

The Air We Breathe

Local environmental group opposes Cemex energy switch

By Holly Hudson

It is a fact of life that as the cost of fuel and natural gas continues to rise inexorably, companies dependent on fuel combustion will increasingly look for cheaper alternatives to save money. The issue of protecting public health in the face of the ever-dominant bottom line considerations of most manufacturers will conflict with increasing regularity in this country. Among manufacturers especially happy to find cheaper alternatives to fuel are power plants, pulp and paper mills, waste-to-energy plants, and cement kilns. Cement plants particularly need lots of fuel to stoke their kilns at all times. Many now use a combination of petroleum coke, coal and tires, or Tire Derived Fuel (TDF). There are about 88 kilns in this country and 43 are currently using TDF to make up at least a portion of their energy source. To some, the use of TDF is a welcome antidote to the problem of the disposal of tires filling up landfills. According to a 1997 EPA Report, emissions from TDF are basically safe, as long as "combustion occurs in a well-designed, well-operated, and well-maintained combustion device."

To others, the EPA's statement encompasses the fundamental problem with cement kilns using TDF. Kilns are being forced to do the work of hazardous waste incinerators without either being subject to the tightest controls possible or fitted for the job of hazardous waste disposal.

For our own local version of this debate, we need look no further than Cemex, formerly Southdown, located just outside of Fairborn. Cemex's recent proposal to start using TDF to replace 20 percent of their current petroleum coke usage has met with resistance from area residents. The Greene Environmental Coalition (GEC), who successfully stopped the plant's attempt to burn other hazardous wastes, including tires as a fuel alternative in 1994, is leading the current counterattack against the TDF initiative.

GEC has asked Cemex to install Continuous Emission Monitors (CEMs), which would test what comes out of the stack for nitrogen oxide, sulfur dioxide, carbon monoxide, carbon dioxide and particulate matter, all of which can contribute to or aggravate respiratory ailments. According to the EPA, Greene, Clark and Montgomery counties are already "out of attainment" for particulate matter, which means that levels are above the allowable limits. Particulate matter is special in the way it bypasses the body's usual filters and goes directly into the bloodstream.



Mike Henry, Environmental Manager of Cemex, contends that the company would indeed like to install a CEM.

"It would give us better information on how to control our burning," he said. "I understand where GEC is coming from wanting CEMs. The thing is, CEMs are not a panacea. They don't tell you everything."

Henry continues by saying that "the technology is still being developed/refined for the particulate matter CEM. Our Title V permit requires that we install a particulate matter CEM when USEPA approves the requirement for it, and I would estimate that will happen in the next 1-2 years."

The plant currently relies on opacity monitors to detect harmful emissions. Opacity monitors measure the reflection of light by large particles in the stack. Henry maintains that the plant achieves "99.999% combustion efficiency. If the combustion were less efficient, we would be putting undesirable fuel constituents into our product and preheater tower, which could cause us real problems both from quality and safety standpoints."

At a recent village meeting in Yellow Springs, residents listened to a presentation given by Wright State environmental chemist Dr. Audrey McGowin on the environmental impact of tire-burning in cement kilns. According to Dr. McGowin, it is the smallest particles that can't be detected by opacity monitors, such as particulate matter and dioxin-furans, that are the most potentially dangerous to human health, though Henry points out that Cemex's stack test results for dioxin-furans were 22 times below the federal regulatory limit.

But GEC feels that it is misleading to extrapolate data on TDF emissions from other cement kilns around the country, as Cemex has done to weight their argument that tire burning within the kiln will be perfectly safe. According to McGowin, cement kiln emissions are hugely dependent on individual kiln characteristics and

operating conditions. Shutdowns and malfunctions occur regularly in most kilns - Henry admits they have at least two shutdowns per month - during which time emissions can vary greatly. Cemex recorded 40 shutdowns during 2005. However, Henry said that, in the context of the cement industry, this is common, and that they try to eliminate shutdowns as much as possible due to the expense. He reassures that "the first action that automatically occurs is fuel shutoff to the kiln."

Cemex is currently in violation of its Title V license to pollute. On March 31, 2005, EPA Region 5 issued a Notice of Violation under the Clean Air Act to Cemex for violating Prevention of Significant Deterioration regulations for sulfur dioxide, nitrogen oxides and particulate matter. Cemex has appealed the violation. According to Henry, the EPA was looking at efficiency improvements the plant made - changing fans and generally improving the process.

"They think because we did that we also increased our emissions," he said. "We were hand-in-hand with RAPCA with everything we did. It's kind of like doing your income taxes and, ten years later, finding out we did it wrong." He says the ball is now in their court.

GEC hopes to use the fact that Cemex has an outstanding Title V violation to prevent the company from gaining approval to start using TDF. At the same time, Cemex is hoping to obtain permission from the EPA to use TDF, notwithstanding the unresolved violation.

According to Dr. McGowin, "Cemex is a major contributor to PM2.5 and ozone pollution in the area. Curbing pollution from Cemex, especially nitrogen oxides and VOCs (volatile organic compounds, which cause ozone to form in the air) and particulate matter will go a long way toward helping Greene County, and possibly Clark and Montgomery Counties, reach attainment."

Henry is optimistic that Cemex can burn tires safely. He refers to the company's plant in Alliance, Colorado, where the Agency for Toxic Substances and Disease Registry just conducted a study on emissions from TDF.

"They did a health risk assessment based on the levels they were seeing during the stack testing, and they concluded that there was no significant health risk. But we have to demonstrate that for this kiln."

Not good enough, according to Dr. McGowin. "The main problem, as I see it, is that Cemex is proposing to do the work of a hazardous waste incinerator without all of the pollution controls and monitors that are required of incinerators and industrial boilers.

Regardless of whether Cemex receives permission to burn tires, it seems that it is incumbent upon residents to investigate safety standards. According to the Ohio Environmental Council, "Ohio's power plants are some of the dirtiest in the nation. Because all of these plants were planned or constructed prior to 1973, they are not required to follow reduced emission standards set up by the Clean Air Act of 1970." Which already makes our air just about the dirtiest in the nation, even without Cemex burning tires.

Reach DCP freelance writer Holly Hudson at contactus@daytoncitypaper.com