

Commonwealth of Pennsylvania
Department of Environmental Protection
Bureau of Air Quality
SO₂
Plan Approval

In accordance with provisions of the Air Pollution Control Act of January 8, 1960, P.L. 2119, as amended, and Section 127.446 of 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 sources described below:

PERMIT NUMBER: 62-017E

Owner: United Refining Company
Address: P. O. Box 780
15 Bradley Street
Warren, PA 16365

Source & Air Cleaning Device:
See attached page 2

Attention: Mr. William J. Roy
Environmental Manager/Air

Location: Bradley & Dobson Streets
Warren
Warren County

This permit is subject to the following conditions:

- (1) That the source and any associated air cleaning devices are to be:
 - a) operated in such a manner as not to cause air pollution;
 - b) in compliance with the specification and conditions of the applicable plan approvals;
 - c) operated and maintained in a manner consistent with good operating and maintenance practices.
- (2) This permit is valid for a limited time and shall be incorporated into the facility's Title V Operating Permit. The facility shall apply for an Administrative Amendment to the Title V Operating Permit within 60 days of issuance of this SO₂ Plan Approval.
- (3) See attached conditions

Failure to comply with the conditions placed on this permit is a violation of 25 Pa. Code Section 127.444. Violation of this or any other provisions 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: June 11, 2001
~~Expires: December 31, 2001~~


Larry W. Wonders
Regional Air Quality Program Manager

Conditions Continued -

4. The allowable SO₂ emissions for the sources are listed in the following table. The emissions are based on the facility SO₂ emission cap of 902.6 #/hr and 3951 ton per year. The emission limits imposed under this permit are to support a State Implementation Plan revision to redesignate portions of Warren County from nonattainment to attainment status for sulfur dioxide.

Source	permit number	emission in #/hr	emission in TPY
boiler house (boiler #1,2,and 3)	na	195.1	854.5
#4 boiler	62-302-010A	24.3	106.4
FCC charge heater (emission limit modified as part of permit 62-312-030)	62-312-010	1.1	4.8
DHT1 heater	na	0.1	0.4
Prefractionator Reboiler	62-312-033	18.0	78.8
old reformer heater (East reformer heater)	62-312-002A	91.3	399.9
crude heater (Wheco)	62-312-003A	207.7	909.7
vacuum heater (emission limit modified as part of permit 62-312-030)	62-312-019	0.8	3.5
pretreater heater	na	28.0	122.6
new reformer heater (West reformer heater) (emission limit modified as part of permit 62-312-030)	62-312-012	2.2	9.6
Sat gas reboiler (Debut Reboiler) (emission limit modified as part of permit 62-312-030)	62-312-017	0.4	1.8
Fluid Catalytic Cracking Unit (FCC Regenerator)	62-312-023A	285.0	1248.3
combo flare (emission limit modified as part of permit 62-312-030)	62-312-009	0.4	1.8
FCC flare (emission limit modified as part of permit 62-312-030)	62-312-020	0.1	0.4
#5 boiler (emission limit modified as part of permit 62-312-030)	62-302-009	1.2	5.3
Sat Gas KVG compressor engine (emission limit modified as part of permit 62-312-030)	62-329-001	0.1	0.4
T-241 heater (Volcanic heater)	62-312-035	0.3	1.3
Distillate Hydrotreater heater (DHT2)	62-312-030	33.4	146.3
Sulfur Recovery Unit 2 (SRU2) incinerator	62-312-031	12.0	52.6
SRU2 hot oil heater	62-312-031	0.1	0.4
Old FCC unit Standby basis used only when new FCC charge heater permit (62-312-010) is not in use	62-312-006		
West FCC KVG compressor engine Standby basis only	na		
Middle FCC KVG compressor engine	62-329-001A	0.14	0.6
East FCC KVG compressor	62-329-001A	0.14	0.6
VCU Unit	62-312-014A	0.81	0.76

Conditions Continued -

5. The sources in condition #4 above (except the SRU2 incinerator, and the FCC regenerator) shall monitor the H₂S concentration in the refinery fuel for the source. The H₂S monitors for these sources shall be installed, calibrated, maintained, and operated by the owner or operator of the facility in compliance with the requirements of the Department Continuous Emission Monitor (CEM) Manual.
6. The SRU2 incinerator and the FCC regenerator shall monitor SO₂ emissions from the sulfur recovery unit (SRU2) and the Fluid Catalytic Cracking Unit respectively. The SO₂ emissions from the SRU2 shall not exceed 0.025% by volume of sulfur dioxide at 0% oxygen on a dry basis. A continuous monitoring system shall be monitored and concentrations of SO₂ in the gasses discharged into the atmosphere from the tail gas treating unit shall be recorded. The span of the CEM shall be set at 500 ppm. The SO₂ monitors for these sources shall be installed, calibrated, maintained, and operated by the owner or operator of the facility in compliance with the requirements of the Department CEM Manual.
7. This permit applies to the emissions of sulfur dioxides (SO₂) emissions only. Emissions of other pollutants, including criteria pollutants, shall be governed by the existing Plan Approvals, Operating permits, and applicable requirements and other Rules and Regulations of the Department. This permit does not require testing and monitoring beyond what is already required under the facility's Plan Approvals, Operating Permits and the Rules and Regulations of the Department.

Issuance of the plan approval is recommended with the appropriate conditions in the plan approval.

cc: Dean Van Orden - Air Resources Management - Harrisburg
Warren District Field Office - Air Quality Division.