

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOUTHCENTRAL REGION - FIELD OPERATIONS
AIR QUALITY PROGRAM

OPERATING PERMIT

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 described below.

Permit No: <u>22-02005</u>	Source & Air Cleaning Device: <u>Four Boilers #6 Oil/Natural Gas</u>
Owner: <u>Harrisburg Steam Works, Ltd.</u>	<u>Fired (Combustion Engineering)</u>
Address: <u>PO Box 2151</u>	<u>(See Attached)</u>
<u>Harrisburg, PA 17105</u>	
Attention: <u>Mr. J. P. Sockel</u>	Location: <u>100 North Tenth Street</u>
<u>Vice President</u>	<u>Harrisburg City, Dauphin County</u>

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 specifications and conditions of the Reasonably Available Control Technology (RACT) plan;
 - c. 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.
3. This operating permit is valid for a limited time only and may be renewed before its expiration. Requests for an operating permit renewal must be in writing and must be accompanied by a fee in the amount of \$600 payable to the "Commonwealth of Pennsylvania - Clean Air Fund." The request should be made on the attached Interim Application for Renewal of a Permit to Operate form and must be received by the Department along with a completed Compliance History form (attached) no later than SEP 1 2003.
4. See 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: MAR 23 1999

Expires: ~~FEB 28 2004~~



Program Manager

Southcentral Region 22-02005, B4
Harrisburg District
Permits

OPERATING PERMIT
PERMIT NO. 22-02005
HARRISBURG STEAM WORKS, LTD.

Sources, Continued

1. No. 12 Boiler (Combustion Engineering) - 105 mmbtu/hr, #6 Oil Fired
2. No. 13 Boiler (Combustion Engineering) - 214 mmbtu/hr, #6 Oil and Natural Gas Fired
3. No. 14 Boiler (Combustion Engineering) - 214 mmbtu/hr, #6 Oil and Natural Gas Fired
4. No. 15 Boiler (Combustion Engineering) - 214 mmbtu/hr, #6 Oil Fired

Conditions, Continued

4. This operating permit constitutes a RACT determination as per the 25 Pa. Code Sections 129.91 and 129.92 for the above sources.
- ~~5. The expiration date shown on this RACT operating permit is for state purposes. For federal enforcement purposes this operating permit shall remain in effect as part of the State Implementation Plan (SIP) until replaced and approved by the U.S. Environmental Protection Agency (EPA).~~
6. The NO_x emissions from the above sources shall not exceed the following limits:
 - a. No. 13 Boiler - 0.44 lb/mmbtu on #6 Oil and 0.23 lb/mmbtu on Natural Gas
 - b. No. 14 Boiler - 0.44 lb/mmbtu on #6 Oil and 0.23 lb/mmbtu on Natural Gas
 - c. Nos. 12 and 15 Boilers - 0.44 lb/mmbtu

Note: When fuel borne nitrogen (FBN) in #6 Oil is greater than 0.49 percent, the following NO_x limits as per AP-42 Table 1.3-1 Footnote (d) shall be calculated as per the formula:

$$\text{NO}_x \text{ in lb NO}_2/10^3 \text{ gal.} = 20.54 + 104.39(N)$$

Where 'N' is weight percentage of nitrogen in #6 Oil

7. NO_x emissions from the Boiler Nos. 12 and 15 shall be calculated as per the AP-42 Emission Factors.
- ~~8. The facility emissions of NO_x shall be limited to 1,260 tons per year (tpy), based on a 12-month rolling total.~~
- ~~9. The facility emissions of VOC shall be limited to 14 tpy, based on a 12-month rolling total.~~
- ~~10. Maximum usage of #6 Oil in No. 15 Boiler shall be limited to 7,840,000 gallons/yr, based on a 12-month rolling total.~~
- ~~11. Maximum usage of natural gas in No. 14 Boiler shall be limited to 787 mmsef/yr, based on a 12-month rolling total.~~

OPERATING PERMIT
PERMIT NO. 22-02005
HARRISBURG STEAM WORKS, LTD.

Conditions, Continued

Monitoring, Recordkeeping, and Reporting Requirements

12. Harrisburg Steam Works, Ltd. (HSW) shall monitor and record the sulfur and nitrogen contents of the #6 Oil, on a monthly basis, from the fuel supplier's certificate.
13. The fuel supplier's certificate including nitrogen content of the #6 Oil shall be submitted to the Department annually.
14. An annual report containing the following shall be submitted to the Department's Harrisburg District Supervisor by March 1 of the following year:
 - a. Monthly and annual natural gas usage for Boiler Nos. 13 and 14
 - b. Monthly and annual #6 Oil usage for Boiler Nos. 12 through 15
 - c. Record of the fuel borne nitrogen (FBN) in #6 Oil
 - d. Record of sulfur content in #6 Oil
 - e. Annual record of the facility NO_x and VOC emissions
15. The facility shall operate and maintain the above listed sources as per manufacturer's specifications.

Stack Test Requirements

16. Each boiler shall be stack tested when the boiler's total cumulative steam generation achieves 100 percent of the boiler's annual 100 percent load factor steam generation quantity, or every four years, whichever occurs first.
 - a. For No. 13 Boiler through No. 15 Boiler, the 100 percent load factor steam generation quantity is 1,314,000,000 pounds.
 - b. For No. 12 Boiler, the 100 percent load factor steam generation quantity is 700,000,000 pounds.
17. Stack testing to determine the emission rate of NO_x as NO₂ shall be performed separately with #6 Oil and natural gas on Boiler Nos. 13 and 14.
18. ~~Stack testing shall be performed in accordance with 25 Pa. Code Section 139 and the current version of the Department Source Testing Manual, or by other means approved by the Department.~~
19. ~~HSW shall submit the proposed emission tests protocol to the Department Air Quality Program Manager for approval at least 60 days prior to the tests.~~

OPERATING PERMIT
PERMIT NO. 22-02005
HARRISBURG STEAM WORKS, LTD.

Conditions, Continued

21. Two copies of the stack test results shall be submitted to the Department Air Quality Program Manager for review within 60 days of completion of testing. The emissions shall be reported in the following units:
- a. Concentration as Measured - part per million (ppm)
 - b. Specific Output - lb/10³ gallon oil and lb/mmcf gas as applicable
 - c. Total Output, Mass Rate - lb/hr
 - d. Total Output, Heat Rate - lb/mmmbtu

General Requirements

- ~~22. The Department reserves the right to lower the NO_x emission standard listed in Condition 6, based on information obtained during the testing program outlined in Condition 16 through 21.~~
- ~~23. Sulfur content of the #6 Oil shall be limited to 2.8 percent by weight to comply with 25 Pa. Code Section 123.22(a)(2).~~
- ~~24. Harrisburg Steam Works, Ltd. shall report to the Department's Air Quality Program Manager any modification to the above sources which is expected to increase NO_x and VOC emissions.~~