WEEKLY AIR MONITORING REPORT

Vo-Toys Removal Action

Site Name: Vo-Toys Site, Harrison, New Jersey
CERCLA Docket No.: 02-2019-2028
Report No.: 44
Report Date: July 23, 2021
Reporting Period: July 19 to July 22, 2021

1 Introduction

This report summarizes the Vo-Toys Removal Action (RA) air monitoring program conducted between July 19 to July 23, 2021, at the Vo-Toys site located at 400 South 5th Street, Harrison, New Jersey (the site). Air monitoring for particulates less than 10 microns in diameter (PM_{10}) and mercury vapor was conducted in accordance with the U.S. Environmental Protection Agency (USEPA)-approved Community Air Monitoring Plan (CAMP). PM_{10} and mercury vapor results were compared with action levels presented in the CAMP.

Air monitoring during the week of July 19, 2021 included the following monitoring tasks:

- Meteorological monitoring
- Work area perimeter air monitoring
- Site perimeter air monitoring
- Off-site/Community air monitoring

A summary of the monitoring activities that were conducted is presented in Section 3.

2 Meteorological Monitoring

Meteorological monitoring was conducted to measure wind speed, wind direction, and air temperature. Meteorological readings were recorded on a data logging device and evaluated at least three times per day to determine the upwind and downwind boundaries of the site.

Table 2-1 presents a summary of the meteorological monitoring during the week of July 19, 2021. The attached site air monitoring figures show the locations of the meteorological sensors.

Table 2-1
Meteorological Monitoring Summary

Date	Weather
July 19, 2021	Partly sunny, high in the upper 80s˚F; Winds: 5-10 mph NW (online), 0-5 mph W (site).
July 20, 2021	Partly sunny, high in the low 90s˚F; Winds: 5-10 mph WNW (online), 0-5 mph W (site).
July 21, 2021	Partly sunny, high in the low 90s˚F; Winds: 0-5 mph W (online), 0-5 mph S (site).
July 22, 2021	Partly sunny, high in the low 90s°F; Winds: 0-5 mph NW (online), 0-5 mph W (site).

3 PM_{10} and Mercury Vapor Monitoring

3.1 Work Area Perimeter Air Monitoring

Air monitoring was performed at the perimeter of the RA work areas and the RA activities were modified as necessary so that particulates and mercury vapors above action levels were not migrating to the site perimeter and off-site/community air monitoring locations. The work area perimeter monitoring locations were in or adjacent to the buildings and were determined based on the location and extent of RA activities and, for exterior RA activities, the prevailing wind direction. Readings were recorded and maintained on site by the Engineer.

On July 20 and 21, 2021, work area perimeter PM_{10} readings exceeded the PM_{10} action levels. The elevated readings were due to atmospheric particulates in the air as a result of West Coast wildfires. Both days the air quality index (AQI) was above 150, indicating an unhealthy atmosphere. Increased attention was given to ensuring visible dust or elevated readings associated with site work activities were not observed.

3.2 Site Perimeter Air Monitoring Summary

Site perimeter monitoring was performed to document that particulates (PM_{10}) or mercury vapor above action levels were not migrating beyond the site boundary. Five air monitoring stations were located outside the buildings around the site perimeter: one upwind and four downwind. Figures SP-1 through SP-4 show the locations of the site perimeter stations each day. Readings were recorded and maintained on site by the Engineer.

On July 20 and 21, 2021, all site perimeter monitoring stations exhibited elevated PM_{10} readings that exceeded the PM_{10} action levels. The elevated readings were due to atmospheric particulates in the air as a result of West Coast wildfires. Both days the AQI was above 150, indicating an unhealthy atmosphere. Increased attention was given to visible dust or elevated readings associated with site work activities were not observed.

All other PM_{10} and mercury vapor site perimeter air monitoring data were below action levels defined in the CAMP. A summary of site perimeter air monitoring data is presented in Table 3-1.

Table 3-1
Summary of PM_{10} and Mercury Vapor Site Perimeter Air Monitoring

Date	Air Monitoring Station/Location	Upwind/ Downwind	PM_{10} 15-Minute Average Range (ug/m^3) *Action Level <100 ug/m^3*	Mercury Vapor 15-Minute Average Range (ug/m^3) *Action Level <10 ug/m^3*
07/19/2021	Station 1 – West	Upwind	17.5 – 31.3	0.10 - 0.20
	Station 2 – East	Downwind	6.8 – 20.9	0.10 - 0.46
	Station 3 – Southeast	Downwind	16.1 – 33.5	0.10 - 0.36
	Station 4 – North	Downwind	0.1 – 12.2	0.13 - 0.20
	Station 5 – South	Downwind	10.1 – 35.4	-
07/20/2021 [4]	Station 1 – West	Upwind	132.7 – 242.5	0.10 - 0.24
	Station 2 – East	Downwind	101.5 – 186.7	0.11 - 0.78
	Station 3 – Southeast	Downwind	131.1 – 236	0.10 - 0.39
	Station 4 – North	Downwind	102.2 – 183.6	0.13 - 0.26
	Station 5 – South	Downwind	133.3 – 221.7	-
07/21/2021 [4]	Station 1 – West	Downwind	62.3 – 129.8	0.10 - 0.22
	Station 2 – East	Downwind	44.5 – 96.7	0.12 - 0.30
	Station 3 – Southeast	Upwind	60.9 – 132.0	0.10 - 0.45
	Station 4 – North	Downwind	40.1 – 96.1	0.12 - 0.27
	Station 5 – South	Downwind	52.7 – 133.6	-
07/22/2021	Station 1 – West	Upwind	22.1 – 29.7	0.10 - 0.15
	Station 2 – East	Downwind	12.1 – 25.2	0.12 - 0.60
	Station 3 – Southeast	Downwind	19.3 – 28.1	0.10 - 0.49
	Station 4 – North	Downwind	3.9 – 16.2	0.12 - 0.21
	Station 5 – South	Downwind	8.7 – 25.6	-

Notes:
1. PM_{10} action level: Normal operations if PM_{10} <100 ug/m^3.
2. Mercury vapor action level: Normal operations if 15-minute average of MVA readings is <10 ug/m^3.
3. See CAMP for further details on action levels.
4. PM_{10} readings above action levels were attributed to atmospheric particulates from West Coast wildfires.

3.3 Off-Site/Community Air Monitoring

Off-site/community air monitoring for mercury vapors was performed during specific phases of the RA to document that mercury vapor above action levels were not migrating beyond the site boundary. In accordance with the CAMP, each day that included a qualifying mercury vapor monitoring event, four 8-hour off-site air samples were collected for mercury vapor analysis (one upwind and three downwind). Off-site/community air monitoring for mercury vapors was performed July 19 to July 22, 2021. Figures SP-1 through SP-4 show the locations of the off-site/community air sample locations for the days when sampling was performed.

A summary of off-site/community air monitoring (including analytical results from the previous week) is presented in Table 3-2.

Table 3-2
Summary of Mercury Vapor Off-Site/Community Air Monitoring

Date	Mercury Vapor Monitoring Event	Air Monitoring Station/Location	Upwind/ Downwind	Mercury Vapor 8-Hour Sample (ug/m^3) *Action Level <4 ug/m^3*
07/13/2021	Floor Removal	Station 1 - West	Downwind	ND
		Station 2 - Southeast	Upwind	ND
		Station 3 – East	Downwind	ND
		Station 4 - North	Downwind	ND
07/14/2021	Floor Removal	Station 1 - West	Upwind	ND
		Station 2 - Southeast	Downwind	ND
		Station 3 – East	Downwind	ND
		Station 4 - North	Downwind	ND
07/15/2021	Floor Removal	Station 1 - West	Upwind	ND
		Station 2 - Southeast	Downwind	ND
		Station 3 – East	Downwind	ND
		Station 4 - North	Downwind	ND
07/19/2021	Floor Removal	Station 1 - West	Upwind	Results Pending (to be reported next week)
		Station 2 - Southeast	Downwind	Results Pending (to be reported next week)
		Station 3 – East	Downwind	Results Pending (to be reported next week)
		Station 4 - North	Downwind	Results Pending (to be reported next week)
07/20/2021	Floor Removal	Station 1 - West	Upwind	Results Pending (to be reported next week)
		Station 2 - Southeast	Downwind	Results Pending (to be reported next week)
		Station 3 – East	Downwind	Results Pending (to be reported next week)
		Station 4 - North	Downwind	Results Pending (to be reported next week)
07/21/2021	Floor Removal	Station 1 - West	Downwind	Results Pending (to be reported next week)
		Station 2 - Southeast	Upwind	Results (to be reported next week)
		Station 3 – East	Downwind	Results Pending (to be reported next week)
		Station 4 - North	Downwind	Results Pending (to be reported next week)
07/22/2021	Floor Removal	Station 1 - West	Upwind	Results Pending (to be reported next week)
		Station 2 - Southeast	Downwind	Results (to be reported next week)
		Station 3 – East	Downwind	Results Pending (to be reported next week)

Date	Mercury Vapor Monitoring Event	Air Monitoring Station/Location	Upwind/ Downwind	Mercury Vapor 8-Hour Sample (ug/m^3) *Action Level <4 ug/m^3*
		Station 4 - North	Downwind	Results Pending (to be reported next week)

Note:
1. ND = Not detected at a concentration above the laboratory detection limit
2. J = Estimated

4 Monitoring Equipment

Table 4-1 presents the air monitoring devices used.

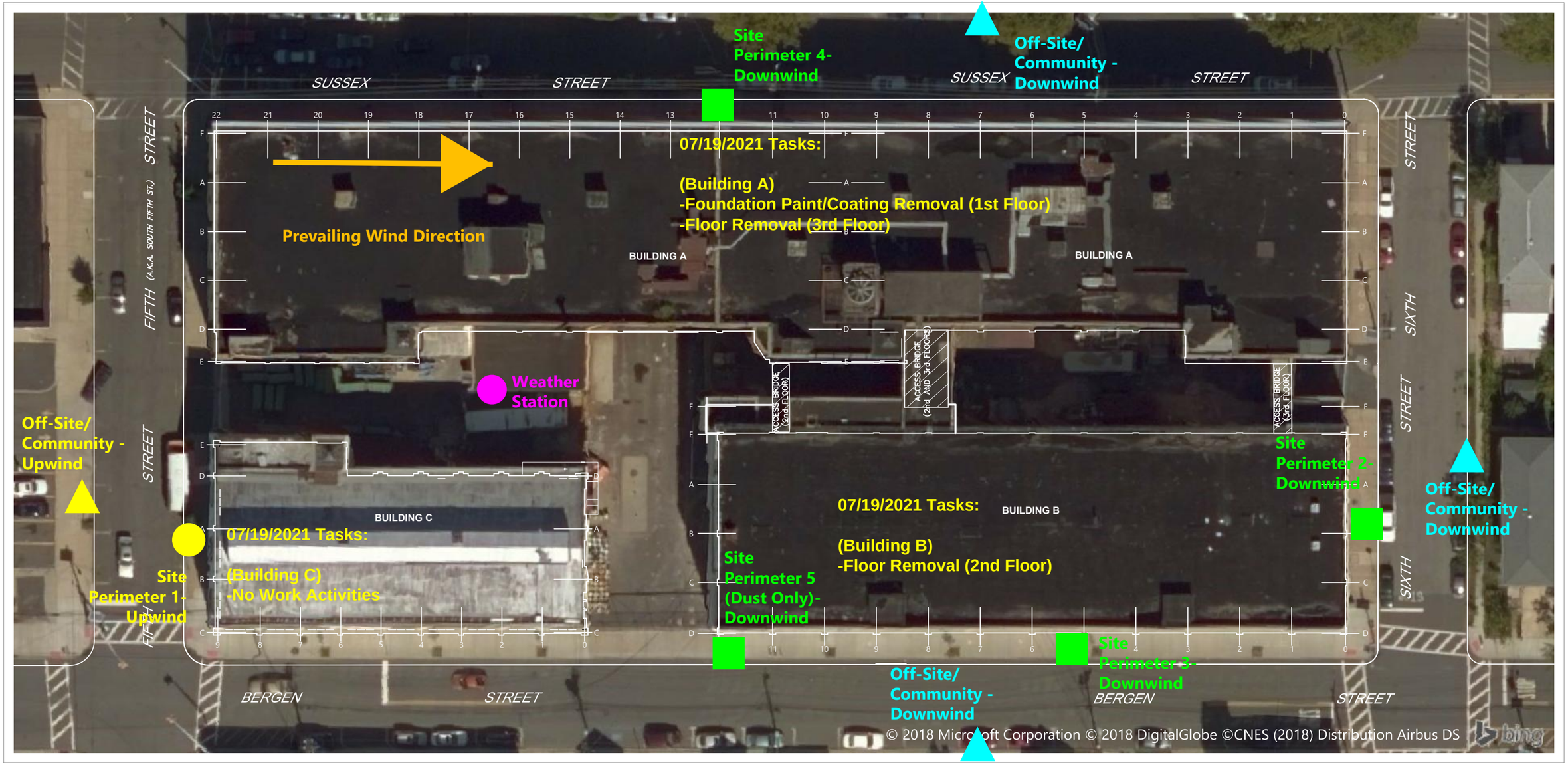
Table 4-1
Monitoring Equipment and Calibration

Parameter	Monitoring Equipment
Mercury Vapors – Real Time and Average Concentrations	• Jerome Mercury Vapor Analyzer J405 – Arizona Instruments, LLC (work area monitoring, regenerated prior to daily use) • VM 3000 – Mercury Instruments (site perimeter stations, auto zeroed prior to daily use)
Airborne Particulates	• MIE DataRAM™ Portable Particulate Monitor (work area perimeter, zeroed prior to daily use) • TSI Dusttrak Particulate Monitor (site perimeter stations, zeroed prior to daily use)
Meteorological Monitoring	• Vantage Pro 2 weather station
Mercury Vapors – 8-hour Average Concentrations via NIOSH 6009	• Sensidyne Gilian GilAir 3 air sampling pump (low flow module) • Mesa Labs Defender 500 series air sampling pump flow calibrator • Solid sorbent glass tubes containing Hopcalite

5 Issues or Potential Modifications to the CAMP

None

Figures



SOURCE: Floor plans compiled from CAD file entitled: "FIG05-REV071615" provided by AMEC Foster Wheeler, Inc. on March 31, 2016. Subsurface utilities and features compiled from CAD file entitled: "NUMBERED_SITEMAP_20101" provided by General Electric Company on March 3, 2016.
HORIZONTAL DATUM: New Jersey State Plane, North American Datum 1983, U.S. Feet (NJ83F).
VERTICAL DATUM: (None).

LEGEND

A,1 —— – —— BUILDING COLUMN LINE

Site Perimeter Air Monitoring Location

Upwind Site Perimeter Monitoring Location

Off-Site/Community Air Monitoring Location (Yellow is upwind off-site location)

0 20 40
SCALE IN FEET

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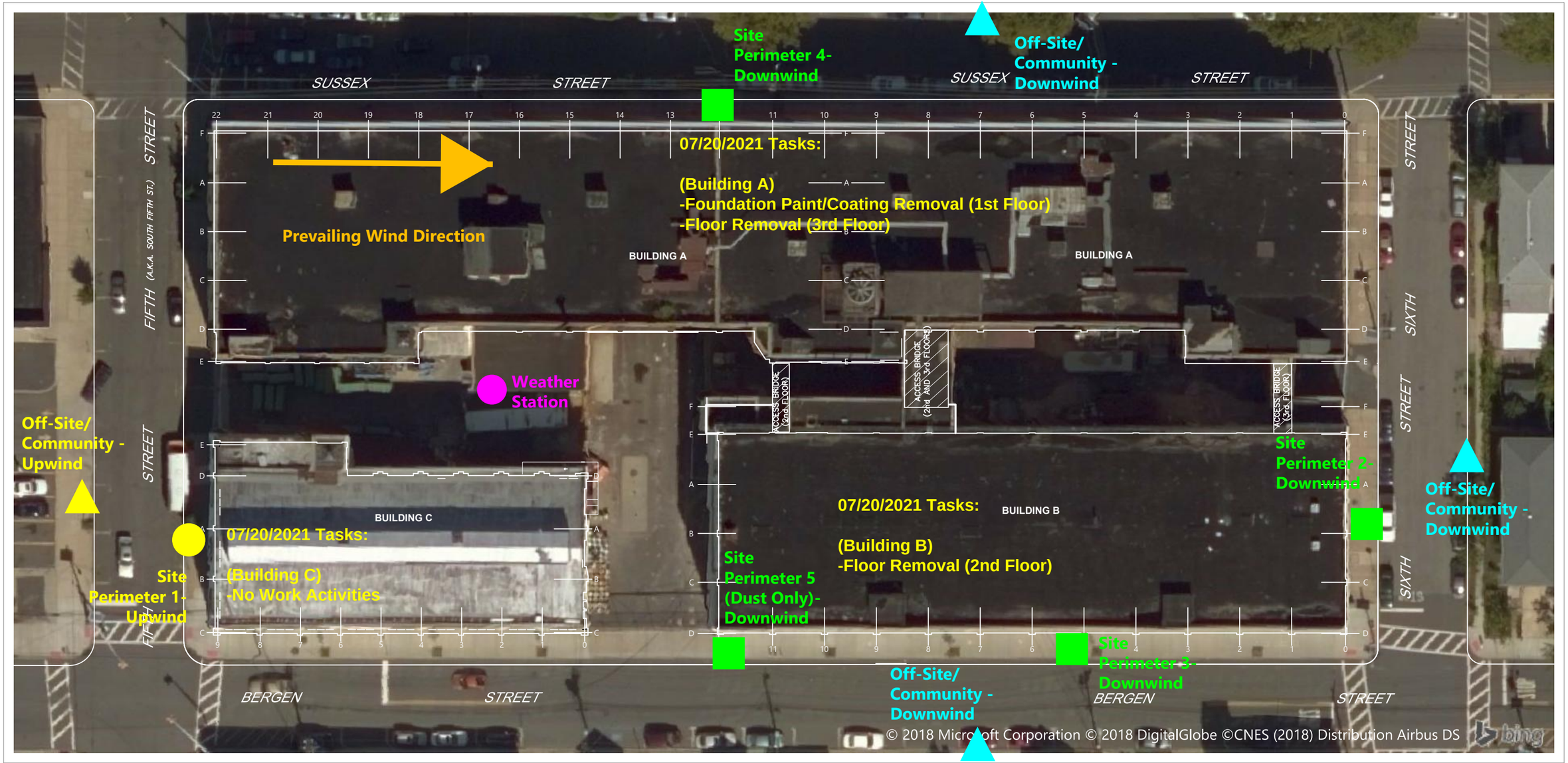
ANCHOR QEA

Figure SP-1
07/19/2021
Air Monitoring Station Locations

Vo Toys Removal Action
General Electric Company



SOURCE: Floor plans compiled from CAD file entitled: "FIG05-REV071615" provided by AMEC Foster Wheeler, Inc. on March 31, 2016. Subsurface utilities and features compiled from CAD file entitled: "NUMBERED_SITEMAP_20101" provided by General Electric Company on March 3, 2016.
HORIZONTAL DATUM: New Jersey State Plane, North American Datum 1983, U.S. Feet (NJ83F).
VERTICAL DATUM: (None).

LEGEND

A,1 —— – —— BUILDING COLUMN LINE

- Site Perimeter Air Monitoring Location
- Upwind Site Perimeter Monitoring Location
- Off-Site/Community Air Monitoring Location (Yellow is upwind off-site location)

0 20 40
SCALE IN FEET

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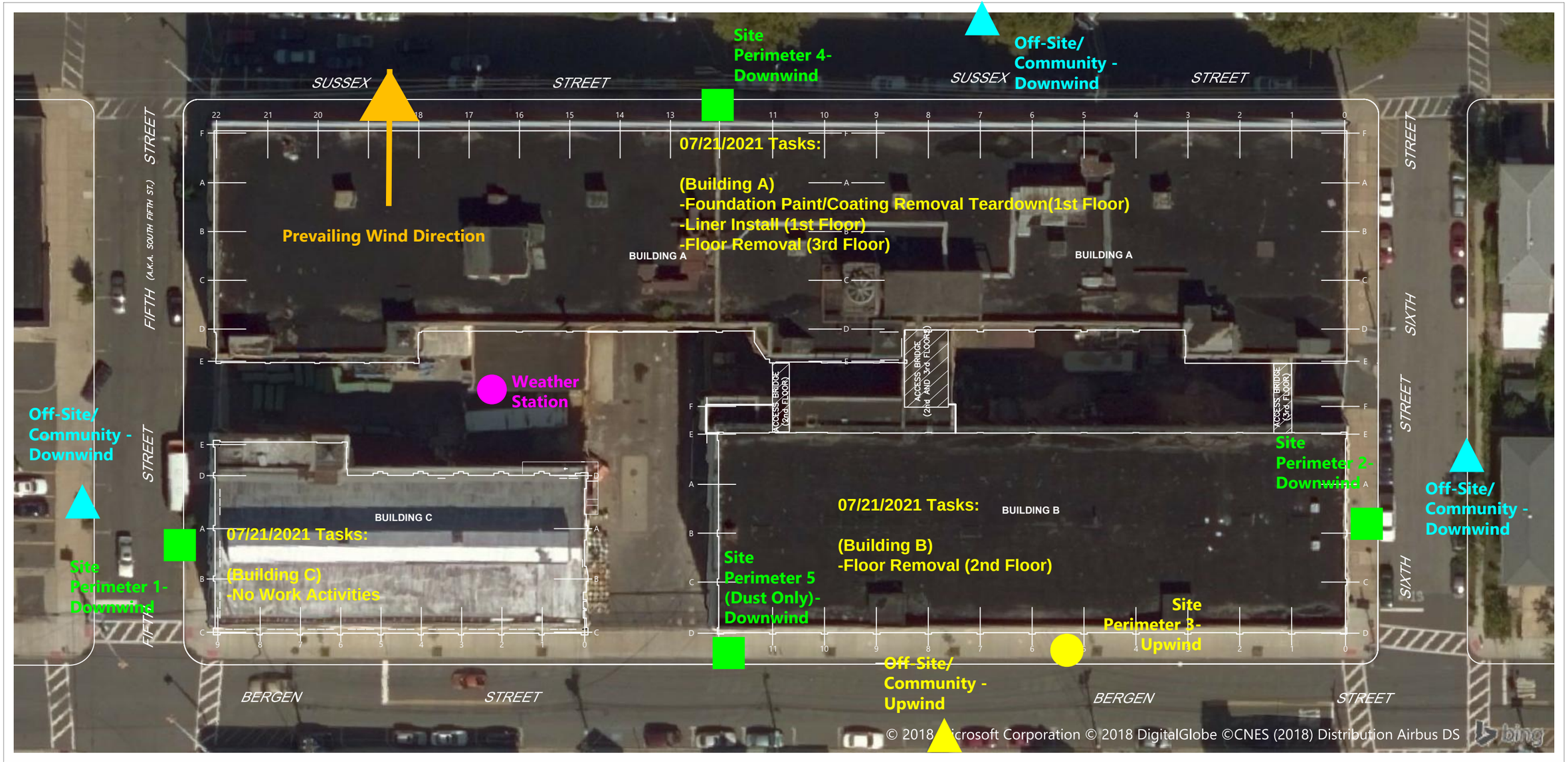
ANCHOR QEA

Figure SP-2
07/20/2021
Air Monitoring Station Locations

Vo Toys Removal Action
General Electric Company



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VERTICAL DATUM: (None).

LEGEND

A,1 —— – —— BUILDING COLUMN LINE

- Site Perimeter Air Monitoring Location
- Upwind Site Perimeter Monitoring Location
- Off-Site/Community Air Monitoring Location (Yellow is upwind off-site location)

0 20 40
SCALE IN FEET

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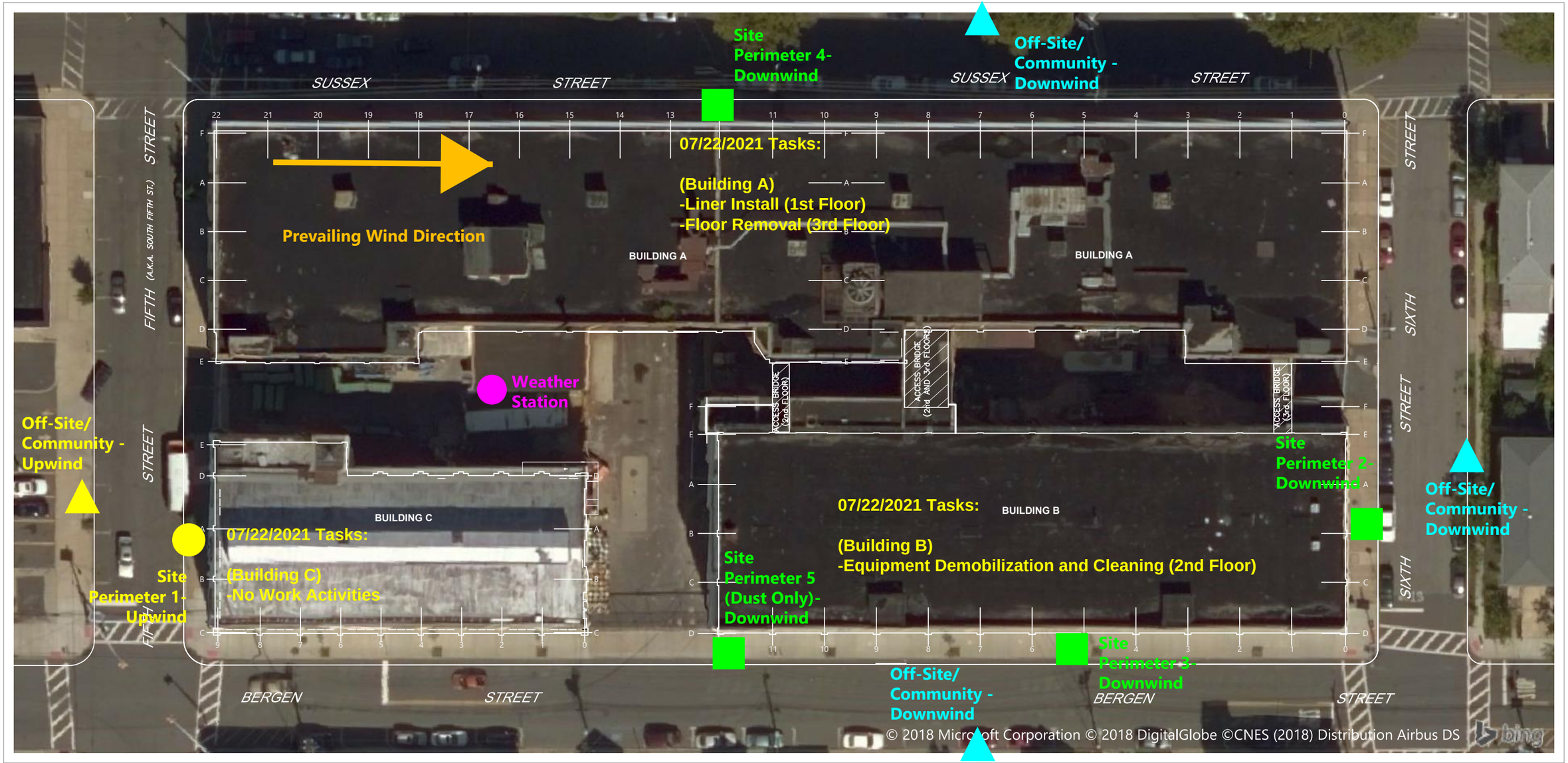
ANCHOR QEA

Figure SP-3
07/21/2021
Air Monitoring Station Locations

Vo Toys Removal Action
General Electric Company



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HORIZONTAL DATUM: New Jersey State Plane, North American Datum 1983, U.S. Feet (NJ83F).
VERTICAL DATUM: (None).

LEGEND

A,1 —— – —— BUILDING COLUMN LINE

- Site Perimeter Air Monitoring Location
- Upwind Site Perimeter Monitoring Location
- Off-Site/Community Air Monitoring Location (Yellow is upwind off-site location)

0 20 40
SCALE IN FEET

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Figure SP-4
07/22/2021
Air Monitoring Station Locations

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