aromatic	64742-95-6	0.0126	3.78	6.61E-05	5.44E-05	Yes	30	8.3	0.29	N/A	100
															9	Crystalline Silica	14808-60-7	0.0025	0.75	1.31E-05	1.08E-05	Yes	30	1.6	0.06	N/A	2
															10	Acetone	67-64-1	0.0025	0.75	1.31E-05	1.08E-05	Yes	30	1.6	0.06	180000	30000
															11	1-Methxy-2-Propyl Acetate	108-65-6	0.0025	0.75	1.31E-05	1.08E-05	Yes	30	1.6	0.06	36850	2000
															12	Ethyl 3-Ethoxypropionate	763-69-9	0.0343	10.29	1.80E-04	1.48E-04	Yes	30	22.5	0.78	140	64
															13	Methyl Amyl Ketone	110-43-0	0.0025	0.75	1.31E-05	1.08E-05	Yes	30	1.6	0.06	N/A	550
															14	Methyl Acetate	79-20-9	0.0025	0.75	1.31E-05	1.08E-05	Yes	30	1.6	0.06	76000	1400
															15	Ethylbenzene	100-41-4	0.0052	1.56	2.73E-05	2.24E-05	Yes	30	3.4	0.12	N/A	1000
															16	Triphosphoric Acid	13939-25-8	0.0025	0.75	1.31E-05	1.08E-05	Yes	30	1.6	0.06	N/A	N/A
															17	Silica, Amorphous	7631-86-9	0.0025	0.75	1.31E-05	1.08E-05	Yes	30	1.6	0.06	N/A	N/A
															18	Butyl Acetate	123-86-4	0.0108	3.24	5.67E-05	4.66E-05	Yes	30	7.1	0.24	71300	565
															19	Mineral Spirits	64742-49-0	0.0036	1.08	1.89E-05	1.55E-05	Yes	30	2.4	0.08	N/A	N/A
															20	1,3,5-trimethylbenzene	108-67-8	0.001	0.3	5.25E-06	4.31E-06	Yes	30	0.7	0.02	N/A	60
															21	Aliphatic Polyisocyanate	28182-81-2	0.0292	8.76	1.53E-04	1.26E-04	Yes	30	19.1	0.66	4.5	0.4
															22	Butylglycol Acetate	123-07-2	0.0099	2.97	5.20E-05	4.27E-05	Yes	30	6.5	0.22	N/A	N/A
															23	VM&P Naphtha	64742-89-8	0.0111475	3.34425	5.85E-05	4.81E-05	Yes	30	7.3	0.25	N/A	100
															24	1-Methxy-2-Propyl Acetate	108-65-6	0.0079625	2.38875	4.18E-05	3.44E-05	Yes	30	5.2	0.18	36850	2000
															25	solvent naphtha, light aromatic	64742-95-6	0.002548	0.7644	1.34E-05	1.10E-05	Yes	30	1.7	0.06	N/A	100
															26	Ethy Glycol Butyl Ether	111-76-22	0.0344925	10.34775	1.81E-04	1.49E-04	Yes	30	22.6	0.78	N/A	N/A
															27	Sec-Butyl Alcohol	78-92-2	0.0114975	3.44925	6.04E-05	4.96E-05	Yes	30	7.5	0.26	N/A	710
															28	Copper	147-14-8	0.008623123	2.5869369	4.53E-05	3.72E-05	Yes	30	5.7	0.20	N/A	N/A
															29	Iron oxide	1309-37-1	0.014371875	4.3115625	7.55E-05	6.20E-05	Yes	30	9.4	0.33	N/A	12
															30	Copper	1328-53-6	0.008623125	2.5869375	4.53E-05	3.72E-05	Yes	30	5.7	0.20	N/A	N/A
															31	Aluminum Oxide	1344-28-1	0.0114975	3.44925	6.04E-05	4.96E-05	Yes	30	7.5	0.26	N/A	2.4
															32	Silicon Dioxide	7631-86-9	0.002874375	0.8623125	1.51E-05	1.24E-05	Yes	30	1.9	0.07	N/A	N/A
															33	Graphite	7782-42-5	0.0114975	3.44925	6.04E-05	4.96E-05	Yes	30	7.5	0.26	N/A	4.8
															34	Hydrophobic	68611-44-9	0.002874375	0.8623125	1.51E-05	1.24E-05	Yes	30	1.9	0.07	N/A	N/A
															35	Solvent naphtha, Medium Aliphatic	64742-88-7	0.002874375	0.8623125	1.51E-05	1.24E-05	Yes	30	1.9	0.07	N/A	3200
															36	Petroleum Naphtha, Heavy	94742-48-9	0.002874375	0.8623125	1.51E-05	1.24E-05	Yes	30	1.9	0.07	N/A	N/A
															37	Iron Oxide Pigment	51274-00-1	0.014371875	4.3115625	7.55E-05	6.20E-05	Yes	30	9.4	0.33	N/A	N/A
															38	Aluminum	21645-51-2	0.002874375	0.8623125	1.51E-05	1.24E-05	Yes	30	1.9	0.07	N/A	N/A
															39	Copper	15680-42-9	0.00574875	1.724625	3.02E-05	2.48E-05	Yes	30	3.8	0.13	N/A	N/A
															40	C.I. Pigment Green	14302-13-7	0.008623125	2.5869375	4.53E-05	3.72E-05	Yes	30	5.7	0.20	N/A	N/A
															41	Bismuth Vanadium Oxide	14059-33-7	0.025869375	7.7608125	1.36E-04	1.12E-04	Yes	30	17.0	0.59	N/A	N/A
															42	Chromium III Compound	15096-41-0	0.002874375	0.8623125	1.51E-05	1.24E-05	Yes	30	1.9	0.07	N/A	N/A
															43	Copper Phthalocyanine	68987-63-3	0.002874375	0.8623125	1.51E-05	1.24E-05	Yes	30	1.9	0.07	N/A	N/A
															44	Mica	12001-26-2	0.0114975	3.44925	6.04E-05	4.96E-05	Yes	30	7.5	0.26	N/A	7.1
															45	Barium Sulfate	7727-43-7	0.002874375	0.8623125	1.51E-05	1.24E-05	Yes	30	1.9	0.07	N/A	12
															46	Aluminum	7429-90-5	0.020120625	6.0361875	1.06E-04	8.68E-05	Yes	30	13.2	0.46	N/A	2.4
															47	Carbon Black	1333-86-4	0.008623125	2.5869375	4.53E-05	3.72E-05	Yes	30	5.7	0.20	N/A	7
27	PB477603	Brooklyn			Pranayama Art Inc	831 Dean Street	Expired but in Operation	2/7/2020	CERTIFICATE TO OPERATE	Wood Working	Artistic Woodworking	4	200	2	1	Particulates (PM2.5)+	NY075-02-5	0.125	100	1.86E-07	4.07E-07	Yes	30	1.79E+01	2.14E-03	**35**	**12**
															2	Particulate (PM10)++	NY075-00-5	0.125	100	2.62E-06	5.75E-07	Yes	30	2.43E+01	3.02E-03	**150**	**N/A**

Note: *As listed in the Permit

** PM10 from Spray booth Operations

^ hourly emission rate averaged over 24 hours and 365 days

+ PM2.5 fraction for sawdust 0.283

++ PM10 fraction for sawdust 0.4

" 2022 24-hour background PM10 concentration of 24 ug/m3 added. 24-hrs background PM2.5 17.9 µg/m3 concentration added

N/A No Criteria

Project Name: Atlantic Avenue Mixed-Use Plan, NYC

Table 3. Industrial Sources out of Project Zone within 400ft

Facility No.	Permit ID No.	Borough	Block	Lot	Facility Name	Street Address	Permit Status	Expiration Date	Type	Description	Usage (gal/8hrs)	Used Hrs/Day	Used Days/Yr	Number of Pollutants	Pollutant No	Pollutant Name	CAS No	SDS Content (%)	Density (g/cm3)	Hourly Emissions (g/sec)	Annual Emissions (g/sec)	Avg 1-hr Emissions (g/sec)^	Avg Annual Emissions (gr/sec)^	Site within 400 ft	Distance to X (ft)	Short-Term Concentration (Calculated)	Annual Concentration (Calculated)	SGC NYSDEC Criteria/ NAAQS" (µg/m3)	AGC NYSDEC Criteria/ NAAQS" (µg/m3)
24	PA042194	Brooklyn	01149	0041	BRAGLEY SHIPPING & CARRYING	924 BERGEN STREET	Active	12/12/2024	Permit to Operate	Woodworking, Spray Booth	11.00	8	250	13	1	Particulates*	NY075-02-5	9%	0.78	2.03E-02	2.03E-02	0.01	0.000002	Yes	210	37.03	0.0006	150	N/A
															2	Total VOC	NY998-00-0	91%		1.02E+00	1.02E+00	8.1891	0.00012			41,256.60	0.0294	-	-
															3	Isobutyl Acetate	74-98-6	40%		4.51E-01	4.51E-01	3.6087	0.00005			18,180.87	0.0130	71300	565
															4	Ethyl Acetate	141-78-6	25%		2.82E-01	2.82E-01	2.2555	0.00003			11,363.05	0.0081	-	3400
															5	Propane	74-98-6	25%		2.82E-01	2.82E-01	2.2555	0.00003			11,363.05	0.0081	-	-
															6	Acetone	67-64-1	25%		2.82E-01	2.82E-01	2.2555	0.00003			11,363.05	0.0081	180000	30000
															7	n-butane	106-97-8	10%		1.13E-01	1.13E-01	0.9022	0.00001			4,545.22	0.0032	-	-
															8	Toluene	108-88-3	10%		1.13E-01	1.13E-01	0.9022	0.00001			4,545.22	0.0032	37000	5000
															9	Butanol	71-36-3	10%		1.13E-01	1.13E-01	0.9022	0.00001			4,545.22	0.0032	-	1500
															10	ellulose nitrate, este	9004-70-0	10%		1.13E-01	1.13E-01	0.9022	0.00001			4,545.22	0.0032	-	-
															11	Butyl cellosolve	111-79-2	2.50%		2.82E-02	2.82E-02	0.2255	0.000003			1,136.30	0.0008	-	-
															12	Isopropanol	67-63-0	2.50%		2.82E-02	2.82E-02	0.2255	0.000003			1,136.30	0.0008	98000	7000
															13	n-butyl acetate	123-86-4	1.00%		1.13E-02	1.13E-02	0.0902	0.000001			454.52	0.0003	71300	565
25	PA042294	Brooklyn	01149	0041	BRAGLEY SHIPPING & CARRYING	924 BERGEN STREET	Active	12/12/2024	Permit to Operate	Cyclone, Woodworking	-	8	25	2	1	Particulates (PM2.5)+	NY075-02-5	-	-	1.12E-01	1.12E+00	4.68E-03	1.28E-05	Yes	210	26.91	0.003	35	12
															2	Particulates (PM10)++	NY075-00-5	-	-	1.59E-01	1.59E+00	6.61E-03	1.81E-05	Yes	210	57.33	0.005	150	N/A

Note: * PM10 from Spray booth Operations
^ hourly emission rate averaged over 24 hours and 365 days
+ PM2.5 fraction for sawdust 0.283
++ PM10 fraction for sawdust 0.4
" **2022 24-hour background PM10 concentration of 24 ug/m3 added. 24-hrs background PM2.5 17.9 µg/m3 concentration added**
N/A Criteria not available

Sample Calculation for PA042194:

NYC Department of Environmental Protection issued Certificate to Operate states that 11 gal of "Mohawk" lacquer is used for surface coating. Per publicly available safety data sheet from the manufacturer (Mohawk), density of lacquer is 0.78 g/cm3.

Provided Lacquer Usage =	11	gal/8 hrs	
=	5.20	lt/hr	
Density of "Lacquer per SDS=	0.78	g/cm3	
Lacquer usage in grams=	4060	g/hr	780 g/L
=	1.13	g/s	
VOC content per SDS =	708.00	g/ltr	
=	1.02	g/s	
=	91%		
Particulates content =	9%		
Assumed Fiberglass filter efficiency =	80%		
Emission of Particulates =	0.02	g/s	
Percentage of Isobutyl Acetate =	40%		
Emission of Isobutyl Acetate =	0.45	g/s	

Sample Calculation for PA042294

NYC Department of Environmental Protection issued Certificate to Operate permit states that wood working occurs for 8 ours at day for 25 days a year. Hourly emission rates mentioned in the permit are 21 lbs/hr and 42000 lbs/year.
Efficiency of 85%

Efficiency of Cyclone dustcollector=	85%	
Hourly emission rate Provided =	21	lbs/hr
=	2.6	g/sec
With cyclone dustcollector =	0.4	g/sec
Annual emission rate =	42000	lbs/yr
=	4	g/sec

Project Name: Atlantic Avenue Mixed-Use Plan, NYC
Industrial Source: Retained Industrial Source on Projected Site
Source Address: Alchemy Paint Works, 1102 Atlantic Avenue, Brooklyn, NY

Table 4. AERMOD Modeling-Industrial Source Parameters

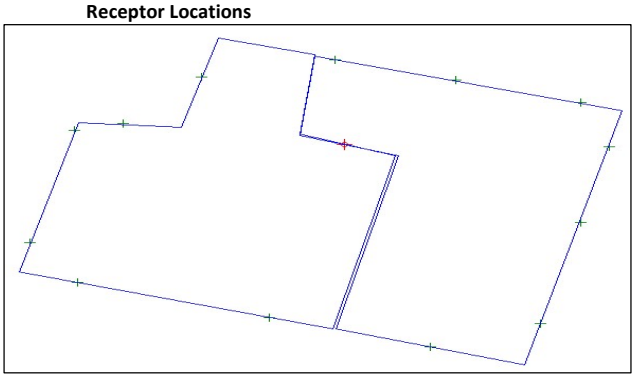
Source ID	Source Description	Source Data						
		Volumetric Flow Rate	Exit Gas Temp.	Inner Diameter	Height above grade	Height above roof	UTM X coordinates	UTM Y coordinates
		(ft^3/m)	(°F)	(in)	(ft)	(ft)	(m)	(m)
PB1	Paint Booth Exhaust 1, Alchemy Paint Works, 1102 Atlantic Avenue, Brooklyn,	15000	70	34.00	198.0	3.5	588179.96	4503660.67
PB2	Paint Booth Exhaust 2, Alchemy Paint Works, 1102 Atlantic Avenue, Brooklyn,	15000	70	34.00	198.0	3.5	588179.48	4503660.81

Project Name: Atlantic Avenue Mixed-Use Plan, NYC
Industrial Source: Retained Industrial Source on Projected Site
Source Address: Alchemy Paint Works, 1102 Atlantic Avenue, Brooklyn, NY

Table 5. AERMOD Receptor Summary - Industrial Source Analysis

Receptor ID	Description	Height above grade	UTM X coordinates	UTM Y coordinates
		(m)	(m)	(m)
R1	North Façade	1.5	588178	4503680
R2	North Façade	1.5	588198	4503676
R2	North Façade	1.5	588219	4503670
R3	Northeast Façade	1.5	588224	4503660
R4	East Façade	1.5	588219	4503642
R5	Southeast Façade	1.5	588213	4503619
R6	South Façade	1.5	588194	4503613
R7	South Façade	1.5	588168	4503620
R8	South Façade	1.5	588136	4503628
R9	Southwest Façade	1.5	588128	4503638
R10	West Façade	1.5	588135	4503664
R11	Northwest Façade	1.5	588143	4503666
R12	West Façade	1.5	588156	4503676
R13	North Façade	4.5	588178	4503680
R14	North Façade	4.5	588198	4503676
R15	North Façade	4.5	588219	4503670
R16	Northeast Façade	4.5	588224	4503660
R17	East Façade	4.5	588219	4503642
R18	Southeast Façade	4.5	588213	4503619
R19	South Façade	4.5	588194	4503613
R20	South Façade	4.5	588168	4503620
R21	South Façade	4.5	588136	4503628
R22	Southwest Façade	4.5	588128	4503638
R23	West Façade	4.5	588135	4503664
R24	Northwest Façade	4.5	588143	4503666
R25	West Façade	4.5	588156	4503676
R26	North Façade	7.5	588178	4503680
R27	North Façade	7.5	588198	4503676
R28	North Façade	7.5	588219	4503670
R29	Northeast Façade	7.5	588224	4503660
R30	East Façade	7.5	588219	4503642
R31	Southeast Façade	7.5	588213	4503619
R32	South Façade	7.5	588194	4503613
R33	South Façade	7.5	588168	4503620
R34	South Façade	7.5	588136	4503628
R35	Southwest Façade	7.5	588128	4503638
R36	West Façade	7.5	588135	4503664
R37	Northwest Façade	7.5	588143	4503666
R38	West Façade	7.5	588156	4503676
R39	North Façade	10.5	588178	4503680
R40	North Façade	10.5	588198	4503676
R41	North Façade	10.5	588219	4503670
R42	Northeast Façade	10.5	588224	4503660
R43	East Façade	10.5	588219	4503642
R44	Southeast Façade	10.5	588213	4503619
R45	South Façade	10.5	588194	4503613
R46	South Façade	10.5	588168	4503620
R47	South Façade	10.5	588136	4503628
R48	Southwest Façade	10.5	588128	4503638
R49	West Façade	10.5	588135	4503664
R50	Northwest Façade	10.5	588143	4503666
R51	West Façade	10.5	588156	4503676
R52	North Façade	13.5	588178	4503680
R53	North Façade	13.5	588198	4503676
R54	North Façade	13.5	588219	4503670

Receptor Locations



R55	Northeast Façade	13.5	588224	4503660
R56	East Façade	13.5	588219	4503642
R57	Southeast Façade	13.5	588213	4503619
R58	South Façade	13.5	588194	4503613
R59	South Façade	13.5	588168	4503620
R60	South Façade	13.5	588136	4503628
R61	Southwest Façade	13.5	588128	4503638
R62	West Façade	13.5	588135	4503664
R63	Northwest Façade	13.5	588143	4503666
R64	West Façade	13.5	588156	4503676
R65	North Façade	16.5	588178	4503680
R66	North Façade	16.5	588198	4503676
R67	North Façade	16.5	588219	4503670
R68	Northeast Façade	16.5	588224	4503660
R69	East Façade	16.5	588219	4503642
R70	Southeast Façade	16.5	588213	4503619
R71	South Façade	16.5	588194	4503613
R72	South Façade	16.5	588168	4503620
R73	South Façade	16.5	588136	4503628
R74	Southwest Façade	16.5	588128	4503638
R75	West Façade	16.5	588135	4503664
R76	Northwest Façade	16.5	588143	4503666
R77	West Façade	16.5	588156	4503676
R78	North Façade	19.5	588178	4503680
R79	North Façade	19.5	588198	4503676
R80	North Façade	19.5	588219	4503670
R81	Northeast Façade	19.5	588224	4503660
R82	East Façade	19.5	588219	4503642
R83	Southeast Façade	19.5	588213	4503619
R84	South Façade	19.5	588194	4503613
R85	South Façade	19.5	588168	4503620
R86	South Façade	19.5	588136	4503628
R87	Southwest Façade	19.5	588128	4503638
R88	West Façade	19.5	588135	4503664
R89	Northwest Façade	19.5	588143	4503666
R90	West Façade	19.5	588156	4503676
R91	North Façade	22.5	588178	4503680
R92	North Façade	22.5	588198	4503676
R93	North Façade	22.5	588219	4503670
R94	Northeast Façade	22.5	588224	4503660
R95	East Façade	22.5	588219	4503642
R96	Southeast Façade	22.5	588213	4503619
R97	South Façade	22.5	588194	4503613
R98	South Façade	22.5	588168	4503620
R99	South Façade	22.5	588136	4503628
R100	Southwest Façade	22.5	588128	4503638
R101	West Façade	22.5	588135	4503664
R102	Northwest Façade	22.5	588143	4503666
R103	West Façade	22.5	588156	4503676
R104	North Façade	25.5	588178	4503680
R105	North Façade	25.5	588198	4503676
R106	North Façade	25.5	588219	4503670
R107	Northeast Façade	25.5	588224	4503660
R108	East Façade	25.5	588219	4503642
R109	Southeast Façade	25.5	588213	4503619
R110	South Façade	25.5	588194	4503613
R111	South Façade	25.5	588168	4503620
R112	South Façade	25.5	588136	4503628
R113	Southwest Façade	25.5	588128	4503638
R114	West Façade	25.5	588135	4503664
R115	Northwest Façade	25.5	588143	4503666
R116	West Façade	25.5	588156	4503676
R117	North Façade	28.5	588178	4503680
R118	North Façade	28.5	588198	4503676
R119	North Façade	28.5	588219	4503670

R120	Northeast Façade	28.5	588224	4503660
R121	East Façade	28.5	588219	4503642
R122	Southeast Façade	28.5	588213	4503619
R123	South Façade	28.5	588194	4503613
R124	South Façade	28.5	588168	4503620
R125	South Façade	28.5	588136	4503628
R126	Southwest Façade	28.5	588128	4503638
R127	West Façade	28.5	588135	4503664
R128	Northwest Façade	28.5	588143	4503666
R129	West Façade	28.5	588156	4503676

R130	North Façade	31.5	588178	4503680
R131	North Façade	31.5	588198	4503676
R132	North Façade	31.5	588219	4503670
R133	Northeast Façade	31.5	588224	4503660
R134	East Façade	31.5	588219	4503642
R135	Southeast Façade	31.5	588213	4503619
R136	South Façade	31.5	588194	4503613
R137	South Façade	31.5	588168	4503620
R138	South Façade	31.5	588136	4503628
R139	Southwest Façade	31.5	588128	4503638
R140	West Façade	31.5	588135	4503664
R141	Northwest Façade	31.5	588143	4503666
R142	West Façade	31.5	588156	4503676
R143	North Façade	34.5	588178	4503680
R144	North Façade	34.5	588198	4503676
R145	North Façade	34.5	588219	4503670
R146	Northeast Façade	34.5	588224	4503660
R147	East Façade	34.5	588219	4503642
R148	Southeast Façade	34.5	588213	4503619
R149	South Façade	34.5	588194	4503613
R150	South Façade	34.5	588168	4503620
R151	South Façade	34.5	588136	4503628
R152	Southwest Façade	34.5	588128	4503638
R153	West Façade	34.5	588135	4503664
R154	Northwest Façade	34.5	588143	4503666
R155	West Façade	34.5	588156	4503676
R156	North Façade	37.5	588178	4503680
R157	North Façade	37.5	588198	4503676
R158	North Façade	37.5	588219	4503670
R159	Northeast Façade	37.5	588224	4503660
R160	East Façade	37.5	588219	4503642
R161	Southeast Façade	37.5	588213	4503619
R162	South Façade	37.5	588194	4503613
R163	South Façade	37.5	588168	4503620
R164	South Façade	37.5	588136	4503628
R165	Southwest Façade	37.5	588128	4503638
R166	West Façade	37.5	588135	4503664
R167	Northwest Façade	37.5	588143	4503666
R168	West Façade	37.5	588156	4503676
R169	North Façade	40.5	588178	4503680
R170	North Façade	40.5	588198	4503676
R171	North Façade	40.5	588219	4503670
R172	Northeast Façade	40.5	588224	4503660
R173	East Façade	40.5	588219	4503642
R174	Southeast Façade	40.5	588213	4503619
R175	South Façade	40.5	588194	4503613
R176	South Façade	40.5	588168	4503620
R177	South Façade	40.5	588136	4503628
R178	Southwest Façade	40.5	588128	4503638
R179	West Façade	40.5	588135	4503664
R180	Northwest Façade	40.5	588143	4503666
R181	West Façade	40.5	588156	4503676
R182	North Façade	43.5	588178	4503680
R183	North Façade	43.5	588198	4503676
R184	North Façade	43.5	588219	4503670
R185	Northeast Façade	43.5	588224	4503660
R186	East Façade	43.5	588219	4503642
R187	Southeast Façade	43.5	588213	4503619
R188	South Façade	43.5	588194	4503613
R189	South Façade	43.5	588168	4503620
R190	South Façade	43.5	588136	4503628
R191	Southwest Façade	43.5	588128	4503638
R192	West Façade	43.5	588135	4503664
R193	Northwest Façade	43.5	588143	4503666
R194	West Façade	43.5	588156	4503676

R195	North Façade	46.5	588178	4503680
R196	North Façade	46.5	588198	4503676
R197	North Façade	46.5	588219	4503670
R198	Northeast Façade	46.5	588224	4503660
R199	East Façade	46.5	588219	4503642
R200	Southeast Façade	46.5	588213	4503619
R201	South Façade	46.5	588194	4503613
R202	South Façade	46.5	588168	4503620
R203	South Façade	46.5	588136	4503628
R204	Southwest Façade	46.5	588128	4503638
R205	West Façade	46.5	588135	4503664
R206	Northwest Façade	46.5	588143	4503666
R207	West Façade	46.5	588156	4503676

R208	North Façade	49.5	588178	4503680
R209	North Façade	49.5	588198	4503676
R210	North Façade	49.5	588219	4503670
R211	Northeast Façade	49.5	588224	4503660
R212	East Façade	49.5	588219	4503642
R213	Southeast Façade	49.5	588213	4503619
R214	South Façade	49.5	588194	4503613
R215	South Façade	49.5	588168	4503620
R216	South Façade	49.5	588136	4503628
R217	Southwest Façade	49.5	588128	4503638
R218	West Façade	49.5	588135	4503664
R219	Northwest Façade	49.5	588143	4503666
R220	West Façade	49.5	588156	4503676
R221	North Façade	52.5	588178	4503680
R222	North Façade	52.5	588198	4503676
R223	North Façade	52.5	588219	4503670
R224	Northeast Façade	52.5	588224	4503660
R225	East Façade	52.5	588219	4503642
R226	Southeast Façade	52.5	588213	4503619
R227	South Façade	52.5	588194	4503613
R228	South Façade	52.5	588168	4503620
R229	South Façade	52.5	588136	4503628
R230	Southwest Façade	52.5	588128	4503638
R231	West Façade	52.5	588135	4503664
R232	Northwest Façade	52.5	588143	4503666
R233	West Façade	52.5	588156	4503676
R234	North Façade	55.5	588178	4503680
R235	North Façade	55.5	588198	4503676
R236	North Façade	55.5	588219	4503670
R237	Northeast Façade	55.5	588224	4503660
R238	East Façade	55.5	588219	4503642
R239	Southeast Façade	55.5	588213	4503619
R240	South Façade	55.5	588194	4503613
R241	South Façade	55.5	588168	4503620
R242	South Façade	55.5	588136	4503628
R243	Southwest Façade	55.5	588128	4503638
R244	West Façade	55.5	588135	4503664
R245	Northwest Façade	55.5	588143	4503666
R246	West Façade	55.5	588156	4503676

Project Name: Atlantic Avenue Mixed-Use Plan, NYC
Industrial Source: Retained Industrial Source on Projected Site
Source Address: Alchemy Paint Works, 1102 Atlantic Avenue, Brooklyn, NY

Table 6. AERMOD Result Summary - Industrial Source Analysis

Contaminant Name	CAS Number	Source Emission Rates		AERMOD Result		NYSDEC Criteria	
		1-hr Avg (g/s)	Avg Annual (g/s)	Highest 1-hr Conc (µg/m³)	Highest Annual Conc (µg/m³)	1-hr Avg (µg/m³)	Annual Avg (µg/m³)
HDI Homopolymer	28182-81-2	3.07E-04	2.52E-04	3.9	0.01	4.5	0.4