

ILLINOIS POLLUTION CONTROL BOARD

September 6, 1973

REILLY TAR AND CHEMICAL CORPORATION,)
)
) Petitioner,)
)
 vs.) PCB 73-218
)
 ENVIRONMENTAL PROTECTION AGENCY,)
)
) Respondent.)

Max K. Naegler, Attorney for Petitioner
Thomas Cengel, Assistant Attorney General for the EPA

OPINION AND ORDER OF THE BOARD (by Mr. Henss)

Reilly Tar and Chemical Corporation requests a 3 month variance from Rule 206(c) of the Air Pollution Control Regulations which on December 31, 1973 will limit the emission of carbon monoxide.

Petitioner has operated its coal tar distillation plant in Granite City, Madison County, Illinois since 1932. It purchases crude high temperature coal tar, a "waste" product of steel mills, and distills it to produce various grades of coal tar pitch and creosote. The crude coal tar is stored in tanks and transferred to stills for the distillation process. Petitioner utilizes four 10,000 gallon stills and two 6,000 gallon stills to process about 520,000 lbs. of crude coal tar daily. The plant operates 5 days per week and employs about 54 persons.

After each still is filled with crude, heat is applied, and this distills off creosote oil vapor and various noncondensable gasses. The distilled gas and vapors are passed through a condenser to liquify the creosote, which is collected in receiving pans. The noncondensable gasses, including carbon monoxide, exit to the atmosphere through vents at the receiving pan.

An independent test laboratory analyzed these gasses by gas chromatography in 1972. The test revealed that Petitioner's total carbon monoxide release was 1.40 lbs./hr. Using an air flow rate of 7 cfm, the Agency estimated the 1.40 lbs./hr. emission rate was equivalent to about 9,000 ppm. Rule 206(c) allows Petitioner to emit a maximum of 200 ppm (adjusted to 50% excess air) after December 31, 1973.

Petitioner's first three applications for operating permit were denied by the Agency for "lack of information, lack of data, and lack of compliance schedules". A fourth application was denied on May 2, 1973 and Reilly Tar then filed the variance petition.

At this time, there are no control devices on the distillation unit capable of reducing carbon monoxide emissions to acceptable levels. Petitioner has submitted a Compliance Plan and Project Completion Schedule for the installation of a low volume waste gas burner, type D.F.S. Fumeabator. This device will burn the various gasses which at the present time are emitted to the atmosphere, so that the final emission will be essentially water vapor and carbon dioxide. The installation of this control equipment will be on the following schedule:

- Part A - July 1973 - Evaluation of the Fumeabator on Petitioner's new enamel plant (also located in Granite City).
- Part B - October 1973 - Petitioner to apply for a construction permit for the Fumeabator on its coal tar refinery.
- Part C - November 1973 - Petitioner will enter into a binding agreement to purchase the equipment.
- Part D - January 1974 - Petitioner expects delivery of the equipment.
- Part E - March 1974 - Petitioner expects equipment to be installed and operational and expects to demonstrate compliance with Rule 206(c) of the Air Pollution Control Regulations.

The record shows that a Fumeabator has been installed at Petitioner's new enamel plant which is located adjacent to the coal tar refinery. William Justin, Petitioner's Director of Environmental Control, testified that the Fumeabator system at the enamel plant was received with safety devices normally considered as standard components of such equipment. However, because of the highly flammable nature of the Reilly gasses, the Reilly engineering staff decided to devise an additional protection system to insure that fire could not flash back through the piping network and cause an explosion. The additional safety devices include steam-jacketed flame arrestor, steam ejector to move the gas stream and automatic valves. The presence of naphthalene in the waste gas of the Reilly plant presented a special problem in the design of the system. Naphthalene solidifies at normal ambient temperatures and could accumulate at certain critical points in the piping network thereby plugging the safety devices. These and other

operational difficulties have delayed start-up of the enamel plant, but Petitioner advises that the delay probably would not affect the Project Completion Schedule as submitted. Petitioner indicates that the installed cost for the incinerator system at the distillation plant would be about \$20,000.

Although Reilly has similar operations at other locations, its Granite City facility was selected as the site for installation and testing of the incinerator control system. Petitioner plans to use this method of pollution control not only at Granite City but at its other factories if the method proves satisfactory.

A company official testified that production capacity of \$40,000 to \$70,000 per week would be lost if the plant were forced to cease operations during the first three months of 1974. The record indicates that Petitioner could install the incinerator equipment at the distillation plant and have the equipment in operation by the December 31, 1973 deadline. A back up incinerator device has been located and is available in the event the first system is found unsatisfactory.

Initially, the Agency recommended that we deny the variance. This recommendation was changed after Petitioner demonstrated to the Agency that, because of the potentially explosive nature of the waste gas stream, complete testing was necessary to insure the safety of Reilly's employees and to protect the plant from fire. In its Amended Recommendation, the EPA recommends granting the variance.

Petitioner's carbon monoxide emissions, while above the allowable rate, are not alarmingly high. Testimony indicates that Petitioner's hourly carbon monoxide emissions are equivalent to carbon monoxide emissions from 12 automobiles driving 10 miles.

We believe the primary concern in this case must be for the safety of the employees. Petitioner is testing the new incinerator now. A back up device will be available in the event the Fumeabator system proves unsatisfactory. The Project Completion Schedule indicates that Petitioner will achieve compliance within three months of the deadline. We do not find this delay unreasonable in view of the dangers inherent in installation of an untested system. We shall grant the variance subject to conditions which will assure installation of the control equipment.

ORDER

It is the order of the Board that:

1. Reilly Tar and Chemical Corporation is granted variance from Rule 206(c) of the Air Pollution Control Regulations at its Granite City tar distillation plant until March 31, 1974.

2. Variance is conditioned upon the submission to the Agency of quarterly reports detailing progress or lack of progress in installation of the Fumeabator or other control equipment at the Granite City tar distillation plant. Such reports shall commence on October 1, 1973.
3. Petitioner shall, by October 1, 1973, post a bond in the amount of \$10,000 in a form acceptable to the Environmental Protection Agency, guaranteeing the installation and operation of suitable carbon monoxide control equipment by March 31, 1974. The bond shall be mailed to: Fiscal Services Division, Illinois EPA, 2200 Churchill Road, Springfield, Illinois 62706.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order was adopted this 6th day of September 1973 by a vote of 4 to 0.

Christan L. Moffett