

New air monitoring station to help state get handle on smog problem

By TOM JOHNSON

The state is trying to find answers to its most intractable air pollution problem with one of the nation's most sophisticated air quality monitoring stations, which is expected to provide crucial new insights into how and where smog is formed.

Set up with rare cooperation among industry, academia and government, the new station at Cook College in East Brunswick will furnish important information necessary for tracking the causes and sources of pollution that

causes ground-level ozone, officials said.

"Understanding and controlling the transport of pollutants into New Jersey is vital to our ability to comply with the Clean Air Act," said Robert Shinn Jr., commissioner of the state Department of Environmental Protection (DEP), at a ceremony unveiling the station.

Tucked in a farm field at Cook College, the 66-foot tower is equipped with nearly a half-million dollars in acoustic and radio gear designed to track wind and weather conditions from ground level to as high as 20,000 feet and to detect about 60 pollutants that lead to smog.

Eventually, 21 other stations will be set up around the nation in areas where ground-level ozone pollution is severe. Smog is formed when pollution from cars, factories and power plants is cooked in the sun on hot summer days, turning stagnant air into a haze laden with ozone.

Exposure to ozone can cause coughing, painful breathing and loss of certain lung functions, particularly in susceptible populations such as the elderly and young. But officials concede that there are many unanswered questions about precisely how smog is formed.

Not until a few years ago, Shinn noted, did experts agree that pollution from power plants and autos in the form of nitrogen oxides was a significant factor in the formation of ozone.

"Ozone is a very complicated pollutant," said William Hunt Jr., a technical expert at the federal Environmental Protection Agency, which helped fund the station, along with Public Service Electric & Gas (PSE&G) and Jersey Central Power and Light (JCP&L).

"It will tell us a lot in terms of the amount of air pollution and how one part of the country is affecting another part," he said of the station. "It will greatly increase our understanding of the ozone problem."

By analyzing the data, scientists and government experts should be

able to better evaluate control strategies used to reduce smog and even make mid-course corrections over the next decade in attempts to comply with Clean Air Act deadlines.

New Jersey, like much of the Northeast, periodically violates the national air quality health standard for ozone during summer months. It is not expected to achieve the standard until the year 2005 in South Jersey and two years later in the northern part of the

state. "The ozone problem is bigger than just one state and one industry," said Peter Landrieu, a vice president at PSE&G, which contributed about \$180,000 in equipment to help set up the station as did JCP&L. "If we're going to solve the ozone problem, we're going to have to look at regional solutions. This station will help us achieve that goal."

The site at the New Jersey Agricultural Experiment Station was selected because it is an ideal location for tracking upper atmosphere conditions that lead to ozone pollution, according to Charles Pietarinen of the DEP's bureau of air monitoring. This summer, an air monitoring station located just across the road recorded the highest levels of ozone concentration during this smog season, he noted.

Although there are several other sites in the metropolitan area where upper atmosphere winds and temperatures are monitored, they do not do so continuously and are not located in high-ozone areas, said Nathan Reiss, chairman of Cook College's meteorology department. "This station will give



(Photo by Tom Kitts)

"This station will give us the most definitive readings available," said Nathan Reiss, chairman of Cook College's meteorology department, of the new pollution-tracking station

us the most definitive readings available," he said. It will also be used by the school to improve the analysis of weather patterns in the Northeast, Reiss said. As a consequence, it should help improve weather forecasts.