

# WEEKLY AIR MONITORING REPORT

## Vo-Toys Removal Action

**Site Name:** Vo-Toys Site, Harrison, New Jersey

**CERCLA Docket No.:** 02-2019-2028

**Report No.:** 25

**Report Date:** March 12, 2021

**Reporting Period:** March 08 to March 11, 2021

## 1 Introduction

This report summarizes the Vo-Toys Removal Action (RA) air monitoring program conducted between March 08 to March 11, 2021, at the Vo-Toys site located at 400 South 5<sup>th</sup> Street, Harrison, New Jersey (the site). Air monitoring for particulates less than 10 microns in diameter (PM<sub>10</sub>) and mercury vapor was conducted in accordance with the U.S. Environmental Protection Agency (USEPA)-approved Community Air Monitoring Plan (CAMP). PM<sub>10</sub> and mercury vapor results were compared with action levels presented in the CAMP.

Air monitoring during the week of March 08, 2021 included the following monitoring tasks:

- Meteorological monitoring
- Work area perimeter air monitoring
- Site perimeter 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 March 08, 2021. The attached site air monitoring figures show the locations of the meteorological sensors.

**Table 2-1  
Meteorological Monitoring Summary**

Date	Weather
March 08, 2021	Mostly Sunny, high in the mid-40s°F; Winds: 5-10 mph NW (online), 0-5 mph W (site).
March 09, 2021	Mostly Sunny, high in the mid-60s°F; Winds: 5-10 mph SW (online), 5-10 mph W (site).
March 10, 2021	Mostly Sunny, high in the mid-50s°F; Winds: 0-5 mph N (online), 0-5 mph E (site).
March 11, 2021	Mostly Sunny, fog in AM, high in the mid-70s°F; Winds: 0-5 mph E (online), 0-10 mph W (site).

### 3 PM<sub>10</sub> 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.

#### 3.2 Site Perimeter Air Monitoring Summary

Site perimeter monitoring was performed to document that particulates (PM<sub>10</sub>) or mercury vapor above action levels were not migrating beyond the site boundary. Four air monitoring stations were located outside the buildings around the site perimeter: one upwind and up to three 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 March 10, 2021, Station 3 exhibited elevated PM<sub>10</sub> readings that exceeded the PM<sub>10</sub> action level. The elevated readings were due to street sweeping on Bergen Street near Station 3. The exceedance was not associated with RA work in either buildings and after the sweeper passed the readings dropped back below the action level.

On March 11, 2021, multiple stations exhibited elevated PM<sub>10</sub> readings that exceeded the PM<sub>10</sub> action level upon startup. The readings remained elevated throughout the day. The elevated readings were attributed to morning fog and lingering haze. All other PM<sub>10</sub> 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<sub>10</sub> and Mercury Vapor Site Perimeter Air Monitoring**

<b>Date</b>	<b>Air Monitoring Station/Location</b>	<b>Upwind/Downwind</b>	<b>PM<sub>10</sub> 15-Minute Average Range (ug/m<sup>3</sup>) Action Level &lt;100 ug/m<sup>3</sup></b>	<b>Mercury Vapor 15-Minute Average Range (ug/m<sup>3</sup>) Action Level &lt;10 ug/m<sup>3</sup></b>
03/08/2020	Station 1 – West	Upwind	9.3-37.1	0.10-0.22
	Station 2 – North	Downwind	6.1-12.9	0.11-0.21
	Station 3 – Southeast	Downwind	5.3-30.0	0.00-0.00
	Station 4 – Northeast	Downwind	5.7-20.4	0.11-0.19
03/09/2020	Station 1 – West	Upwind	23.7-59.5	0.10-0.47
	Station 2 – North	Downwind	15.1-48.8	0.10-0.24
	Station 3 – Southeast	Downwind	14.9-50.9	0.00-0.00
	Station 4 – Northeast	Downwind	19.1-36.5	0.12-0.20
03/10/2020 <sup>4</sup>	Station 1 – West	Downwind	21.6-58.9	0.10-0.30
	Station 2 – North	Downwind	13.1-46.2	0.11-0.21
	Station 3 – Southeast	Downwind	11.2-104.5	0.00-0.00
	Station 4 – Northeast	Upwind	10.7-60.1	0.10-0.19
03/11/2020 <sup>5</sup>	Station 1 – West	Upwind	56.6-109.9	0.11-0.62
	Station 2 – North	Downwind	45.1-139.4	0.11-0.31
	Station 3 – Southeast	Downwind	47.9-99.5	0.10-0.50
	Station 4 – Northeast	Downwind	46.5-136.5	0.11-0.26

Notes:

1. PM<sub>10</sub> action level: Normal operations if PM<sub>10</sub> <100 ug/m<sup>3</sup>
2. Mercury vapor action level: Normal operations if 15-minute average of MVA readings is <10 ug/m<sup>3</sup>
3. See CAMP for further details on action levels
4. PM<sub>10</sub> readings above action levels were attributed to the contractor sweeping Bergen St. near the station
5. PM<sub>10</sub> readings above action levels were attributed to morning fog and lingering haze

### 3.3 Off-Site/Community Air Monitoring

Off-site/community air monitoring for mercury vapors was not required during the week of March 08, 2021 based on Work Area Perimeter and Site Perimeter monitoring results and the tasks being performed on-site.

## 4 Monitoring Equipment

Table 4-1 presents the air monitoring devices used.

**Table 4-1  
Monitoring Equipment and Calibration**

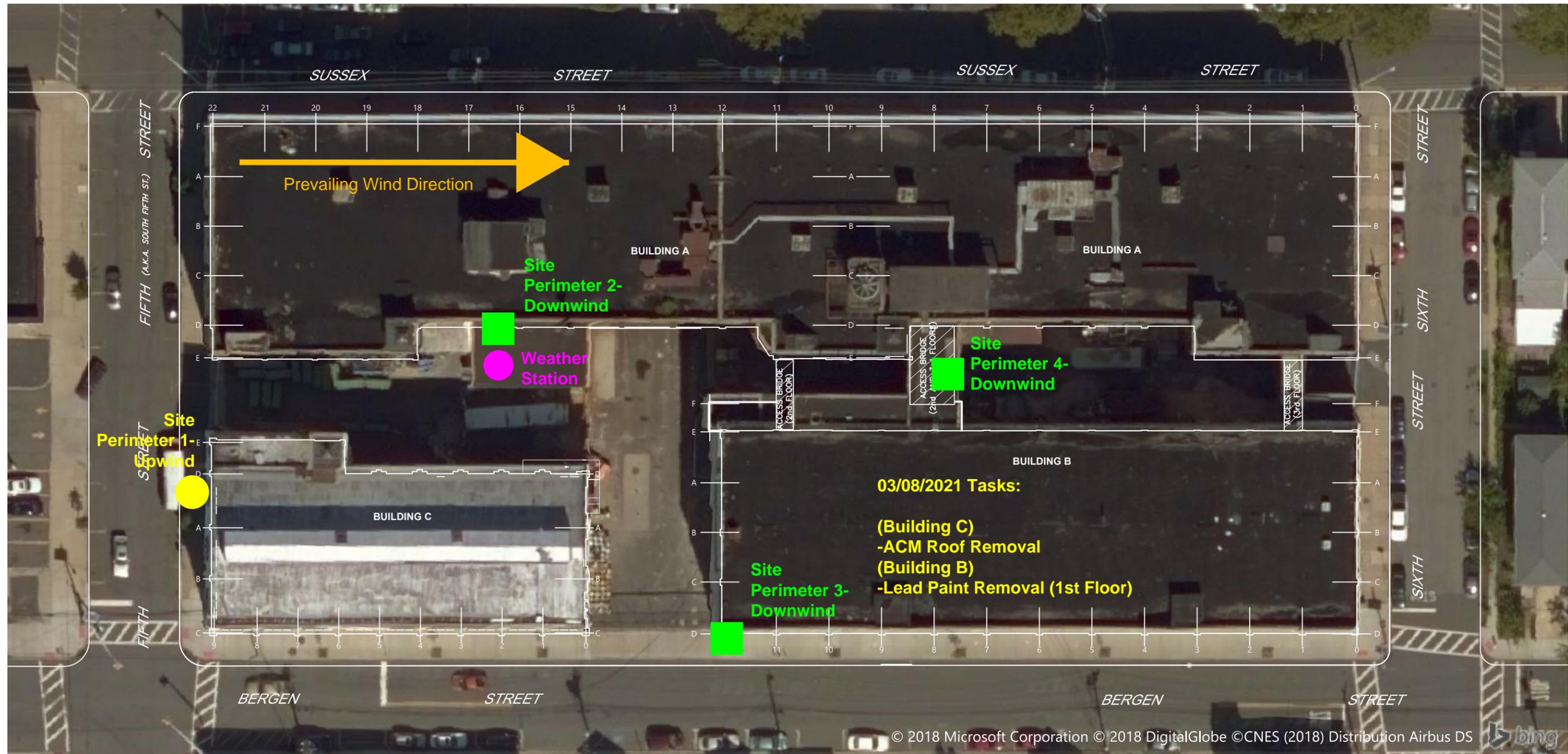
Parameter	Monitoring Equipment
Mercury Vapors – Real Time and Average Concentrations	<ul style="list-style-type: none"> <li>• Jerome Mercury Vapor Analyzer J405 – Arizona Instruments, LLC (work area monitoring, regenerated prior to daily use)</li> <li>• VM 3000 – Mercury Instruments (site perimeter stations, auto zeroed prior to daily use)</li> </ul>
Airborne Particulates	<ul style="list-style-type: none"> <li>• MIE DataRAM™ Portable Particulate Monitor (work area perimeter, zeroed prior to daily use)</li> <li>• TSI Dusttrak Particulate Monitor (site perimeter stations, zeroed prior to daily use)</li> </ul>
Meteorological Monitoring	<ul style="list-style-type: none"> <li>• Vantage Pro 2 weather station</li> </ul>

## 5 Issues or Potential Modifications to the CAMP

On March 02, 2021, the VM-3000 unit at Station 3 had malfunctioned. All the VM-3000 units were in the process of being rotated through the yearly calibration/maintenance process so there was no spare unit onsite. Manual mercury vapor readings were taken every 15 minutes at Station 3 with the Jerome meter. These readings were tabulated in the field application. The faulty meter was sent for maintenance. On March 11, 2021, the spare meter was returned and deployed at Station 3 and manual readings were no longer required.

# Figures

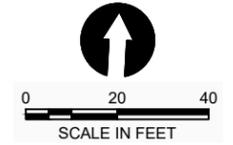
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**SOURCE:** Floor plans compiled from CAD file entitled: "FIG05-REV071615" provided by AMEC Foster Wheeler, Inc. on March 31, 2016. Subsurface utilities and features compiled from CAD file entitled: "NUMBERED\_SITEMAP\_20101" provided by General Electric 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

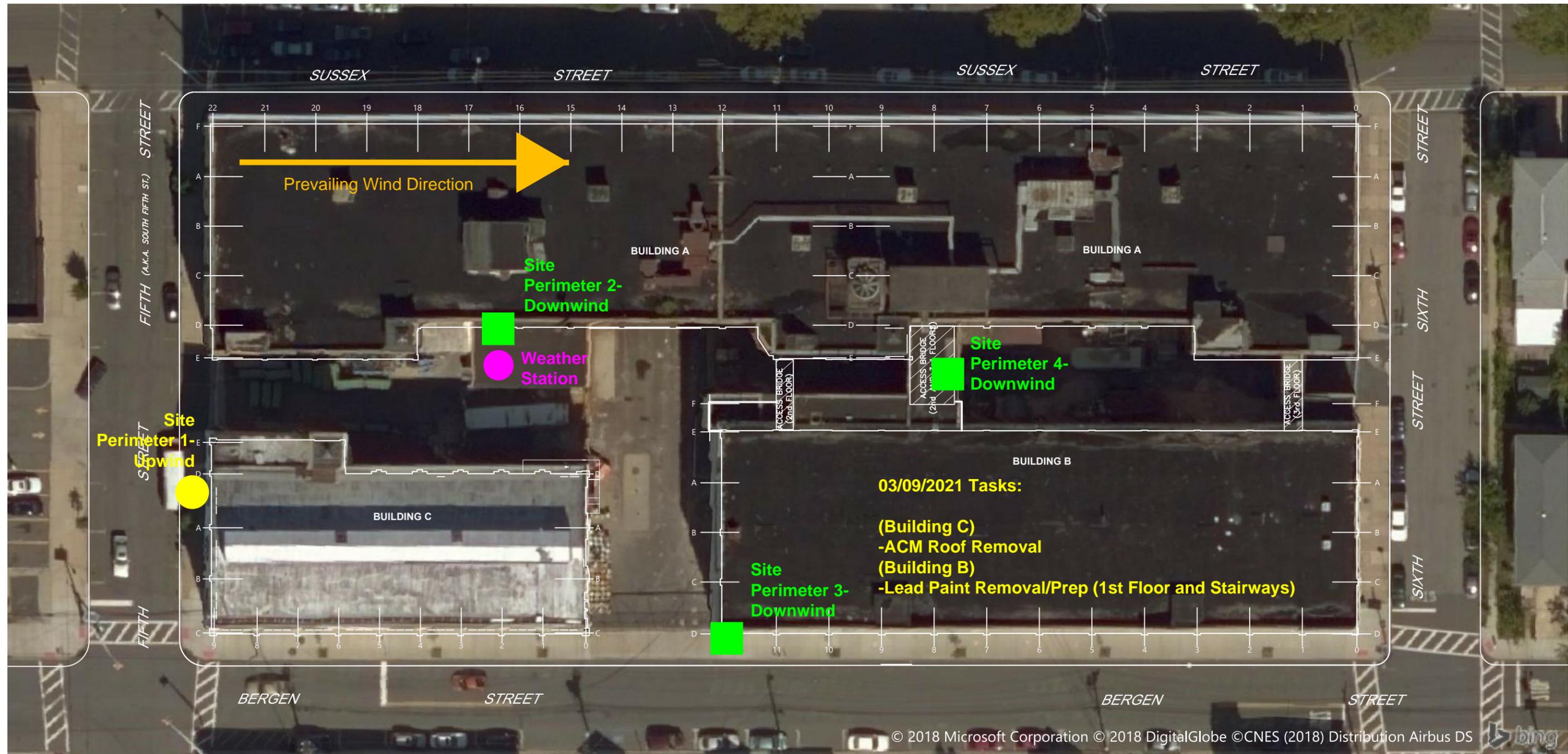
- Site Perimeter Air Monitoring Location
- Upwind Site Perimeter Monitoring Location



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**Figure SP-1**  
**03/08/2021**  
**Air Monitoring Station Locations**  
 Vo Toys Removal Action  
 General Electric Company

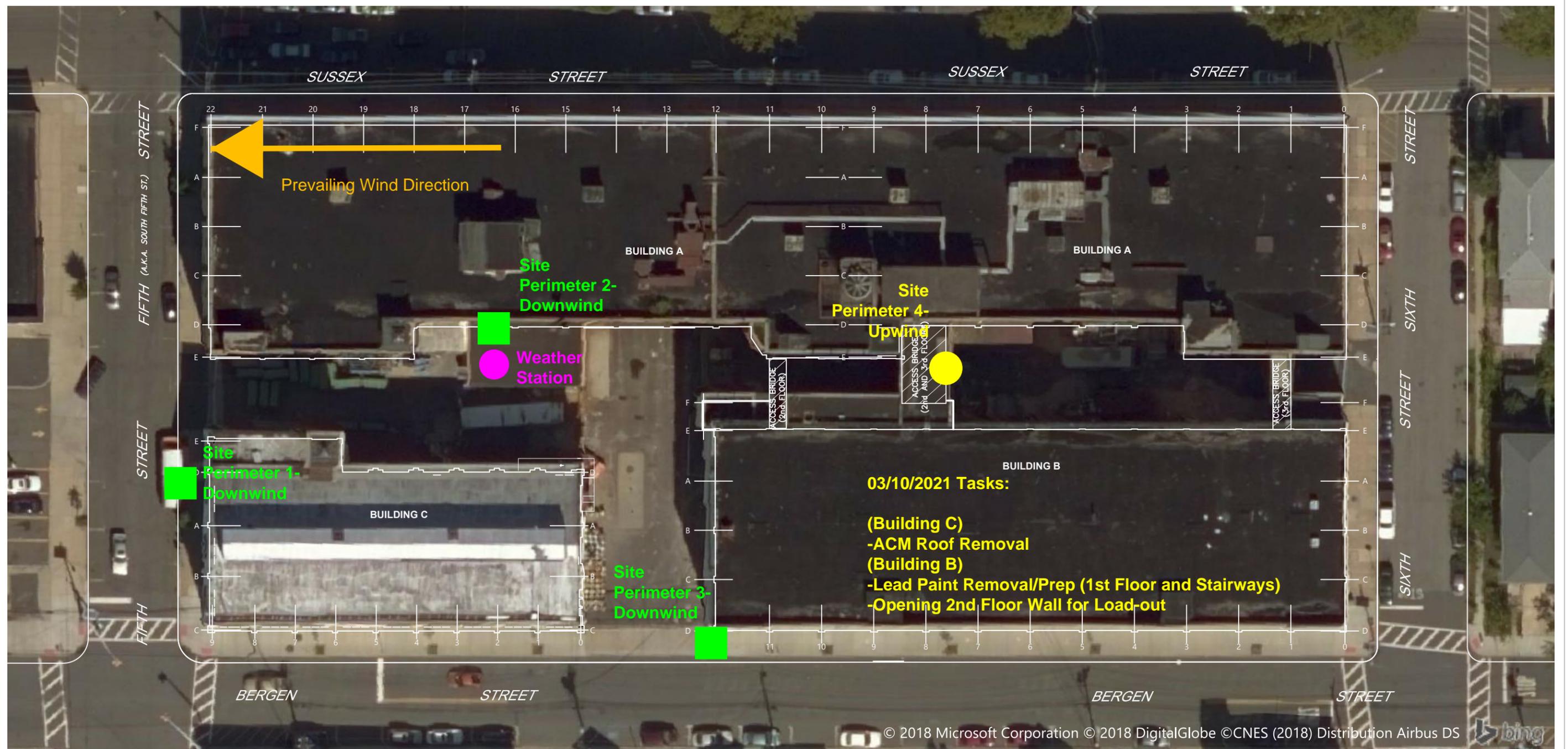


**SOURCE:** Floor plans compiled from CAD file entitled: "FIG05-REV071615" provided by AMEC Foster Wheeler, Inc. on March 31, 2016. Subsurface utilities and features compiled from CAD file entitled: "NUMBERED\_SITEMAP\_20101" provided by General Electric Company on March 3, 2016.  
**HORIZONTAL DATUM:** New Jersey State Plane, North American Datum 1983, U.S. Feet (NJ83F).  
**VERTICAL DATUM:** (None).

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**Figure SP-2**  
**03/09/2021**  
**Air Monitoring Station Locations**  
 Vo Toys Removal Action  
 General Electric Company



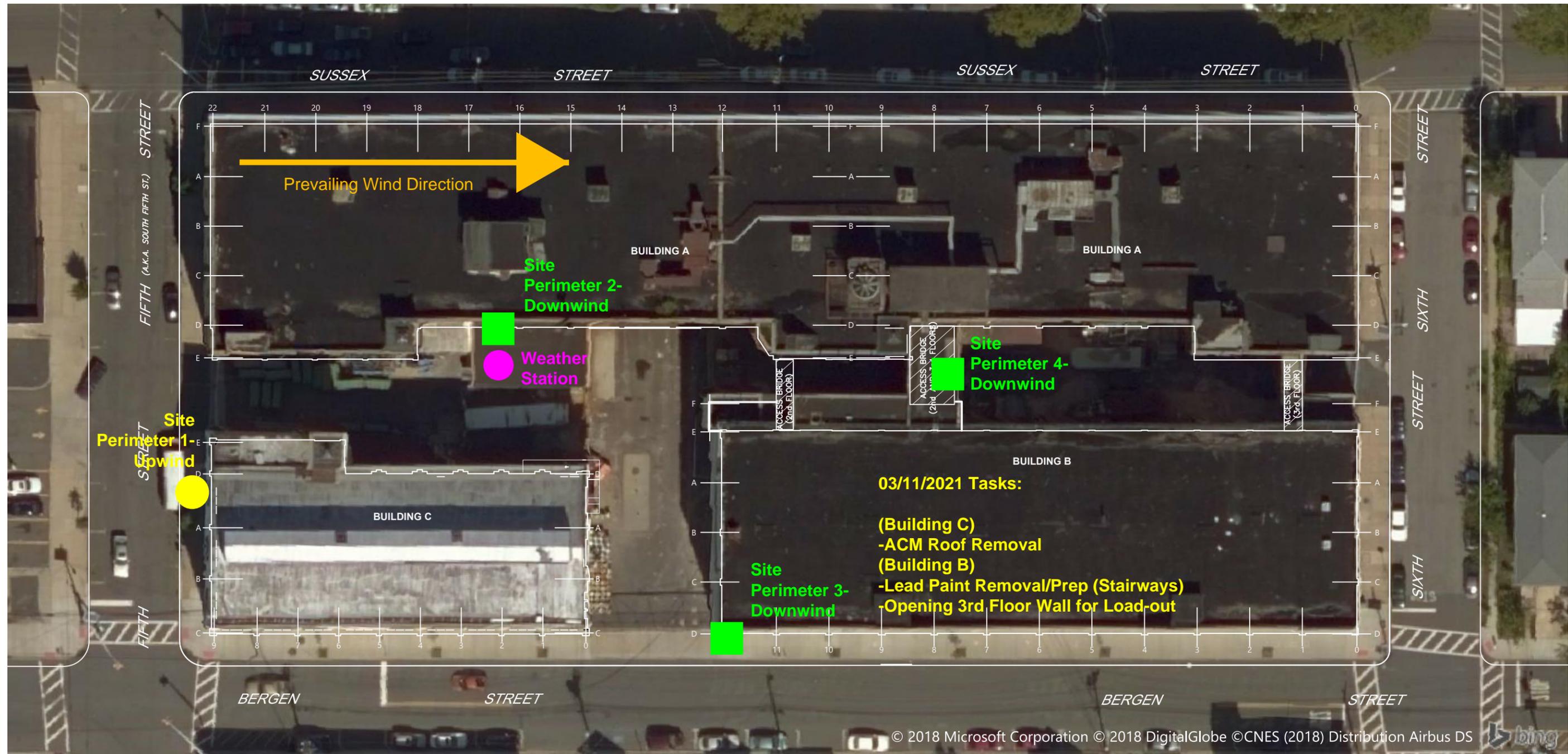
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**VERTICAL DATUM:** (None).

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**Figure SP-3**  
**03/10/2021**  
**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).

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**Figure SP-4**  
**03/11/2021**  
**Air Monitoring Station Locations**

Vo Toys Removal Action  
 General Electric Company