Researcher tries to get handle on potentially hazardous plant emissions

By Callie Lyons
Athens NEWS Contributor
Monday, January 7th, 2008

A researcher from the University of Cincinnati is applying for grant funds to study the impact of industrial emissions on people who live near a manufacturing plant in Washington County.

In particular, Erin Haynes wants to learn whether the levels of manganese observed in local people, which exceed those seen in some workers who have suffered negative impacts, could pose a health risk to children who live in the communities neighboring the Eramet plant near Marietta.
According to the U.S. Environmental Protection Agency, the manganese particulate emissions in question are coming from Eramet Marietta, a ferro alloy production facility whose unique manufacturing processes confound traditional environmental regulation and enforcement.

Though the Eramet plant is located on Ohio Rt. 7 near Marietta, evidence of these plant emissions have been found in the furnace filters of homes as far away as Athens.

In the initial phase of her research project, Haynes, an assistant professor of environmental health, and her research team sampled the blood and hair of about 140 people who live in the vicinity of the plant for exposure to manganese, chromium and lead. Secondly, she recruited hundreds more area residents to participate in an online survey about air pollution. Additional information gained through the limited use of personal air monitors, sway tests, and roof-swipe tests have all helped define the path ahead for Haynes' project. Data gathered through the survey have helped her determine the concerns of the community and the best ways to communicate results with them.

"We haven't conducted the large study yet; we've done a lot of the preliminary work," Haynes said.

Haynes' pilot study found the manganese levels of area residents averaged 9.2 micrograms per liter. Negative health effects such as shakes and tremors, loss of balance and more severe problems have been examined in a Quebec, Canada, community with an average exposure of just 7.3 micrograms per liter. Manganese is an essential mineral necessary for health, but in larger quantities it acts as a neurotoxin in humans -- a
phenomenon documented in worker studies. A safe level of exposure in adults and children remains to be defined.

As part of an ongoing federal examination prompted by the complaints of nearby residents, the federal Agency for Toxic Substance and Disease Registry (ATSDR) has established monitoring stations at various locations around the Eramet plant to measure particulates in the air. In September, researchers from the agency traveled to Marietta and met with state health and environmental officials from Ohio and West Virginia to discuss some of their preliminary results. The small gathering of the public officials was called so the ATSDR could reveal that after just three months of monitoring, the levels of manganese in the air were showing up much higher than expected.

Due to a lack of public notice about the session, only two local residents attended the meeting. An e-mail sent by ATSDR epidemiologist Stephanie Davis afterward apologized for "not getting the word out."

Davis said officials from the federal agency were anxious to share quality data with the public, but that it would take a year of monitoring to draw any real conclusions. She said the agency soon will develop a Web site to serve as an informational portal for the public.

Haynes is looking to the data collected by the ATSDR as further evidence that more study needs to be done in the interest of public health. In October, Haynes visited Marietta to share her early findings with the community and to explain how she would like to proceed.
"Manganese is very essential," Haynes said. "We're talking about a mineral or a metal that is essential for normal body functions; our nerves need it, our brains need it, our connective tissue, bones. It's also part of calcium absorption and blood sugar regulation. We have to have it."

But Mid Ohio Valley residents have been getting much more than the recommended daily dose, and Haynes said it's important to learn how much manganese exposure is too much.

Eramet spokesperson Joy Frank-Collins would not respond to the findings from Haynes or the ATSDR directly, but said that the company follows all studies relevant to manganese exposure.

But for the people who live near the plant and cope with the daily fumes and dust, Haynes' attention to the problem has been refreshing.

For 10 years, Caroline Beidler of Pinehurst has been sharing her concerns over the air in her neighborhood. She's the founding member of a community group called the Neighbors for Clean Air whose goal is to talk the Eramet company into cleaning up its processes -- and the air they breathe.

"We are very encouraged and excited with Dr. Haynes' interest in our communities," Beidler said. "The citizens of Washington County, Ohio and Wood County, W.Va., have been exposed to airborne manganese for over 50 years. The perception is that the particulate emissions we see coming from Eramet, the soot we wash off of our homes, and the manganese-laden air we breathe is harming our health. Dr. Haynes' research adds legitimacy to our campaign to convince Eramet to modernize
their equipment and lower their emissions."

Most recently the Neighbors for Clean Air have been approaching local elected officials to solicit their assistance in petitioning Eramet representatives for a meeting to explore ways the plant can clean up its manufacturing process. So far, company officials have declined to participate in such a meeting with the impacted community members.

Login to Post Comment || Email this article

User Comments: