



**CITY OF PHILADELPHIA
DEPARTMENT OF PUBLIC HEALTH
AIR MANAGEMENT SERVICES**

RACT PLAN APPROVAL

Plan Approval No. IP16-000276

Effective Date: March 5, 2020

Expiration Date: None

Replaces Permit No. RACT Plan Approval dated February 9, 2016

The RACT plan approval is subject to the following conditions:

In accordance with provisions of the Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, as amended, and after due consideration of a Reasonably Available Control Technology (RACT) proposal received under the Pennsylvania Code, Title 25, Chapter 129.96 thru 129.100, of the rules and regulations of the Pennsylvania Department of Environmental Protection (PADEP), Air Management Services (AMS) approved the RACT proposal of the Facility below for the source(s) listed in section 1.A. Emission Sources of the attached RACT Plan Approval.

Facility: AdvanSix Resins & Chemicals LLC – Frankford Plant

Owner: AdvanSix Resins & Chemicals LLC

Location: 2501 Margaret Street, Philadelphia, PA 19137-1193

Mailing Address: 2501 Margaret Street, Philadelphia, PA 19137-1193

SIC Code(s): 2869

Plant ID: 1551

Facility Contact: Paul Persing

Phone: (215) 807-8442

Permit Contact: Paul Persing

Phone: (215) 807-8442

Responsible Official: Christopher Bond

Title: Plant Manager

A handwritten signature in blue ink, appearing to read "Edward Wiener".

Edward Wiener, Chief of Source Registration

3/5/20

Date

The RACT plan approval is subject to the following conditions:

1. The purpose of this Plan Approval is to establish Nitrogen Oxides (NO_x)/Volatile Organic Compound (VOC) Reasonably Available Control Technology (RACT) for AdvanSix. This includes the following emission sources and control equipment:

A. Emission Sources

- (1) Boilers: Boiler #1 (260 MMBTU/hr), firing waste residue, gas or #6 fuel oil.
Boiler #2 (260 MMBTU/hr), firing waste residue, gas or #6 fuel oil.
Boiler #3 (381 MMBTU/hr), firing gas or #6 fuel oil only.
Boiler @ barge loading facility (2.52 MBTU/hr), firing #2 fuel oil.
- (2) Barge Loading.
- (3) Storage Tanks: VT-609, VT-610.
- (4) Fugitive Emission Sources: pumps, valves, flanges, compressors, pressure relief valves, and rupture disks.
- (5) Wastewater Facilities
- (6) Phenol Tank Car Loading PTC 1

B. Control Equipment

- (1) Thermal Oxidizer TR-602

2. This approval requires and authorizes:

- A. Boiler #1 and Boiler #2 shall only burn natural gas and waste phenol residue except if there is a natural gas curtailment, other loss of supply (e.g. PGW supply line failure or maintenance activity) or during stack testing programs (e.g. annual CEM RATA testing, annual combustion tuning, and combustion performance testing, as required). During such events No. 6 fuel oil may be used.

- B. Boiler #3 shall only burn natural gas except if there is a natural gas curtailment, other loss of supply, or during stack testing programs. During such events No. 6 oil may be used. Boiler #3 No. 6 oil usage shall be less than 1% of the unit's annual fuel consumption on a heat input basis based on a 12-month rolling average.
- C. Boiler #3: AdvanSix shall maintain and operate the low NO_x burners and wall ports on Boiler #3.
- D. AdvanSix shall perform, at a minimum, the annual combustion tuning specifications as cited in 25 PA 129.93(b)(2) through (5) for Boilers #1, #2, and #3.
- E. BARGE LOADING:
AdvanSix shall not load any VOC with a vapor pressure in excess of 1.5 psia at 20 degrees Celsius.
- F. STORAGE TANKS VT-609 and VT-610:
Internal floating roofs shall be installed and maintained on tanks VT-609 and VT-610.
- G. WASTEWATER FACILITIES:
The thermal oxidizer will control VOC emissions from the air stripper at the wastewater facility. The thermal oxidizer will have destruction efficiency not less than 95%.
- H. PHENOL TANK CAR LOADING:
Phenol Tank Car Loading shall be operated with good operating practices. During the loading process, if any issues occur, including spills, which could potentially cause excess VOC emissions, the process shall be stopped immediately by hitting the emergency stop mechanism. VOC emissions from Phenol Tank Car Loading shall not exceed 7.93 tons per rolling 12-month period.

3. RACT Implementation Schedule

- A. Upon issuance of this approval, AdvanSix shall begin immediate implementation of the measures necessary to comply with the approved RACT proposal.
- B. Sources proposing combustion tuning to comply with RACT requirements of 25 PA Code 129.91(f) shall perform the annual combustion tuning by December 31st of each year not to exceed 12 months between tunings.
- C. Sources that have Low NO_x Burners and FGR to comply with RACT requirements of 25 PA Code 129.91(f) shall perform combustion tuning annually by December 31st of each year not to exceed 12 months between tunings.

4. Stack Emission Limitations

- A. The emission rates for Boiler #1 & #2:

- (1) Shall not exceed 0.28 pounds of NO_x per MMBTU each, on a rolling 30-day average, while burning natural gas, waste phenol residue, or a combination of these fuels;
- (2) Shall not exceed and 0.35 pounds of NO_x per MMBTU each while burning No. 6 oil;
- (3) The combined NO_x emissions for Boiler #1 and Boiler #2 shall not exceed 272 tons per year.

- B. The emission rate of Boiler #3 shall not exceed 0.10 pounds of NO_x per MMBTU heat input based on a rolling 30-operating day average while burning natural gas or 0.3 pounds of NO_x per MMBTU while burning No. 6 oil.

5. RACT Implementation Schedule

- A. Upon issuance of this approval, AdvanSix shall begin immediate implementation of the measures necessary to comply with the approved RACT proposal.

6. Testing/Monitoring Requirements

- A. Continuous nitrogen oxides and oxygen monitors and recorders shall be operated on Boiler # 1, Boiler #2, and Boiler #3 in order to measure and record the concentrations of these gases emitted from the boiler stack.

7. Recordkeeping and Reporting Requirements

- A. AdvanSix shall maintain a file containing all the records and other data that are required to be collected to demonstrate compliance with NO_x /VOC RACT requirements of 25 PA Code 129.91-129.94.
- B. The records shall provide sufficient data and calculations to clearly demonstrate that the requirements of §129.91-129.94 are met. These shall include:
- (1) Continuous nitrogen oxides and oxygen monitor records for Boiler # 1, Boiler #2, and Boiler #3.
 - (2) Fuel type and monthly fuel usage.
 - (3) Monthly records demonstrating compliance with the combined tons per year NO_x limit for Boiler #1 and Boiler #2 in Condition 4.A.
 - (4) Records of each time No. 6 oil is burned in Boilers #1, #2, or #3 and the reason why. If the reason is gas curtailment or other loss of supply, it shall be reported to AMS.
 - (5) Records demonstrating that Boiler #3 No. 6 oil usage shall be less than 1% of the unit's annual fuel consumption on a heat input basis based on a 12-month rolling average.

- (6) Records demonstrating VOC emissions from Phenol Tank Car Loading do not exceed 7.93 tons per rolling 12-month period.
- C. Data or information required to determine compliance shall be recorded and maintained in a time frame consistent with the averaging period of the requirement.
- D. Records shall be retained for at least five years and shall be made available to the AMS on request.
8. The operation of the aforementioned sources shall not at any time result in the emission of visible air contaminants in excess of the limitations specified in Section 123.41, particulate matter in excess of the limitations specified in Section 123.11 or sulfur oxides in excess of the limitations specified in Section 123.22, all Sections of Chapter 123 of Article III of the Rules and Regulations of the Department of Environmental Resources, or in the emission of any of these or any other type of air contaminant in excess of the limitations specified in, or established pursuant to, any other applicable rule or regulation contained in Article III.
9. The company shall not impose conditions upon or otherwise restrict the AMS's access to the aforementioned source(s) and/or any associated air cleaning device(s) and shall allow the AMS to have access at any time to said source(s) and associated air cleaning device(s) with such measuring and recording equipment, including equipment recording visual observations, as the AMS deems necessary and proper for performing its duties and for the effective enforcement of the Air Pollution Control Act.
10. Revisions to any conditions approved as RACT by EPA will require resubmission as revision to the PA State Implementation Plan. The applicant shall bear the cost of public hearing and notification required for EPA approval as stipulated in 25 PA Code §129.91(h).