

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

OPERATING PERMIT

Revised 4/15/1999

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-15-0027	Source(s)	Facility's VOC and NO <sub>x</sub> Sources
Owner	Johnson Matthey, Inc.	Air	
Address	436/456 Devon Park Drive Wayne	Cleaning	
		Device	
Attention	Mr. Ted Knudson	Location	Tredyffrin Township
			Chester 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. in compliance with the specifications and conditions of all applicable the Plan Approvals issued;
  - 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.

(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 8/3/1998

Expires 8/2/2003

  
Francine Carlini  
Regional Manager  
Air Quality

cc: Division of Permits, RCSOB  
Administration  
SEFO  
Re (RN99)82-12

**OPERATING PERMIT CONDITION**  
**APPLICATION NO. OP-15-0027**  
**JOHNSON MATTHEY, INC.**  
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**CONDITIONS (continued):**

3. This Operating Permit includes Reasonably Available Control Technology (RACT) determinations and supersedes previously issued Permit Nos. 15-309-010, 15-399-038, 15-399-034, 15-399-035, 15-399-036, 15-309-015, 15-323-008, 15-318-010F and 15-323-009 as required by Title I provisions of the CAAA, and, 25 PA Code Sections 129.91 through 129.95 for the sources listed in Condition No. 4, 5, 7, and 8. The Terms and Conditions of Permit Nos. 15-309-010, 15-399-038, 15-399-034, 15-399-035, 15-399-036, 15-309-015, 15-323-008, 15-323-009, and 15-318-010F have been incorporated into this permit.
4. The following VOC and NOx sources are covered by this permit:
  - (a) Lines No. 1 & 2 PGM Drying Oven, Lines No. 1 & 2 PGM Coater, Lines No. 1 & 2 Stabilizer & Hard Fire Drying Ovens, Lines 3 & 4 Stabilizer, Hard Fire, and PGM Drying Ovens, Lines No. 3 & 4 PGM Coater, Devon II PSG Coater, Devon II PSG Oven, and Lines 1, 2, 3, & 4 Production Coaters.
  - (b) Devon I & 2 Hoods, Devon II Engine Test Cells, Devon I Oven, four parts washers, and two above ground storage tanks.
  - (c) Detroit and Caterpillar Emergency Generators.
  - (d) Miscellaneous Oil-, Gas-, and Propane-fired Heaters.
  - (e) Eight (8) powder transfer stations, four (4) batching stations, six (6) process tanks, two (2) batch reactors, two (2) batch ovens, a coater, two (2) coater rooms, two (2) hood-exhausted rooms for laboratory work, two (2) process ovens, a spray dryer, four (4) batchers, three (3) powder feeders, a powder scale, five (5) housekeeping wands, five (5) grinders, a drill press, two (2) work benches, a metal support buffing machine, four (4) catalyst drying ovens, an adjustable speed drill, two (2) band saws, a lab hood, two (2) batching mills, a rotary crusher, a chip remover machine, two (2) centerless grinders, two (2) precious metals solution storage tank systems, two (2) blending solution storage tank systems, two (2) containment room ventilation systems, a batching system, four (4) underground gasoline storage tanks, two (2) underground heating oil tanks, an acetic acid storage tank, spray painting, and catalyst stamping.
5. (a) All the sources mentioned in Condition No. 4a shall operate in compliance with 25 PA Code Section 129.52. The annual NOx emission limit calculated on a 12-month rolling sum basis, of these sources will be according to the following table.

**Sources**

**Annual NOx emission limit, TPY**

Lines No. 1 & 2, PGM Drying Oven	
Lines No. 1 & 2, PGM Coater, Lines No.	98.3
1 & 2, Stabilizer & Hard Fire Drying Ovens	



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**CONDITIONS (continued):**

Lines 3 & 4 Stabilizer, Hard Fire, and  
PGM Drying Ovens, Lines No. 3 & 4  
PGM Coater, Devon II PSG Coater, and Devon II PSG  
Oven

26.6

- (b) All the sources mentioned in Condition No. 4b will also be covered by this Operating Permit. Each of these source categories shall be operated with VOC emission rates of no greater than 3 pounds per hour, 15 pounds per day, and 2.7 tons on a 12-month rolling average whichever is more stringent. The annual NOx emission limit calculated on a 12-month rolling sum basis, of these sources will be according to the following table.

Sources	Annual NOx emission limit, TPY
Devon I & II Hoods	0.8
Devon I Oven	2.1
Devon II Engine Test Cells	11.0

- (c) In accordance with § 129.93(c)(5), NOx RACT for the Detroit Emergency Generator and Caterpillar Emergency Generator operating less than 500 hours in a consecutive 12-month period shall be maintenance and operation in accordance with manufacturers specifications and good air pollution control practices.
- (d) In accordance with § 129.93(c)(1), NOx RACT for all Oil-, Gas-, and Propane-fired Heaters shall be maintenance and operation in accordance with the manufacturer's specifications and good air pollution control practices.
6. Facility wide volatile organic compounds and nitrogen oxides emissions shall not exceed 150 tons/year of Nitrogen Oxides (as calculated by the Department) and 43 tons/year of VOC (as calculated by the Department). Both Nitrogen Oxides and VOC emissions shall be calculated on a consecutive 12-month rolling sum basis.
7. Johnson Matthey shall keep on hand a sufficient quantity of spare dust collector bags for all the dust collector(s) in order to be able to immediately replace any bags requiring replacement due to deterioration resulting from routine operation of the source(s) and fabric collector(s).

**Condition from Permit No. 15-318-010F**

8. The following sources are now included under this Operating Permit:

- (a) Line 3 Washcoat Drying Oven  
Line 3 PGM Drying Oven  
Line 4 Washcoat Drying Oven  
Line 4 PGM Drying Oven; and the PSG Drying Oven  
(controlled by Scrubber D)
- (b) Line 1 Stabilizer and Hard Fire Drying Ovens

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**CONDITIONS (continued):**

Line 1 PGM Drying Oven  
Line 2 Stabilizer and Hard Fire Drying Ovens  
Line 2 PGM Drying Oven  
(controlled by Scrubber E)

- (c) Line 1 PGM Coater  
Line 2 PGM Coater  
Line 3 PGM Coater  
Line 4 PGM Coater  
The PSG Coater  
The precious metal and blending solution storage tanks,  
and the acetic acid storage tank.  
(controlled by Scrubber F)

The following conditions (9 and 10) apply to Scrubber D, originally under Operating Permit No. 15-309-016, and now consolidated into this Operating Permit.

9. Johnson Matthey, Inc. Shall not emit air contaminants into the atmosphere in excess of the limits listed below:

<u>Contaminants</u>	<u>Allowable Emission Limitations</u> <u>(tons/year)</u>
Total Volatile Organic Compound (VOC)	13.6
Nitrogen Oxides (NOx )	26.6

10. An operating pressure drop of at least 2.25 inches w.g. shall be maintained across the scrubber the whole time the sources are operating.

**The following conditions (11 to 15) apply to the sources controlled by Scrubber E listed in Condition 8 (b).**

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**CONDITIONS (continued):**

11. The company shall not emit air contaminants into the atmosphere in excess of the limits listed below.

<u>Contaminant</u>	<u>Allowable Emissions Limitations</u>	
	<u>(lb/hr)</u>	<u>(tons/year)</u>
Total Volatile Organic Compound (VOC)	3.3	11.5
Nitrogen Oxide (NOx)	28.1	98.35
Hydrochloric Acid	0.50	1.75
Carbon Monoxide (CO)	35.9	125.65

12. Equipment (a differential manometer or equivalent, as approved by the Department) shall be provided, so at the request of the Department of Environmental Protection, the pressure drop across the scrubber can be measured.
13. An operating pressure drop, between 2 to 6 inches w.g. for this scrubber, shall be maintained across the scrubber on any occasion that the sources are operating.
14. The pH meter shall be calibrated monthly, or as approved by the Department. A pH range from 8 to 12 for the scrubber shall be maintained.
15. Equipment (a rotameter or equivalent, as approved by the Department) shall be provided so that, at the request of the Department of Environmental Protection, the water flow rate to the scrubber can be measured. A water flow rate of minimum 600 gpm shall be maintained for this scrubber when the sources are operating.

**The following conditions ( 16 to 19 ) apply to Scrubber F:**

16. The scrubber shall have a pressure drop range of 2 to 4 inches w.g.
17. The above scrubber shall maintain a pH in the range of 8 to 12 in the scrubber water.
18. The above scrubber shall be equipped with an automatic pH controller with alarm to keep the pH in the range of 8 to 12.
19. The above scrubber shall use only a sodium hydroxide solution as the scrubber medium.
20. The company shall keep a record of the pH on a daily basis. These records shall be available to the Department upon request.



**CONDITIONS (continued):**

Condition from Permit No. 15-399-038

21. Two Torit-Donaldson Dust Collectors (Model Nos. 2DF 16 and 2DF 12) shall initiate cleaning whenever the pressure drop reaches 4 inches w.g. Eight (8) powder transfer stations and four(4) batching stations shall not be operated unless the associated dust collector is turned on.

Condition from Permit No. 15-399-036

22. The dust collector (Niro-Atomizer HT Portable) shall have a maximum pressure drop of 1.6 in w.g. The spray dryer shall not be operated unless this dust collector is running.

Condition from Permit No. 15-399-034

23. The maximum pressure drop for the Torit-Donaldson (Model No. 90-H-55) dust collector shall be 7" w.g. Four batchers, three powder feeders, a powder scale and a housekeeping wand shall not be operated unless this dust collector is turned on.

Condition from Permit No. 15-399-035

24. The maximum pressure drop for the Torit-Donaldson dust-collector (Model No. 2DF 4) shall be 8.4" w.g. A grinder, a drill press, two (2) work benches, a band saw, two batching mills, and a housekeeping wand shall not be operated unless this dust collector is running.

Condition from Permit No. 15-323-008 and 15-323-009

25. The maximum pressure drop for the two Torit-Donaldson dust collectors (Model Nos. 2DF4 and 2DF4) shall be 6" w.g. The metal support buffing machine, the chip remover machine, and/or the centerless grinders shall not be operated unless this dust collector is running.
26. All dust collectors shall be equipped with individual pressure drop gauges.
27. The two Coward-Eastman demisters shall be equipped with a photohelic gauge to indicate the pressure drop. When the pressure drop reaches a maximum of 1.5 in. w.g. the demisters shall be back flushed.
28. Johnson Matthey shall limit air contaminant emissions from the specific sources to the following:

**Contaminant**

**Allowable Emissions Limitations  
tons in 12 consecutive months**

Hydrochloric Acid  
CO  
Ammonia

2.95  
125.65  
7.32

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**CONDITIONS (continued):**

Condition from Permit No. 15-309-010

29. An adjustable speed drill, a band saw, a rotary crusher, four (4) grinders, and three (3) housekeeping wands shall be operated with the appropriate fabric collector on.

Condition from Permit No. 15-309-015

30. Three (3) process tanks, a batch reactor and a batch oven shall not be operated unless the connected baghouse is operating. The baghouse shall initiate cleaning whenever the pressure drop reaches 4 inches w.g.

31. RACT Monitoring, Recordkeeping, and Reporting Procedures:

Company shall maintain records in accordance with the minimum recordkeeping requirements of 25 PA Code Section 129.95. At a minimum, this shall include:

- (a) Records shall provide sufficient data and calculations to clearly demonstrate that the requirements of Conditions 5 and 6 are met.
  - (b) Data or information required to determine compliance with Conditions 5 and 6 shall be recorded and maintained in a time frame consistent with the averaging period of the requirements.
  - (c) Records shall be retained for at least five years and be made available to the Department upon request.
32. Johnson Matthey shall not at any time allow emissions of any air contaminants 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.
33. If at any time it is determined that the operation of the aforementioned source(s) is causing the emission of visible air contaminants in excess of the limitations specified in Section 123.41, or malodorous air contaminants in excess of the limitations specified in Section 123.31, is causing the emission of these contaminants or any other type of air contaminant in excess of the limitations specified in this permit and specified in, or established pursuant to, any other applicable rule or regulation contained in Article III, the owner shall take immediate steps, including the installation of additional air cleaning device(s), if necessary, to reduce the air contaminant emissions to within the applicable limitations.
34. 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

**CONDITIONS (continued):**

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 required.

35. Any notification required as a result of any condition herein should be directed to:

Regional Air Quality Manager  
Pennsylvania department of Environmental Protection  
Suite 6010  
Lee Park, 555 North Lane  
Conshohocken, Pa. 19428  
Telephone: 610-832-6242

Re 30 (RN99)82-11