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Digging Up Dirt On Mystery Ash In Alexandria

Activists Link Soot to Power Plant

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For years, an odd dust has coated nearly everything in the northern part of Old Town -- from bicycles and cars to windowsills and furniture. The gray chalky residue sticks fast to anything it touches and turns black when met with a damp cloth.

"We've had to close our windows, it was so bad," said longtime Alexandria resident Poul Hertel, 44, a former chairman of the Alexandria Federation of Civic Associations.

What was it, and where did it come from?

Old Town residents have long discussed the nature and source of the daily annoyance. Some residents suspect that the ash-colored residue is from the nearby coal-fired power plant that is off the George Washington Memorial Parkway and currently owned by Mirant Corp. Others say that's impossible because the wind would blow away any plant emissions. They believe that the substance is probably just dirt.

Residents said they began to see more of the sooty film several years ago, even though Mirant officials say the plant's output has not changed since the company took it over several years ago.

Nonetheless, in spring 2001, Hertel and Elizabeth Chimento decided to get to the bottom of what had become a neighborhood mystery.

For 21/2 years, the longtime friends, spending their free time and money, have been on a crusade to understand for themselves -- and then help the community understand -- whether the strange dust is something to fear. More importantly, they were determined to figure out whether there were lasting health effects from waste emitted at the hulking brick structure, which has loomed in Old Town's back yard for more than 50 years.

"We had an idea that it may be coming from the power plant, but without scientific testing, we knew that nothing could be proven," said Chimento, 62, who has lived a block from the power plant in a Pitt Street townhouse since 1997.

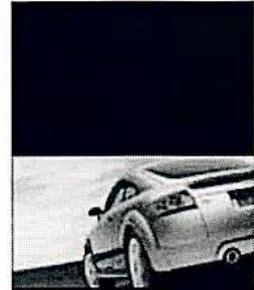
What they found confirmed what some neighborhood residents long suspected -- a significant portion of the soot collected in the neighborhood was directly associated with the plant, according to a report made by Penn State University and confirmed this summer by the Virginia Department of Environmental Quality (DEQ).

The department conducted a separate test at the behest of Hertel and Chimento as they sought independent evidence for their questions about the source of the dust. Those studies, and several other scientific studies by national researchers, were included in a report that the two submitted to the Alexandria city staff in August.

"Uncombusted coal dust was estimated to constitute up to 50 percent of each sample," Kelly Lease, an air compliance inspector for the department, who collected the samples for the agency, wrote in a memo Aug. 12. "Significant quantities of coal . . . ash were also observed in the samples."

The Penn State study concluded that the sooty material is an indicator of microscopic residue that is undetectable by the human eye and is produced during the plant's combustion process. The fine material, called particulate matter, can trigger several respiratory illnesses, including asthma, bronchitis, pneumonia and emphysema, according to a study reported by seven researchers in the March 2002 Journal of the American Medical Association.

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The researchers added that "long-term exposure to combustion-related [particulate matter] is an important environmental risk factor for cardiopulmonary and lung cancer."

Of particular concern to Hertel and Chimento is a third study by Jonathan Levy, a professor of environmental health at Harvard University, who found that particulate matter is most dangerous to those who live close to its source -- in this case, Alexandrians near the power plant.

"Concentrations peaked closer to the plant and decreased more rapidly with distance," Levy and his associates wrote in their study. Titled "The Importance of Population Susceptibility for Air Pollution Risk Assessment: A Case Study of Power Plants Near Washington D.C.," it also looked at Mirant's several other power plants in the region. The study's findings were based on a year-long satellite-based analysis of the area's wind patterns.

Chimento, a volunteer teacher, and Hertel, an economist, argued in their half-inch-thick report to the city that the power plant -- which serves parts of Maryland and most of the District but not Virginia -- is potentially a danger to Alexandrians. They said the city must push federal and state officials, and the plant itself, to alter drastically the amount of particulate matter being emitted.

However, neither the U.S. Environmental Protection Agency nor the state Department of Environmental Quality has emission standards for the material. That is because previous attempts to set such standards have been blocked by the power plant industry and challenged all the way to the Supreme Court, according to C. Arden Pope III, lead writer of the AMA study. Federal officials are developing standards that may address the most recent research.

Although Hertel and Chimento acknowledged that the plant technically has not violated state or federal law, they said the studies they cite send up red flags that officials should heed. They have called on the City Council to put pressure on state and federal lawmakers to address the issue.

"The city has a duty to protect the health of its citizens," said Hertel, who said the studies are theoretically and empirically based. The researchers, he said, have not tested local residents to assess whether they have been affected by the plant's emissions nor has any of their research been based on hospital records.

Mirant spokesman Steve Arabia said in an interview that he had several concerns about the research presented by Chimento and Hertel. He said he was skeptical of the assertion that the plant is responsible for the residue in the neighborhood.

Arabia said Mirant planned another round of its own tests, even though it conducted some this summer of the neighborhood dust that refute the DEQ and Penn State findings. However, state officials were not present for those tests, according to the DEQ report.

"We don't believe there's sufficient and credible information to say there's a chronic problem," Arabia said. "Is it possible that occasionally dust goes up from our plant? Yes, but right now, it's our impression that it's infrequent."

Arabia added that because particulate matter is not monitored by federal standards, the company could not be held responsible for some of the research by national experts. He said it's important that more research be done, adding that Mirant plans to work with residents and city officials to gather more facts.

City officials, said they, too, were hesitant to endorse all findings of the various studies but are taking Hertel's and Chimento's work seriously.

In an eight-page memo to the City Council last week, City Manager Philip G. Sunderland said his staff plans to look closely at several issues, including the actual amount of matter emitted from the plant, the best way of reducing emissions and how much of the emissions contribute to levels found in Alexandria according to Levy's study.

Sunderland, who described Hertel's and Chimento's report as excellent, also said that no definitive conclusions could be made yet and that staff members have written several questions to Levy and plan to meet with him in Alexandria soon.

"The best, perhaps, one can say today is that very small particulate matter may have an effect on people," Sunderland said in an interview. "But whether small particulates from the Mirant plant are affecting Alexandrians is still to be determined."

DEQ officials also have said more research is necessary, specifically regarding the particulate matter. They said they are not convinced about a direct link between the ash that neighbors find on their patio furniture and the harmful ash that Levy discussed in his study.

"At this point, [the emissions] don't rise to the level of violating state standards," said Jeff Steers, DEQ's Northern Virginia regional director. "Is there more they can do? Probably, and it's something we're going to work with both residents and city officials to try to address."

Mirant's Alexandria plant, which can generate 485 megawatts of power a day, is no stranger to controversy. The first generator was opened in 1949, and for years, Pepco, which sold that function to Atlanta-based Mirant several years ago, owned the plant's coal-operating facilities.

The plant, which has 130 employees, has come under fire recently for exceeding state regulations on emission of gases that form ozone. For instance, for the five months ending Oct. 31, a peak generating period, it emitted 2,129 tons of gases, according to the Virginia Office of Air Quality Planning and Monitoring. According to regulations, it was allowed to emit only 1,019 tons in that period.

Rep. James P. Moran Jr. (D-Va.) and state lawmakers have tried to work with leaders in Maryland and the District to force the plant more in line with federal and state regulations on emission of noxious gases that create smog and ozone. In several letters to state officials and regional leaders, Moran has tried to pressure state officials to crack down on Mirant's Potomac River facility.

"This plant's emissions have serious effects on the local residents and the region's health as a whole," Moran said in an interview.

Mirant officials said they disagree with Virginia officials about whether they have violated state standards.

In light of violation regarding emission of noxious gases, Hertel and Chimento said it is even more important for local, state and federal officials to discuss the particulate matter. They said the Levy study and others are examples of new research on the harmful residue that are ahead of public policy.

Levy's study, for example, said that if the best available technology were used to prevent the emissions, lives could be saved, as could trips to the emergency room and medical payments by insurers. Such evidence, Chimento and Hertel said, should compel local leaders to address the effects of the plant's byproducts.

"To wait any more is to exacerbate any potential health difficulties," said Chimento, who has lived in Alexandria since she was a teenager. Last month at the Old Town Holiday Inn, she and Hertel discussed their research with about 100 residents.

"I think we have enough established scientific evidence to determine a change in public policy," she said.

Meanwhile, City Council members said that they, too, are concerned about the research but that the community must fully understand all factors that could be contributing to the residue found in the neighborhood before drawing conclusions.

"We should pay attention to what these studies say," said City Council member Rob Krupika (D). "They raise a number of points regarding the plant we haven't thought about before, and some good questions have been raised. Now we need to see what further research shows and how it impacts our community."

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