



October 1, 2007

The Honorable Sheila Dixon
City Hall, Room 250
100 N. Holliday Street
Baltimore, Maryland 21202

Dear Madame Mayor:

The Swann Park Task Force has been continuing its investigation into arsenic contamination at Swann Park. Most recently, we have reviewed several scientific studies released from 1974 to 1980, which identified potential health risks posed by arsenic production at the Allied Chemical plant, Race Street site, in Baltimore.

This letter summarizes our review and makes recommendations.

The Scientific Studies

In the 1970s, scientific researchers began to identify linkages between arsenic production at the Race Street site and high rates of cancer in the surrounding community. In fact, a 1974 study conducted by Johns Hopkins researchers concluded that workers who handled inorganic arsenic at the plant had a lung cancer death rate 7 times the expected level for men in Baltimore.¹

A subsequent pilot study, focused on the long-term effects of exposure to airborne arsenic, was funded by a contract issued by the U.S. Environmental Protection Agency (EPA) Office of Toxic Substances. In this research, Dr. Genevieve Matanoski of the Johns Hopkins School of Public Health sought to determine the level of risk from the inhalation of arsenic discharged from the Allied Chemical plant. Narrowing her research to the period of 1970 to 1972, she reviewed index census tracts and death certificates in Baltimore, and found that men living in the area surrounding the Allied plant had a 1.4 times higher risk of lung cancer.² Dr. Matanoski also provided her preliminary findings to a reporter with *The Baltimore Sun*, which printed an article about it her study on February 15, 1976 under a headline that reported an excess of “fatal lung cancer”.³

Dr. Matanoski’s pilot study led to further research, including additional cancer analyses and soil sampling conducted in Summer 1976 and Spring 1977. Dr. Matanoski presented this work at a

¹ “Fatal Lung Cancer Found High In South Baltimore,” *Evening Sun* (February 15, 1976).

² Matanoski, G., Landau, E., & Elliott, E., “Epidemiology Studies: Pilot Study of Cancer Mortality Near An Arsenical Pesticide Plant in Baltimore,” May 1976.

³ “Fatal Lung Cancer Found High In South Baltimore,” *Evening Sun* (February 15, 1976).

scientific workshop conducted by the American Public Health Association and funded by the Department of Energy in Albuquerque, New Mexico, January 22-24, 1979. On September 15, 1980, Dr. Matanoski submitted her full results to the journal *Environmental Research* as part of a monograph of presentations from the 1979 workshop. This report, *Cancer Mortality in an Industrial Area in Baltimore*, was published in August 1981; it further evaluated the level of risk due to exposure to arsenic. Citing census tracts, death certificates and soil sampling from the area surrounding the Allied plant – including from Swann Park -- Dr. Matanoski found that there was excess cancer mortality among men living in the area from 1966 to 1974. According to the report, the highest arsenic levels corresponded with areas where lung cancer mortality was also the highest.⁴

In an interview with the Task Force on July 10, 2007, Dr. Matanoski said that her primary interaction was with EPA and she was not invited to present her research results to city or state health officials or community groups. She stated she would have gladly presented the research had she been asked. She reiterated her view that the health risk came from airborne arsenic exposure while the Race Street Plant was operational, not from soil in Swann Park.

EPA experts were present at the 1979 workshop. Moreover, *Environmental Research* was, and still is, among the most widely read journals for environmental health scientists, including those at the EPA. As noted above, EPA contracted with Dr. Matanoski for the research to be performed and received her findings. Moreover, Dr. Matanoski stated that she presented this study to the Environmental Protection Agency. Yet, our review of several hundred available documents did not find any evidence that that EPA, or state or local government experts, brought the ongoing research to the attention of the Kepone Task Force, which was evaluating the public health risks to Swann Park.

We did find one document indicating that at least one member of the state government and of the Kepone Task Force was aware of Dr. Matanoski's research. An internal Allied Company letter from 1976 references a conversation with Mr. George Ferreri, Director, Maryland Bureau of Air Quality. In the letter, Dr. Ferreri advises that "an additional study was being issued by Dr. Matanoski of Johns Hopkins covering cancer incidents adjacent to the Baltimore Plant."⁵ According to the company memo, "Ferreri feels that there will be added extensive publication and pressure for further environmental studies."

Discussion

Despite the fact that the EPA and at least one state official were aware, as early as 1976, of the increased risk of cancer and, a few years later, of research demonstrating high arsenic levels in soil in areas surrounding the Allied Plant, these findings were not shared with the community. Without wider dissemination or understanding of the results of this research, this pressure never came for further studies or for action to be taken. It was 25 years later before the discovery of old company documents led the issue of arsenic at Swann Park to resurface.

⁴ Matanoski, G., Landau, E., Tonascia, J., Lazar, C., Elliott, E., McEnroe, W. & King, K., "Cancer Mortality in an Industrial Area of Baltimore." *Environmental Research* September 15, 1980. The mean arsenic levels found in Swann Park were 63 parts per million (ppm). However, levels near the fence were as high as 695 ppm.

⁵ William Reiter, Letter to Bratt, Callahan, Ferguson, Matthiesen, von Frank (April 26, 1976).

Today there is a broad understanding of the critical role that research plays in improving public health. Environmental studies can identify risks, suggest approaches to remediation, and provide important information to policymakers and communities. For this reason, it is important to ensure wide dissemination of important research studies beyond funders, professional journals, and academic conferences.

This is a shared responsibility. Policymakers must be open to hearing about the results of research, even if it may contain inconvenient facts. Community groups and leaders must make time to provide input and receive updates on local research efforts. Researchers must prioritize informing and involving the community and policymakers from very early in the investigation process. Today, in the realm of environmental health, this process is often facilitated by the government via mechanisms such as health assessments, task forces, community meetings, and outreach efforts.

Had the results of the Swann Park research been more widely known when they were published, more attention probably would have been paid to the site decades before 2007.

The Task Force has asked the Commissioner of Health to share this letter with federal officials, state officials and academic leaders in public health in Baltimore. We have asked him to discuss the responsibilities of policymakers, the community, and investigators in public health research, with the goal of promoting better health in our city.

Sincerely,



Joshua M. Sharfstein, M.D.
Commissioner of Health

On behalf of the Swann Park Task Force: Dr. Lynn R. Goldman, George Nilson, Heather Moore, Stuart Simms, and Dr. Joshua Sharfstein.