EPA

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
FIELD OPERATIONS - BUREAU OF AIR QUALITY

OPERATING PERMIT

(REVISED 02/22/1999)

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 an application received under Chapter 127 of the rules and regulations of the Department of Environmental Protection, the Department hereby issues this permit for the operation of the air contamination source(s) described below:

Permit No.	OP-46-0015	**Source(s)**	Facility NOx and VOC Sources
Owner	Occidental Chemical Corporation	**Air**	
Address	Armand Hammer Boulevard	**Cleaning**	
	Pottstown, PA 19464	**Device**	
Attention	John W. Fisher	**Location**	Armand Hammer Boulevard
	Plant Manager		Lower Pottsgrove Township
			Montgomery County

This permit is subject to the following conditions:

1. That the source(s) and any associated air cleaning devices are to be:
   a. operated in such a manner as not to cause air pollution;
   b. operated and maintained in a manner consistent with good operating and maintenance practices.
2. This permit is valid only for the specific equipment, location and owner named above.

(SEE ADDITIONAL CONDITIONS ATTACHED)

Failure to comply with the conditions placed on this permit is a violation of Section 127.444. Violation of this or any other provision of Article III of the rules and regulations of the Department of Environmental Protection will result in suspension or revocation of this permit and/or prosecution under Section 9 of the Air Pollution Control Act.

Issued November 7, 1996

Expires November 7, 2001

Francine Carlini
Regional Manager
Air Quality

cc: Division of Permits, RCSOB
Administration
SEFO
Re 30 (RN)157-10

CONDITIONS (continued):

3. This operating permit is issued to the owner for the operation of the following sources:

   A. Four (4) Boilers

   B. Five (5) Emergency Generators

   C Chemical Processes

   D. Wastewater Pretreatment Plant

   E. Storage Tanks

   F. Parts Cleaners

4. The expiration date shown on the Operating Permit is for ~~state purposes~~. For Federal enforcement purposes the RACT provisions ~~of the~~ Operating Permit shall remain in effect as part of the State Implementation Plan ~~(SIP)~~ until replaced pursuant to 40 CFR 51 and approved by the U.S. Environmental Protection Agency (EPA). The Operating Permit shall become enforceable by the U.S. ~~EPA~~ upon its approval of the above as a revision to the SIP.

5. ~~This operating permit~~ supersedes all previously issued operating permits bearing the numbers 46-302-098, 46-330-011, 46-313-081, 46-313-098 and ~~46-313-101.~~

6. RACT Determination for Boilers and Operating Requirements:

   A. Source Description

Boilers	Capacity (MMBtu/hr)	Fuel	NOx Emission Limitation TPY
No.1	72	No.6 oil	21.0
No.3	120	No.6 oil	3.4
No.4	126	No.6 oil	30.8
No.5	120	No.6 oil/Coal	178.3

   B. RACT for boilers Nos. 3 and 4 is that the operation of boilers shall not exceed the capacity factor of 50% each, and that annual tune-up specified in Condition 6D below shall be conducted.

   The capacity factor defined for these two boilers is the ratio of the actual heat input to the maximum heat input of each boiler in a consecutive 12-month period.

CONDITIONS (continued):

A consecutive 12-month capacity factor is expressed as follows:

$$\frac{\text{Last 12-months fuel consumption (gallons) x fuel heating value (MMBtu/gal)}}{\text{120 (MMBtu/hr) x 8760 (hours/year)}}$$

C. RACT for Boiler No. 5 is that the boiler shall not fire coal from April to October each year, and that annual tune-up specified in Condition 6D below shall be conducted.

D. The Company shall properly maintain the boilers by following the steps listed below. These steps will also constitute RACT for boiler No. 1. Alternative steps or procedures shall be approved by the Department.

1. The company shall conduct an annual adjustment or tune-up on the combustion units which can not be shut down by the end of March 1997. This adjustment shall include, but not limited to the following:

   a. Inspection, adjustment, cleaning or replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer.

   b. Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NO_x and to the extent practicable minimize emissions of CO.

   c. Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.

2. The company shall record each adjustment conducted under the procedures in paragraph 6D (1) in a permanently bound log book or other method approved by the Department. This log shall contain, at a minimum, the following information:

   a. The date of the tuning procedure.

   b. The name of the service company and technicians.

   c. The final operating rate or load.

   d. The final CO and NO_x emission rates.

CONDITIONS (continued):

e. The final excess oxygen rate.

E. The company shall maintain the following information for the boilers firing No.6 fuel oil:

1. A certification from fuel supplier of the nitrogen content of the fuel;

2. The identification of the sampling method and sampling protocol.

F. The sulfur content of No. 6 oil ~~fired in the boilers shall not, at any time, exceed~~ 1.0% by weight.

7. Requirements for Emergency Generators:

A. Source Description

Generators	Manufacturer	Capacity (kW)	Fuel
GEN1		150	Diesel
GEN2		200	Diesel
GEN3	EMD-GM	2700	Diesel
GEN4		230	Diesel
GEN5		300	Diesel

B. The company shall maintain and operate the emergency generators in accordance with manufacturer's specifications and good air pollution control practices.

C. The operating hours of each emergency generator shall not exceed 500 hours in a consecutive 12-month period.

D. The company shall record the date and hours each time the generators are operated.

8. Operating Requirements for Chemical Processes

A. Source and Air Cleaning Device Description:

1. Suspension Resin Production Line, Dispersion Resin Production Line, and Pilot Plant (manufacturing portion only) which include the following equipment:

CONDITIONS (continued):

36 solution tanks
6 charge pots
5 charge vessels
58 batch reactors
15 strippers
6 hold and feed tanks
2 continuous strippers
22 blend tanks
3 centrifuges
6 grinders
4 spray dryers
4 rotary dryers
1 bulk storage area (16 storage silos)
1 semi-bulk storage area
2 wastewater strippers

2. Specialty Resin Line

3. Laboratories

4. Vinyl Chloride Storage Tanks:

Tank Number	Capacity (gallons)
1	25,000
2	25,000
3	25,000
4	25,000
9	25,000
10	25,000
11	25,000
12	25,000
13	25,000
14	25,000
15	25,000
20	170,000
21	10,000
22	10,000

5. The unreacted VOC and vinyl chloride vapors from the reactors, strippers, and vinyl chloride storage tanks are ducted to and controlled by a common recovery system in series with a thermal incinerator followed by a packed tower or a catalytic incinerator as a secondary incinerator.

CONDITIONS (continued):

B. Operating Requirements:

1. The vinyl chloride monomer (VCM) ~~feed rate~~ to the primary incinerator shall not exceed 247 ~~pounds~~ per hour.

2. The burner associated with the thermal incinerator shall be set so as to maintain the combustion chamber exit gas temperature at 1800°F at all times while VCM is fed to the incinerator.

3. The incinerators shall be maintained and operated in accordance with manufacturer's specifications.

4. The pressure drop of 6 inches w.g. maximum shall be maintained across the packed tower.

5. A minimum flow rate of 9 gpm to the packed tower and a minimum flow rate of 35 gpm to the quench chamber shall be maintained at all times when the thermal incinerator is operating.

6. The overall destruction and removal efficiency (DRE) of the thermal incinerator and packed tower at maximum operating conditions shall be at least 99.99% for VCM and 99% for HCl.

C. Emission Limitations:

1. The owner shall comply with ~~the applicable~~ emission standard specified in Sections 61.64 ~~and~~ 61.65 of 40 CFR Part 61 Subpart F.

2. The vinyl chloride emissions from fugitive ~~and point sources~~ in the facility shall not exceed 100 tons ~~per year~~.

3. The VOC emissions from the dryers, blenders, and centrifuges shall not exceed, in total, 95.5 pounds per hour, ~~and 243.1 tons on a 12-month rolling basis~~. Compliance with VOC emission limitations shall be determined semi-annually using the data listed below:

   a. the amount of dried VCM slurry during the 6-months;

   b. VOC concentrations in dispersion and suspension resins measured semi-annually.

CONDITIONS (continued):

4. The vinyl chloride emissions from the specialty resin shall not exceed 0.031 tons per year.

5. The VOC emissions from the pilot plant or the laboratories shall not exceed 2.7 tons on a 12-month rolling basis.

6. The owner shall limit the concentration/weighted average of residual vinyl chloride monomer (RVCM) in dispersion resin to 1200 ppmw on an annual basis. Measurements of the RVCM concentration must be made in conformance with 40 CFR 61, Subpart F, National Emission Standards for Vinyl Chloride.

7. The owner shall limit the combined concentration/weight of residual vinyl chloride monomer from the thermal incinerator and packed tower to less than 5 ppmv on a daily basis. Additionally a limit of 141 pounds on an annual basis, under normal operating conditions, shall not be exceeded.

8. The owner shall limit the hydrogen chloride (HCl) emission from the packed tower to less than 1 pound/hour.

D. Monitoring Requirements:

1. The owner shall comply with all appropriate emission monitoring requirements in accordance with Sections 61.68 and 61.65(b)(8)(i) of 40 CFR Part 61 Subpart F and 40 CFR Part 61 Subpart V.

2. Equipment shall be provided so that at the request of the department the following can be measured:

   a. pressure drop across the packed tower, utilizing a differential manometer, or equivalent.

   b. water flow rate to the packed tower and quench chamber, utilizing a differential rotameter, or equivalent.

   c. pH of the packed tower scrubbing solution.

   d. % caustic of the scrubbing solution.

   e. VCM feed rate to the incinerator. key 7

CONDITIONS (continued):

3. Continuous emission monitoring system for VCM and thermal incinerator temperature approved by the Department shall be operated and maintained in accordance with the requirements of Chapter 139 of the Rules and Regulations of the Pennsylvania Department of Environmental Protection.

4. The thermal incinerator shall be equipped with temperature monitoring instrumentation which continuously indicates and records the combustion chamber exit gas temperature.

5. The fabric collector(s) must be equipped with a device for monitoring the pressure differential across the collector(s).

E. Reporting and Recordkeeping Requirements:

1. This source is subject to Subpart F and V of the National Emission Standards for Hazardous Air Pollutants and shall comply with all applicable requirements of these Subparts. 40 CFR § 61.04 requires submission of copies of all requests, reports, applications, submittals, and other communications to both EPA and the Department. The EPA copies shall be forwarded to:

Director
Air, Toxics and Radiation Division
U.S. EPA, Region III
841 Chestnut Street
Philadelphia, PA 19107

2. The owner shall comply with reporting requirements in accordance with 40 CFR Sections 61.70 and 61.247.

3. The owner shall comply with the recordkeeping requirements in accordance with 40 CFR Sections 61.71 and 61.246.

4. The records shall be retained for a minimum of 3 years and shall be made available to the Department upon request.

9. Wastewater Pretreatment Plant

A. The VOC emissions from the plant shall not exceed 6.4 pounds per hour, and 25.0 tons on a 12-month rolling basis. Compliance with VOC emission limitations shall be determined semi-annually using USEPA Water 8 Modeling System (or equivalent if EPA develops any) and the data listed below:

CONDITIONS (continued):

a. the amount of wastewater processed during the 6-months;

b. total VOC from the wastewater pretreatment plant semi-annually.

B. The vinyl chloride monomer (VCM) emissions from the air stripper shall not exceed 12 ppm on an annual basis and 1.4 tons per year.

C. The trichloroethylene (TCE) emissions from the air stripper shall not exceed 0.076 ppm on an annual basis and 37.0 pounds per year.

D. The vinyl chloride concentration in wastewater streams shall be in compliance with 40 CFR Section 61.65 (b)(9).

E. The owner shall test the air stripper inlet and outlet VCM and TCE concentrations on a weekly basis using the method approved by the Department.

10. Storage Tanks

A. Source Description

1. The following storage tanks are subject to 25 Pa. Code Section 129.95:

Tank No.	Content	Capacity (gallons)	Control Method	Vapor Pressure (psia)
61	2-mercaptoethanol	3,500	Nitrogen Blanket	0.1
62	2-mercaptoethanol	3,500	Nitrogen Blanket	0.1
111	Fatty Alcohol	10,600		<0.002
112	Fatty Alcohol	10,600		<0.002
121	Propane	1,000	Pressurized Tank	NA
122	Propane	1,000	Pressurized Tank	NA
123	Propane	1,000	Pressurized Tank	NA
124	Propane	1,000	Pressurized Tank	NA
125	Propane	1,000	Pressurized Tank	NA
126	Propane	1,000	Pressurized Tank	NA
127	Propane	1,000	Pressurized Tank	NA
128	Propane	1,000	Pressurized Tank	NA
129	Propane	1,000	Pressurized Tank	NA
130	Propane	1,000	Pressurized Tank	NA
131	Propane	1,000	Pressurized Tank	NA
132	Propane	1,000	Pressurized Tank	NA
819	Gasoline	1,500	Conservation Vent	4.3
5K	No.2 Fuel Oil	5,000		<0.01
10K	No.2 Fuel Oil	5,000		<0.01

CONDITIONS (continued):

230K	No.6 Fuel Oil	230,000		<0.0001
275-1	Diesel	275		<0.01
275-2	Diesel	275		<0.01
Disp.- 1	Diesel	275		<0.01
Disp.- 2	Diesel	275		<0.01
Main A	Diesel	275		<0.01
Main B	Diesel	275		<0.01
Pump 1	Diesel	275		<0.01
Pump 2	Diesel	500		<0.01
RPH	Diesel	275		<0.01
SCHRAM	Diesel	275		<0.01
SUSP	Diesel	275		<0.01
TS	Diesel	275		<0.01
WTH	Diesel	275		<0.01
Stores 1	Kerosene	275		0.01
Stores 2	Kerosene	275		0.01
HTG Oil	Heating Oil	550		<0.01

2. The following six (6) vinyl acetate storage tanks with a capacity of 25,000 gallons each are subject to 25 Pa. Code Section 129.57:

Tank No.	Content	Control Method
16	Vinyl Acetate	Conservation Vent
17	Vinyl Acetate	Conservation Vent
	Vinyl Acetate	Pressurized
	Vinyl Acetate	Pressurized
	Vinyl Acetate	Pressurized
	Vinyl Acetate	Pressurized

B. The operation of vinyl acetate storage tanks shall be in compliance with 25 Pa. Code Section 129.57.

C. The owner shall monitor and record the annual throughput and materials stored in each tank listed in Condition 10A.

D. The VOC emissions from the tanks listed in Condition 10A (1) above shall not exceed 3 pounds per hour, 15 pounds per day, and 2.7 tons per year.

11. Operating Requirements for Parts Cleaners

A. These tanks range from 20 to 60 gallons and shall be covered when not in use.

B. The VOC emissions from these cleaning tanks shall not exceed 2.7 tons per year.

CONDITIONS (continued):

C. The owner shall keep records which clearly demonstrate that the requirement of Condition 11.B is met.

12. General Conditions:

A. The methods for emission tracking and calculations shall be consistent with those in the RACT proposal approved by the Department. Any changes in tracking and calculating emissions shall be submitted and approved by the Department prior to the application.

B. The owner shall maintain records that clearly demonstrate to the Department that sources, with emission limitation of 2.7 tons per year or less, are not subject to 25 Pa. Code Sections 129.91 through 129.94.

C. Unless specified above, records required by this operating permit shall be kept for a period of two (2) years and shall be made available to the Department upon its request.

D. This operating permit is issued to the owner for the operation of oxides of nitrogen (NOx) and volatile organic compounds (VOC) emission sources regulated under 25 Pa. Code Sections 129.91 and 129.95. This operating permit also specifies the company's Reasonably Available Control Technology (RACT) requirements for sources of VOCs and NOx. Other pollutants are regulated under the applicable provisions of Title 25 of the Pennsylvania Code and by existing permit conditions which are incorporated herein.

E. If at any time the Department has cause to believe that air contaminant emissions from the aforementioned source(s) may be in excess of the limitations specified in, or established pursuant to, any applicable rule or regulation contained in Article III of the Rules and Regulations of the Department of Environmental Protection, the company shall be required to conduct whatever tests are deemed necessary by the Department to determine the actual emission rate(s). Such testing shall be conducted in accordance with the provisions of Chapter 139 of the Rules and Regulations of the Department of Environmental Protection, where applicable, and in accordance with any restrictions or limitations established by the Department at such time as it notifies the company that testing is required.

CONDITIONS (continued):

F. ~~If at~~ any time the permittee causes, permits or allows any modification (as that term is defined in ~~Chapter~~ 121 of Title 25, the Rules and Regulations of the Department of Environmental Protection) ~~of the~~ aforementioned air contamination source(s), the operation and use of which is authorized ~~by this~~ permit, or causes, permits or allows any modifications, malfunction or removal of any air pollution control device required as a condition of this permit, then and in that event, this permit shall be ~~suspended~~, and the permittee shall not thereafter continue to operate or use said air contamination ~~source(s)~~.

Re 30 (RN)157-11