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Cleansing the Air at the Expense of Waterways

By **CHARLES DUHIGG**

MASONTOWN, Pa. — For years, residents here complained about the yellow smoke pouring from the tall chimneys of the nearby **coal**-fired power plant, which left a film on their cars and pebbles of coal waste in their yards. Five states — including New York and New Jersey — sued the plant's owner, **Allegheny Energy**, claiming the air pollution was causing **respiratory diseases** and acid rain.

So three years ago, when Allegheny Energy decided to install scrubbers to clean the plant's air emissions, environmentalists were overjoyed. The technology would spray water and chemicals through the plant's chimneys, trapping more than 150,000 tons of pollutants each year before they escaped into the sky.

But the cleaner air has come at a cost. Each day since the equipment was switched on in June, the company has dumped tens of thousands of gallons of wastewater containing chemicals from the scrubbing process into the Monongahela River, which provides drinking water to 350,000 people and flows into Pittsburgh, 40 miles to the north.

“It's like they decided to spare us having to breathe in these poisons, but now we have to drink them instead,” said Philip Coleman, who lives about 15 miles from the plant and has asked a state judge to toughen the facility's pollution regulations. “We can't escape.” Even as a growing number of coal-burning power plants around the nation have moved to reduce their air emissions, many of them are creating another problem: water pollution. Power plants are the nation's biggest producer of toxic waste, surpassing industries like plastic and paint manufacturing and chemical plants, according to a New York Times analysis of **Environmental Protection Agency** data.

Much power plant waste once went into the sky, but because of toughened air pollution laws, it now often goes into lakes and rivers, or into landfills that have leaked into nearby groundwater, say regulators and environmentalists.

Officials at the plant here in southwest Pennsylvania — named Hatfield's Ferry — say it does not pose any health or environmental risks because they have installed equipment to limit the toxins the facility releases into the Monongahela River and elsewhere.

But as the number of scrubbers around the nation increases, environmentalists — including those in Pennsylvania — have become worried. The Environmental Protection

Agency projects that by next year, roughly 50 percent of coal-generated electricity in the United States will come from plants that use scrubbers or similar technologies, creating vast new sources of wastewater.

Yet no federal regulations specifically govern the disposal of power plant discharges into waterways or landfills. Some regulators have used laws like the Clean Water Act to combat such pollution. But those laws can prove inadequate, say regulators, because they do not mandate limits on the most dangerous chemicals in power plant waste, like arsenic and lead.

For instance, only one in 43 power plants and other electric utilities across the nation must limit how much barium they dump into nearby waterways, according to a Times analysis of E.P.A. records. Barium, which is commonly found in power plant waste and scrubber wastewater, has been linked to heart problems and diseases in other organs.

Even when power plant emissions are regulated by the Clean Water Act, plants have often violated that law without paying fines or facing other penalties. Ninety percent of 313 coal-fired power plants that have violated the Clean Water Act since 2004 were not fined or otherwise sanctioned by federal or state regulators, according to a Times analysis of Environmental Protection Agency records. (An interactive [database of power plant violations](#) around the nation is available at www.nytimes.com/coalplants.)

Fines for Plants Modest

Other plants have paid only modest fines. For instance, Hatfield's Ferry has violated the Clean Water Act 33 times since 2006. For those violations, the company paid less than \$26,000. During that same period, the plant's parent company earned \$1.1 billion.

"We know that coal waste is so dangerous that we don't want it in the air, and that's why we've told power plants they have to install scrubbers," said Senator [Barbara Boxer](#), the California Democrat who is chairwoman of the Senate Committee on Environment and Public Works. "So why are they dumping the same waste into people's water?"

Though the Environmental Protection Agency promised earlier this decade to consider new regulations on power plant waste — and reiterated that pledge after a Tennessee dam break sent 1.1 billion gallons of coal waste into farms and homes last year — federal regulators have yet to issue any major new rules.

One reason is that some state governments have long fought new federal regulations, often at the behest of energy executives, say environmentalists and regulators.

The counties surrounding Hatfield's Ferry, which are home to multiple universities, are an example of what hangs in the balance as this debate plays out.

Last year, when Hatfield's Ferry asked the state for permission to dump scrubber wastewater into the Monongahela River, the Pennsylvania Department of Environmental Protection approved the request with proposed limits on some chemicals.

But state officials placed no limits on water discharges of arsenic, aluminum, boron, chromium, manganese, nickel or other chemicals that have been linked to health risks, all of which have been detected in the plant's wastewater samples, according to state documents.

Records show, and company officials concede, that Hatfield's Ferry is already dumping scrubber wastewater into the Monongahela that violates the state's few proposed pollution rules. Moreover, those rules have been suspended until a judge decides on the plant's appeal of the proposed limits.

"You can get used to the plant, and the noise and soot on your cars," said Father Rodney Torbic, the priest at the St. George Serbian Orthodox Church, across the road from Hatfield's Ferry. "But I see people suffering every day because of this pollution."

Officials at Hatfield's Ferry say there is no reason for residents to be concerned. They say that lawsuits against the plant are without merit, and that they have installed a \$25 million water treatment plant that removes many of the toxic particles and solids from scrubber wastewater. The solids are put into a 106-acre landfill that contains a synthetic liner to prevent leaks.

Officials say that the plant's pollution does not pose any risk. Limits on arsenic, aluminum, barium, boron, cadmium, chromium, manganese and nickel are not appropriate, the company wrote in a statement, because the plant's wastewater is not likely to cause the Monongahela River to exceed safety levels for those contaminants.

"Allegheny has installed state-of-the-art scrubbers, state-of-the-art wastewater treatment, and state-of-the-art synthetic liners," the company wrote in a statement. "We operate to be in compliance with all environmental laws and will continue to do so."

The plant's water treatment facility, however, does not remove all dissolved metals and chemicals, many of which go into the river, executives concede. An analysis of records from other plants with scrubbers indicates that such wastewater often contains high concentrations of dissolved arsenic, barium, boron, iron, manganese, cadmium,

magnesium and other heavy metals that have been shown to contribute to **cancer**, organ failures and other diseases. Company officials say the emissions by the plant will not pose health risks, because they will be diluted in the river.

Though synthetic liners are generally considered effective at preventing leaks, environmentalists note that the Hatfield's Ferry landfill is less than a mile uphill from the river, and that over time, other types of liners have proven less reliable than initially hoped.

The Environmental Protection Agency, in a **statement last month**, said it planned to revise standards for water discharges from coal-fired power plants like Hatfield's Ferry. Agency studies have concluded that "current regulations, which were issued in 1982, have not kept pace with changes that have occurred in the electric power industry," officials wrote. But some environmentalists and lawmakers say that such rules will not be enough, and that new laws are needed that force plants to use more expensive technologies that essentially eliminate toxic discharges.

Cleaning Up Pollution

"It's really important to set a precedent that tells power plants that they need to genuinely clean up pollution, rather than just shift it from the air to the water," said Abigail Dillen, a lawyer with the law firm Earthjustice, which represents two advocacy organizations, the Environmental Integrity Project and the Citizens Coal Council, in asking a Pennsylvania court to toughen regulations on Hatfield's Ferry.

Ms. Dillen, like other environmentalists, has urged courts and lawmakers to force plants to adopt "zero discharge" treatment facilities, which are more expensive but can eliminate most pollution.

State officials say they have established appropriate water pollution limits for Hatfield's Ferry, and have strict standards for landfill disposal.

"We asked the plant for estimates on how much of various pollutants they are likely to emit, and based on those estimates, we set limits that are protective of the Monongahela," said Ron Schwartz, a state environmental official. "We have asked them to monitor some chemicals, including arsenic, and if levels grow too high, we may intervene."

However, environmental groups have argued in court documents and interviews that Hatfield's Ferry probably will emit dangerous chemicals, and that they fear the state is unlikely to intervene.

Similar problems have emerged elsewhere. Twenty-one power plants in 10 states, including Alabama, Kentucky, North Carolina and Ohio, have dumped arsenic into rivers or other waters at concentrations as much as 18 times the federal drinking water standard, according to a Times analysis of E.P.A. data.

In Florida, Georgia, Illinois, Indiana, Maryland, North Carolina, Ohio, Wisconsin and elsewhere, power plants have dumped other chemicals at dangerous concentrations. Few of those plants have ever been sanctioned for those emissions, nor were their discharge permits altered to prevent future pollution.

Records indicate that power plant landfills and other disposal practices have polluted groundwater in more than a dozen states, contaminating the water in some towns with toxic chemicals. A 2007 report published by the E.P.A. suggested that people living near some power plant landfills faced a cancer risk 2,000 times higher than federal health standards.

Lobbyists Block Controls

In 2000, Environmental Protection Agency officials tried to issue stricter controls on power plant waste. But a lobbying campaign by the coal and power industries, as well as public officials in 13 states, blocked the effort. In 2008 alone, according to campaign finance reports, power companies donated \$20 million to the political campaigns of federal lawmakers, almost evenly divided between Democrats and Republicans.

In interviews, E.P.A. officials said that toughening pollution rules for power plants was among their top priorities. Last month, the agency announced it was moving forward on new rules regulating greenhouse gas emissions from hundreds of power plants and other large industrial facilities. [Lisa P. Jackson](#), who was confirmed to head the agency in January, has said she would determine by the end of the year whether certain power plant byproducts should be treated as hazardous waste, which would subject them to tougher regulations.

But for now, there are no new rules on power plant waste. And many states are trying to dissuade Ms. Jackson from creating new regulations, according to state and federal regulators, because they worry that new rules will burden overworked regulators, and because power plants have pressured local politicians to fight greater regulation.

For instance, Pennsylvania has opposed designating the waste from Hatfield's Ferry and other power plants as hazardous. In a statement, the Department of Environmental Protection said the state had "sufficient state and federal laws and regulations at our

disposal to control wastewater discharges at levels protective of the environment and public health.”

But residents living near power plants disagree.

“Americans want cheap electricity, but those of us who live around power plants are the ones who have to pay for it,” Mr. Coleman said. “It’s like being in the third world.”

Karl Russell contributed reporting.