



CITY OF PHILADELPHIA  
DEPARTMENT OF PUBLIC HEALTH  
AIR MANAGEMENT SERVICES

RACT PLAN APPROVAL

Effective Date: July 27, 1999

Expiration Date: None

PA Permit Number: 51-9515

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 129.91 thru 129.95, 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: Southwest Water Pollution Control Plant/  
Biosolids Recycling Center

Owner: Philadelphia Water Department

Location: 8200 Enterprise Avenue, Phila., PA 19153 (SW WPCP)  
7800 Penrose Ferry Road, Phila., PA 19153 (BRC)

Mailing Address: 8200 Enterprise Avenue, Phila., PA 19153 (SW WPCP)  
7800 Penrose Ferry Road, Phila., PA 19153 (BRC)


SIC Code(s): 4952

Plant ID: 9515

Facility Contact: Leonard Gipson (SW WPCP)/James Golembeski (BRC)  
Phone: (215) 685-4003 (SW WPCP)/(215) 685-4073 (BRC)

Permit Contact: Dennis D. Blair  
Phone: (215) 685-6368

Responsible Official: Richard E. Roy  
Title: Water Commissioner

  
Thomas Huynh, Chief of Source Registration

July 27, 1999  
Date

The RACT plan approval is subject to the following conditions:

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

A. Emission Sources:

(1) NOx Sources at BRC:

	<u>Boiler Description</u>	<u>Fuel Type</u>	<u>Full Rated Capacity</u>
1.	Boiler #1	#2 Oil	3 MMBTU/hour
2.	Boiler #2	#2 Oil	1.5 MMBTU/hour

(2) NOx Sources at Southwest WPCP:

	<u>Boiler Description</u>	<u>Fuel Type</u>	<u>Full Rated Capacity</u>
1.	Boiler #1	#2 oil and digester gas	4.2 MMBTU/hour
2.	Boiler #2	#2 oil and digester gas	4.2 MMBTU/hour
3.	Boiler #3	#2 oil and digester gas	20.1 MMBTU/hour
4.	Boiler #4	#2 oil and digester gas	20.1 MMBTU/hour
5.	Boiler #5	#2 oil and digester gas	20.1 MMBTU/hour
6.	Boiler #6	#2 oil and digester gas	11.7 MMBTU/hour
7.	Flares	digester gas	

(3) VOC Sources at BRC Composting Site:

1. composting areas
2. biofilters and fugitive blower exhaust
3. curing areas
4. cured compost drying and blower exhaust
5. cured compost screening
6. screened compost storage
7. new woodchip storage and recovered woodchip storage
8. sludge dewatering
9. liquid sludge storage
10. sludge cake storage
11. mine mix storage
12. raw compost mix storage
13. vehicle fueling station
14. 2 fuel oil storage tanks
15. 2 boilers (previously mentioned in NOx sources)

(4) VOC Sources at Southwest WPCP:

1. inlet and screw pump channels
2. grit basins
3. aerated flocculation channels
4. primary sedimentation tanks
5. pure oxygen aeration tanks
6. mixed liquor channels
7. secondary sedimentation tanks
8. chlorination & effluent channels

9. dissolved air flotation thickener tanks
10. anaerobic digesters
11. lime mix area
12. sludge transfer tank
13. boilers (previously mentioned in NOx sources)
14. digester gas flares (previously mentioned in NOx sources)
15. fuel dispensers

B. Control Equipment

- (1) BRC compost pile aeration system blower exhausts vent to biofilters.
- (2) Excess gas produced by the anaerobic digestion of sludge is flared through waste gas burners.

2. This approval requires and authorizes:

- A. ~~Boilers #3, #4, and #5 at the Southwest WPCP will comply with presumptive RACT requirements of 25 PA Code 129.93(b)(2) (5) for combustion sources with individual rated gross heat inputs equal to or greater than 20 MMBTU/hr but less than 50 MMBTU/hr. RACT will be the performance of an annual adjustment or tune-up on the boilers in accordance with the above regulation.~~
- B. ~~Both boilers at the BRC and Boilers #1, #2, and #6 at the Southwest WPCP will comply with the presumptive RACT requirements of 25 PA Code 129.93(e) for combustion sources with individual rated gross heat inputs less than 20 MMBTU/hr. RACT will be the installation, maintenance and operation of the boilers in accordance with manufacturer specifications.~~
- C. RACT for the composting area is good maintenance and operation of the existing biofilters and the compost pile aeration system.
- D. RACT for the wastewater treating plant process is adhering to a current good maintenance and operation program.

3. RACT Implementation Schedule:

Upon issuance of this approval, Southwest WPCP/BRC shall begin immediate implementation of the measures necessary to comply with the approved RACT proposal.

4. Testing Requirements:

- A. Southwest WPCP/BRC shall test its wastewater influent monthly using EPA Method 624. A continuous 24 hour composite sample (one sample aliquot every four hours) shall be collected and analyzed for one day during the last seven days of the month. The sampling day shall be varied during the year.
- B. Southwest WPCP/BRC shall determine the VOC emission from its wastewater operation based on the test result and the "TOXCHEM+" Computer program.
- C. Southwest WPCP/BRC may petition to AMS for approval of an alternate emission estimate method instead of the above testing and calculation.

## 5. Recordkeeping:

A. Southwest WPCP/BRC shall maintain a file containing all the records and other data that are required to be collected to demonstrate compliance with NO<sub>x</sub> and VOC RACT requirements of 25 PA Code §129.91-129.94. These records shall include the following:

## (1) Southwest WPCP:

1. Daily influent wastewater flow and associated parameters required to estimate VOC emission from the wastewater treatment sources using EPA Method 624 and the "TOXCHEM+" Computer program..
2. Monthly VOC concentration of influent
3. Monthly air flow into the flocculation tanks
4. Monthly report of process tanks being used
5. Monthly production of digester gas
6. Annual fuel usage which includes - No. 2 fuel oil
7. digester gas to boilers
8. digester gas to flares
9. Periods when the flares are malfunctioning
10. Report on all VOC spills to the wastewater treatment plant investigated by the Water Department 's Industrial Waste Unit.
11. Any changes to the wastewater treatment plant that would cause the need for recalibration of the TOXCHEM+ model.

## (2) Biosolids Recycling Center:

1. Monthly dewatering building sludge production
2. Monthly Material Inventory Maps
3. Annual fuel usage of No. 2 fuel oil
4. Periods when the biofilters, or compost pile aeration system operate beyond their operating ranges.

B. The records shall provide sufficient data and calculations to clearly demonstrate that the requirements of §129.91-129.94 are met.

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 two years and shall be made available to the Department on request.

## 6. Reporting:

Southwest WPCP/BRC shall report on a semiannual basis. The report shall be due August 15th ( for the period covering January 1 through June 30) and February 15th ( for the period covering July 1 through December 31) of each year.

A. Monthly VOC emissions from the facility.

B. Periods when the flares are malfunctioning, VOC spills to the wastewater plant investigated by the Industrial Waste Unit and any changes to the wastewater plant that would cause the need for recalibration of the TOXCHEM+ model.

C. Annual fuel usage.

7. ~~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 123.11, 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.~~
8. The company shall not impose conditions upon or otherwise restrict the Department's access to the aforementioned source(s) and/or any associated air cleaning device(s) and shall allow the Department 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 Department deems necessary and proper for performing its duties and for the effective enforcement of the Air Pollution Control Act.
9. Revisions to any emission limitations incorporated in this RACT Approval 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).

*Wording with ~~strikethrough~~ font is NOT being submitted for SIP approval.*

