BUREAU OF AIR POLLUTION CONTROL
301 39th Street
Pittsburgh, Pennsylvania 15201

August 28, 1986

Mr. John R. Weinert
Manager
Environmental Engineering
USX Corporation
600 Grant Street
Pittsburgh, PA 15230

PERMIT NO.: 86-I-0024-P
EQUIPMENT : Afterburner Maleic Anhydride Units #3 & #4
LOCATION : Neville Island
FIRST OPERATING PERMIT FEES: Unit #3 = $290
Unit #4 = $290

Total = $580

NOTICE OF INSTALLATION PERMIT APPROVAL

The subject installation has been approved for construction. The installation shall be made in conformity with the plans and specifications which are a part of your application and must be inspected and approved by the Bureau before it can be placed into operation. Conditions for approval are as follows:

1) Maleic anhydride process off-gas incineration destruction efficiency for each major organic chemical component must be at least 96% and for carbon monoxide at least 93.5%.

   Maleic anhydride units #3 and #4 incineration destruction must achieve the minimum efficiencies individually and combined. A combined maximum emission rate of 64 lbs./hr. or organics and 141 lbs./hr. of carbon monoxide for MA units #3 and #4 is required. When operated alone the required maximum emission rates are 36 lbs./hr. of organics and 79 lbs./hr. of carbon monoxide for unit #3 and 28 lbs./hr. of organics and 62 lbs./hr. of carbon monoxide for unit #4.

2) The phthalic anhydride process must be permanently disconnected from the thermal incinerator.

3) Maleic anhydride units #1 and #2 are not included as changed in this installation and shall not be connected to the thermal incinerator.

4) Incineration temperature shall be a minimum of 1400°F ±25°F. This temperature shall be chart recorded.

5) Stack monitor, such as that used on the existing catalytic oxidizers, must be installed and operated to determine total combustibles consisting of hydrocarbon and carbon monoxide concentrations in parts per million from the exhaust stack gases.

Also, incinerator fume inlet gas shall be monitored at least once per day for hydrocarbon and continuously for carbon monoxide concentrations in parts per million. Monitors shall be equipped with recording charts and such charts must be retained for six months.

6) Consistent with the design, there must be no air dilution of exhaust gases in the stack or after the recuperator.

7) Inside volume of the "dwell chamber" is required to have a minimum volume of 909.6 cu.ft. to produce an incineration time of at least 0.88 seconds.

8) When the incinerator operates, any additional incinerator fuel above the consumption figure found on line #10 of the application shall be used as necessary to sustain proper incineration temperature, waste heat boiler operation, or recuperator performance.

9) Incinerator fuel use must be recorded on totalizing flow meters.

10) Primary fuel shall be natural gas with #2 fuel oil used as backup fuel.

11) Dilution air fans may only operate during startups and during an incinerator temperature overheat malfunction. Such a malfunction shall be reported as a breakdown under Paragraph 202.C of Article XX, Air Pollution Control Rules and Regulations.

12) The exhaust stack must be equipped with two easily accessible 3" diameter FID stack sample ports located 90° from each other.

Upon completion of the installation, please submit an application for revised Operating Permits with the fee listed above and an inspection will be scheduled. When it is determined by the Bureau that the installation complies with the regulations and the approved permit application, the facility may be placed into operation.

The installation will require emission testing prior to revision of the Operating Permits and every two years thereafter.

The approved test sampling procedure, as outlined in Article XX, shall apply. The Bureau must be notified at least ten (10) days prior to the date of any tests conducted by U. S. Diversified Group.

If emission testing demonstrates compliance with Article XX, and permit conditions, the revised Operating Permits will be approved.

This Installation Permit shall be posted at the site during the construction period.

Permit Issued by:

BUREAU OF AIR POLLUTION CONTROL

J. D. Graham
Engineering & Plan Review Section

JDG/nh
Attachment
cc: R. J. Chleboski
C. J. Goetz
J. L. Ruffing

Appendix 24

Aristech Chemical Corporation

INSTALLATION PERMIT #86-I-0024-P

for

Afterburner Maleic Anhydride Units #3 and #4

Neville Island Plant, Pittsburgh, PA 15225

HEREBY incorporated in the Allegheny County portion of the Pennsylvania State Implementation Plan for the Attainment and Maintainence of the National Ambient Air Quality Standards, Appendix 24, in satisfaction of the committment to adopt, as a SIP revision for ozone, additional stationary source regulations incorporating all CTG's published by EPA.

This Installation Permit satisfies the conditions for adoption of Control Technology Guideline EPA-450/3-84-015 "Control of Volatile Organic Compound Emissions from Air Oxidation Processes in Synthetic Organic Chemical Manufacturing Industry (SOCMI)".

BUREAU OF AIR POLLUTION CONTROL
301 39th Street
Pittsburgh, Pennsylvania 15201

March 3, 1987

Mr. John R. Weinert
Manager
Environmental Engineering
Aristech Chemical Corporation
600 Grant Street
Pittsburgh, PA 15230-0250

RE: I.P. #86-I-0024-P
Afterburner - Maleic Anhydride
Units #3 & #4
Issued August 28, 1986

NOTICE OF INSTALLATION PERMIT MODIFICATION AND AMENDMENTS

Pursuant to your February 18, 1987 request for an amendment to Aristech's Installation Permit No. 86-I-0024-P, condition No. 1 of the subject permit is modified as follows:

1) Maleic anhydride process off-gas incineration destruction of organic chemical components must be at least 98%, and for carbon monoxide at least 93.5%. Maleic anhydride units #3 and #4 incineration destruction must achieve these minimum efficiencies individually and combined. A combined maximum emission rate of 32 lbs./hr. of organics and 141 lbs./hr. of carbon monoxide for MA units #3 and #4 is required. When operated alone, the required maximum emission rates are 18 lbs./hr. of organics and 79 lbs./hr. of carbon monoxide for unit #3, and 14 lbs./hr. of organics and 62 lbs./hr. of carbon monoxide for unit #4.

The subject permit is amended as follows:

1) If a Total Resource Effectiveness (TRE) coefficient greater than 1.0 (from available control technology) is demonstrated, using the calculation procedures of the EPA Control Technology Guideline Document for air oxidation processes, the original permit condition (1) will remain in force.

2) As an alternate to modified condition 1), equivalent Reasonably Available Control Technology (RACT) of at least 1600 degrees F incinerator temperature and at least 0.75 seconds residence time may be demonstrated and maintained.

All other permit conditions remain unchanged, except that if the RACT option 2) above is implemented, condition 4) is altered to 1600 degrees F from 1400 degrees F, and condition 7) is altered from 0.88 seconds to 0.75 seconds.

Very truly yours,

J. D. Graham
Air Pollution Manager

JDG/nh
cc: R. J. Chleboski
R. W. Westman
J. R. Serpa
J. L. Ruffing
G. W. Leney