

Pollutants trapped

Smog Causes Deaths

(Editor's Note: the following is the first story in a series on the air pollution problem.)

by Bill Stuble

Collegian Staff Writer

The sun was showing — not shining — over central London at high noon Sunday, Dec. 7, 1952. A New York Times reporter said it looked like an unlit Chinese lantern even at noon although there wasn't a cloud in the sky.

This was the third day of an unusual air pollution episode caused by a meteorological phenomenon known as temperature inversion. Weathermen explained that an extremely slow moving mass of air had moved in over the city with the result that a blanket of warm air was trapping beneath it a layer of cooler air — and much of the city's air pollution.

When rainfall and a brisk wind finally cleared the air, medical reports listed 4,000 deaths over the normal rate and many illnesses as a result of the nearly black smog that covered the city.

This was only one such incident in the annals of air pollution. A similar smog struck London in 1956 resulting in approximately 1,000 deaths and as early as 1930 the industrial Meuse Valley in Belgium was hit by a temperature inversion that claimed 60 lives.

Donora, Pa., was the scene of a death-dealing smog in 1948. Located at a sharp bend in the Monongahela River 25 miles southeast of Pittsburgh, Donora suffered the most serious smog in terms of percentage of population affected. Twenty elderly persons died and 4,500 of the town's 13,000 residents became ill.

Experts said that if a similar smog struck New York City, 11,000 persons would die and four million would become ill.

New York City did suffer a temperature inversion in November 1966 which resulted in an estimated 100 deaths.

A heavy soot in Donora's atmosphere was so dense, according to The Pittsburgh Post-Gazette, that it precipitated on paved streets causing pedestrians to leave footprints where they stepped.

The Post-Gazette might have had this in mind when it editorialized on Nov. 1, 1948 on the Donora incident, "... no one is any more free to throw gas refuge into the air than he is to dump garbage in the streets." In any case the statement could qualify as one of the first common laws of air pollution.

Today the possibilities of local air pollution emergencies are minimized by alert city authorities.

New York City maintains an air pollutant monitoring system which provides daily its Air Pollution Index, a relative indicator of the presence of three major pollutants in the city's atmosphere. When the pollution reached dangerous levels in the 1966 emergency, city authorities immediately ordered the shutdown of waste incinerators and advised landlords to lower apartment temperatures to 60 degrees, thereby minimizing the pollution emitted from coal and fuel oil burning furnaces.

Also, unnecessary travel by automobile was discouraged and power plants were ordered to switch to low sulfur content fuel where possible.

There are many facets to the air pollution problem, however; emergencies caused by temperature inversions are not the biggest problem.

Francis A. Wood, professor of plant pathology, spoke Oct. 18 on "The Impact of City Air Pollution on Plant Life."

Citing Johnstown as the most seriously air-polluted city in Pennsylvania, he recalled a project there in which 600 white pine seedlings were planted, of which only three or four survived. He explained the white pine was sensitive to the air pollution emitted by local steel mills.

"If you want to see the effects of air pollution on vegetation," Wood said, "don't go into well-established cities where only resistant strains have survived."

However, air pollution is not dangerous in high concentrations only. Research is being done at the University's Center for Air Environment Studies on the low-level, long-term effects of contaminated air.

Principle investigator Rodney A. Rhoades, assistant professor of physiology, reports a significant change in lung tissue elasticity, among other ailments, in various mammals exposed to low levels of several primary air pollutants for periods of nine months.

In the distant future there may be some new prospects for danger. For example, air pollution threatens to disrupt weather conditions on a world-wide scale according to some scientists. Carbon dioxide, although not officially considered an air pollutant, has the profound ability to permit infra-red (heat) rays from the sun to penetrate the earth's atmosphere while blocking those same rays from leaving through the atmosphere after they reflect off the earth's surface. The result is a global increase in temperature.

The effects of this will be inconsequential at least until the year 2000, according to William J. Moroz, director of the Center for Air Environment Studies and professor of mechanical engineering. He also pointed out that air pollution in the form of particles has the reverse effect of carbon dioxide in interfering with the passage of infra-red rays through the atmosphere, thus reducing the problem somewhat.

In any case, there are few signs that air pollution control will be a temporary chore. Even The Pittsburgh Post-Gazette declared in its 1948 editorial on the Donora incident, "The job is far from finished."

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DTK Mental Health Seminar

Delta Tau Kappa, the international social science honor society, will sponsor a symposium, "Careers in Mental Health", Thursday, May 18, beginning at 12:00 p.m. in the auditorium.

The seminar, which is open to the public, has as its objective to inform college students of opportunities as volunteers, student-interns and post-graduate work in the field of mental health.

Several area mental health personnel will participate in the symposium. The following people are scheduled to serve on the panel of speakers: Harold D. Keister, Director, Intermediate Care Unit, Harrisburg State Hospital; Delores Loncaric, a nurse and caseworker based at the North Dauphin County Mental Health Clinic; Barbara Scheffer, Director, Volunteer Resources, Harrisburg State Hospital; John S. Brauner, a caseworker with Goodwill Industries; Dennis Felty, Program Director, Harrisburg Hospital Mental Health Center; and John K. Stauffer, Assistant Director, the Aurora Club, which is a mental health group. Stauffer is also a student at Capitol Campus.

Miss Scheffer will serve as panel moderator. Each panel representative will briefly explain the basic function of his rehabilitative services. Those attending the seminar may pose questions to the panel by presenting them on note cards and giving them to the moderator.

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Volunteers For Action

Camp Sertoma needs help. The summer camp for mentally retarded children is in dire need of maintenance work, which must be completed for the camp to open on June 6.

The work would entail cleaning of cabins, policing the grounds, and some painting. The camp is located at the foot of Blue Mountain near

Linglestown, approximately a 30 minute drive from campus.

A campus group is planning to go to Sertoma on Saturday, May 20. Volunteers could meet at the Cafeteria at 9:00 A.M. and a motorcade could form. If you wish to help or for further information, call John Stauffer at 232-6675 or Bob Bonaker at 944-1788.



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