



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
Four Penn Center - 1600 John F Kennedy Blvd
Philadelphia, Pennsylvania 19103-2852

Report Title: Clean Air Act Inspection of AdvanSix
Inspection Date(s): 03/28/2023
Regulatory Program(s): Title V, NESHAP, NSPS
Company Name: AdvanSix
Facility Name: AdvanSix
Facility Location: 2501 Margaret Street
Philadelphia, PA 19137
Latitude: 39.996985 **Longitude:** -75.079633
County/Parish: Philadelphia
AFS/ICIS-Air Number: PAPAM0004210101551
Permit Number: V95-047
NAICS Code: 325199 **SIC:** 2869
Unique Project #: 3E23CA086A

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EPA Lead Inspector

Signature

Paul Arnold
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Date

Supervisor

Signature

Kristen Hall

Date

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I. Introduction

The United States Environmental Protection Agency (EPA) conducted Geospatial Measurement of Air Pollution (GMAP) monitoring at AdvanSix Resins & Chemicals LLC (AdvanSix or Facility) to determine if elevated levels of compounds were present. The City of Philadelphia Air Management Services (AMS) was notified of the inspection on March 14, 2023, via email. On March 27, 2023, EPA notified the Facility of the planned inspection via phone.

A. Summary of the Facility

The Facility is located at 2501 Margaret Street, Philadelphia, PA 19137. AdvanSix is an integrated chemical manufacturer. It produces phenol through the cumene oxidation process. The site began operations in the 1880s, with current operations beginning in the 1950s. In 2016, Honeywell spun off AdvanSix as an independent company. The facility encompasses approximately 47 acres of which approximately seven acres are used for production. AdvanSix operates twenty-four hours a day and seven days a week, with two (2) twelve (12) hour shifts.

The Facility received a Title V Operating Permit (V95-047) AMS issued on April 17, 2003.

AdvanSix is classified as major source for Carbon Monoxide (CO), Oxides of Nitrogen (NO_x), Particulate Matter (PM), Sulfur Dioxide (SO₂), Volatile Organic Compounds (VOC), and Hazardous Air Pollutants (HAPs). The Facility is subject to, or potentially subject to the following federal regulations:

- 40 CFR Part 60, Subpart A: General Provisions;
- 40 CFR Part 60, Subpart Kb: Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984;
- 40 CFR Part 60, Subpart VV: Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006;
- 40 CFR Part 60, Subpart III: Standards of Performance for Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes;
- 40 CFR Part 60, Subpart NNN: Standards of Performance for Volatile Organic Compound (VOC) Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations;
- 40 CFR Part 60, Subpart RRR: Standards of Performance for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes;
- 40 CFR Part 63, Subpart A: General Provisions;
- 40 CFR Part 63, Subpart F: National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry;

- 40 CFR Part 63, Subpart G: National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater;
- 40 CFR Part 63, Subpart H: National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks;
- 40 CFR Part 63, Subpart ZZZZ: National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines;
- 40 CFR Part 63, Subpart DDDDD: National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters;
- 40 CFR Part 68: Chemical Accident Prevention Provisions.

B. Inspection Opening Conference

At 08:45 AM on March 28, 2023, EPA inspectors made entry at the Facility for a Clean Air Act (CAA) inspection. Each member of the inspection team viewed a required safety video.

Immediately following the safety video EPA conducted a brief opening conference. AdvanSix was represented by Adrienne Yeager, Kevin Leong, Paul Persing, and Ashley Gugliemini. Also, Paresh Mehte and Adessalem Cherifi Phial of AMS were present. EPA inspectors, Paul Arnold, Alex Everhart, Scott Yanos, Parmatma Adhikari, Nick Bobbs and Phil Meyers, presented their credentials and explained the purpose of the visit was to conduct mobile monitoring using Geospatial Measurement of Air Pollution monitoring (GMAP). Nick Bobbs explained that the GMAP vehicle has the capability to monitor Hydrogen Sulfide, volatile organic compounds, Methane, Sulfur Dioxide and Benzene. Additionally, EPA informed the facility representatives of their right to claim any material obtained during the inspection as confidential business information (CBI). At that time, AdvanSix did not claim any photos or documentation as CBI.

II. Site Activity/Process Description

As mentioned earlier, the site began operations in the 1880s, with current operations beginning in the 1950s. In addition to producing phenol, acetone and styrene are produced as byproducts of the process. AdvanSix stated that one continuous process produces all three products, phenol, acetone, and alpha-methylstyrene. Once produced the products are stored in above ground storage tanks (ASTs) at the facility. Adrienne Yeager of AdvanSix informed EPA that two (2) of the facilities boilers were shut down and not operating and only one (1) boiler was in operation and as a result the production process was not in operation at the time of the inspection.

The opening conference concluded at 09:27 AM.

III. Observations

EPA inspectors were led on a drive through of the Facility at 9:35 AM by Adrienne Yeager of Advansix. At 09:37AM, EPA initiated GMAP monitoring. Paresh Mehte and Adessalem Cherifi

of Phial-AMS, and Paul Arnold, Alex Everhart, Scott Yanos, Parmatma Adhikari, Nick Bobbs and Phil Meyers, of EPA, were present during GMAP monitoring.

The EPA GMAP vehicle was lead through various interior roads and around the perimeter of the Facility. EPA observed GMAP readings which are represented in Table 1. Actual numeric concentration readings observed during the monitoring event were not yet verified at the time of this report, but can be shared, with AdvanSix, once the data becomes verified and available.

TABLE 1				
Time	VOC (ppb)	Benzene (ppb)	Approximate Location	Additional Comments
10:00 AM	Elevated	Elevated	South of acetone loading station	Strong Odor, 1 Suma can (3114) sample taken @ 10:05
10:35 AM	Elevated		South of Maintenance building by unit #2	Strong Odor
10:47 AM	Elevated		E. 5 th Street South of Phenol Unit #1 tanks	Strong Odor
11:08 AM	Elevated		West of Phenol Unit #1 tanks	
11:12 AM	Elevated		West of Phenol Unit #1 tanks	1 Suma can (4621) sample taken @11:11

The GMAP monitoring concluded at 11:30 AM.

IV. Records Review

No records were reviewed as part of the inspection.

V. Closing Conference

EPA inspectors, Adrienne Yeager, Paresh Mehte Phial-AMS and Adessalem Cherifi Phial-AMS had a brief closing conference to ask additional questions and discuss observations. The EPA inspectors noted that the investigation is on-going, and any areas of concern identified in the final report do not necessarily reflect a violation or deviation, rather, they are areas that will require further investigation. EPA also noted that they would issue an inspection report within in 60 days, with a copy to the State. The inspection concluded at 11:55 AM.

The following have been identified as *potential* issues during the inspection. They are issues that require either further investigation by EPA or additional information or explanation by AdvanSix.

- EPA observed elevated GMAP readings at various locations, within facility property, as detailed in Table 1 above.

VI. List of Attachments

Attachment 1: Opening Conference sign in sheet.