PUBLIC HEALTH

Ask Control of Bad Air

The problem of polluted air extends beyond state borders. In one effort to work effectively toward a solution, two states may soon form an interstate agency.

➤ THE INTERSTATE Sanitation Commission, composed of health authorities from Connecticut, New Jersey and New York, has proposed creation of an interstate agency to cope with the growing problem of bad air, some of it dangerously polluted, drifting over the New York City-northern New Jersey metropolitan area.

The Commission points out in a report issued in New York that economic losses caused by air pollution damage to buildings, paint, clothing and vehicles are "enormous." In addition, the Commission reports, "health may be adversely affected."

Aircraft flights in the huge metropolitan area "are hampered by poor visibility brought about by air pollution," the Commission also reported to the governors and legislatures of New York and New Jersey, the two states most concerned.

On the basis of atmospheric tracer tests that showed each state was polluting the other, the Commission recommends creation of an interstate control group similar to the group now controlling pollution of rivers and streams shared by the states in the area.

The report is based on tests made during the summer and fall of 1957 in cooperation with four Federal agencies: Public Health Service, Weather Bureau, Army Chemical Corps and National Bureau of Standards.

During the tests a zinc cadmium dust, easily spotted by its fluorescence and by chemical means, was dispersed into the air at various locations. Air was spot-checked over both states and the travel of the dust was mapped.

The tests indicated air-carried pollutants spread mutually over the two states, depending on wind direction and weather conditions.

Since it is impractical to try to clean the air once it has been polluted, the Commission concludes the only helpful measure is to control air pollution at its source by regulation of smoke-producing factories, incinerators, refuse dumps, automobile traffic, etc. However, nothing would be gained if only one state invoked controls and conducted an education campaign. Bad air still would flow in from any neighboring area not fighting air pollution.

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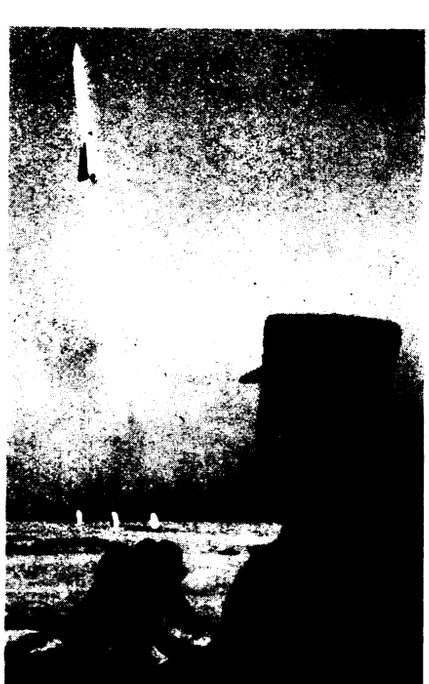

SERGEANTS AT WORK — The U. S. Army's new surface-to-surface "Sergeant" missile blasts off during a recent test flight at White Sands Proving Ground, N. M. The missile is said to be capable of being fired under all conditions of weather and terrain by a very small crew. Its highly accurate guidance system is invulnerable to possible enemy counter-measures, reports the Sperry Gyroscope Company, N. Y., which will produce the missile system.

PUBLIC HEALTH

Protection From Radiation

A new linear accelerator being built at the Argonne National Laboratory will help scientists learn what happens to living cells that are exposed to radiation.

➤ BETTER PROTECTION against nuclear radiation hazards is expected to result from studies with a new high energy electron accelerator scheduled for completion at Argonne National Laboratory, Lemont, Ill., this fall.

Scientists will use the accelerator to learn more precisely just what happens in a chemical reaction set off by atomic radiation. At present, chemists have only a general notion of what happens to many life processes when nuclear radiation enters the scene.

Scientists know what materials are present in a normal body cell, and they have identified the substances present after the cell has suffered radiation damage. However, the very rapid steps and the short-lived intermediate compounds formed during radiation exposure remain, for the most part, a mystery.

Using the linear accelerator, the Argonne chemists will make a direct frontal attack on the problem of producing, isolating and identifying the intermediate compounds.

The accelerator, under construction by Applied Radiation Corporation, Walnut Creek, Calif., will fire short, very intense bursts of electrons at cells and chemicals present in living organisms, creating enough of the intermediate materials to identify them.

When the method of radiation damage thus becomes more fully understood, chemists will then seek substances that, when injected, can either prevent the formation of the intermediates, or can combine with them to produce harmless materials.

For example, scientists have pointed out, some sugars recently have been found to reduce radiation effects in certain cases. How the sugars act is not known, but when chemists have identified more of the intermediate radiation products, they may be able to find a specific sugar or even more effective chemicals to pull the harmful intermediates out of the scene, thus stopping the cell damage process.

Argonne scientists believe knowledge gained from the accelerator experiments also will prove useful in producing new chemical products and in preserving foods by radiation.

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PUBLIC HEALTH

Form U. S. Committee On Radiation Hazards

➤ A NATIONAL Advisory Committee on Radiation to develop adequate safeguards against radiation hazards has been established by the U. S. Public Health Service.

Dr. Leroy E. Burney, the Service's Surgeon General, said the committee will advise him on programs concerning the public health aspects of radiation from all sources. Present activities of the Service in this field include research, epidemiological studies, radiation monitoring of milk, water and air, and technical assistance to the states on radiation safety measures.

Dr. Russell H. Morgan, professor of radiology, Johns Hopkins University Medical School, and radiologist in chief of Johns Hopkins Hospital, now serving as special consultant to the Surgeon General on public health aspects of radiation, will be chairman of the new committee, which will hold its initial meeting March 13.

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