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Ethanol plants among Iowa's polluters

The rapid growth of the industry has resulted in a 'whole host' of violations.

PERRY BEEMAN
REGISTER STAFF WRITER

Ethanol is supposed to be easy on the environment, but the plants that make the corn-based, clean-burning fuel have fouled Iowa's air and water, a Des Moines Sunday Register investigation has found.

"When it was ramping up, it was not a pretty sight," said Wayne Gieselman, the Iowa Department of Natural Resources' environmental-protection chief.

Internal documents from the natural resources department, obtained by the Register, show that a team of 18 department employees met in late June to discuss how to deal with a range of environmental problems surrounding the expansion of Iowa's \$500 million-a-year ethanol industry.

The pollution violations are varied and in some cases have resulted in significant fines.

Iowa plants - which produce a third of the nation's ethanol supply - have sent syrup, batches of bad ethanol and sewage into streams. As the pollutants decomposed, the waters lost oxygen, threatening fish.

The facilities emitted so much formaldehyde and toluene into the air that the U.S. Environmental Protection Agency forced several large companies to install new equipment. Cargill Inc. on Sept. 1 agreed to spend \$130 million to cut air pollution at ethanol and other processing plants in Iowa and 12 other states under an agreement with federal officials.

A plant in Ashton was built on a floodplain without a permit. Several plants had crews that burned construction rubble outdoors, which is illegal, inspectors said. Many have sent dust from gravel and corn kernels wafting onto neighbors' cars.

Some plants were built without required construction permits.

"We've had a whole host of notices of violations," said environmental inspector Ken Hassenius of the DNR's regional office in Spencer.

Gieselman, the environmental protection chief, said many of the violations occur at smaller plants.

"These are often a group of farmers who got together and didn't realize they were managing a pretty big operation," he said.

Quad County Corn Processors in Galva paid two \$10,000 fines primarily because of excess air

The issue

Iowa's 17 ethanol plants — which produce a corn-based fuel trumpeted as less-polluting than regular gasoline — have contaminated the state's rivers and air. At times, developers built plants without the required state permits designed to limit pollution. State officials learned about some of the new plants by reading newspapers.

emissions. Siouxland Energy and Livestock Cooperative in Sioux Center paid \$10,000 for failing to get required air permits and for excess sewage pollution. It also had a 1,000-gallon syrup spill that was not immediately reported to the state.

Other plants got notices from the state demanding improvements, testing and documentation to make sure they weren't polluting more than allowed by state law, Gieselman said.

Violations a sign of a growing industry

Iowa has 17 ethanol plants, with 10 more either planned or under construction, said Lucy Norton of the Iowa Renewable Fuels Association. The new plants will produce 500 million gallons a year on top of the current production of 1.1 billion gallons.

Mike Jerke, general manager at Quad County Corn Processors, said the violations were signs of growing pains in an industry that has grown rapidly as environmental regulators tried to keep up. He said plant operators grasp the irony of environmental violations in a business that is supposed to help improve air quality.

"The folks in the industry by nature want to do the right thing," said Jerke, immediate past president of the Iowa Renewable Fuels Association. "Everybody is aware that we are in an industry that is providing an alternative to oil and gas, that is renewable and from corn grown here. People definitely hold onto the standard of wanting to be in compliance."

So why weren't they in compliance?

Jerke said no one, including the state, realized when the ethanol industry began to take off in 2002 that emissions of potentially cancer-causing chemicals would be so high until a Minnesota report found trouble. State inspectors agreed.

After 2002, the industry agreed to install air pollution equipment to cut emissions by 90 percent, Jerke said.

"We contacted every ethanol plant that was operating after that," said Catharine Fitzsimmons, the state's top air-quality official. Compliance has improved, she said.

State inspectors try to keep up

Gieselman said inspectors discovered plant construction contractors were telling farmers the plants wouldn't discharge into waterways.

"They do," Gieselman said. The state has forced many of the plants to install holding ponds so the pollutants decompose or settle out before the water flows into streams used by fishing enthusiasts, canoeists and thirsty livestock.

However, with plants now doubling capacity and new water regulations clamping down on discharges into streams, the department expects plenty of work in coming years, said Gieselman.

The state has scrambled to keep up. Ethanol plant backers like to keep their plans secret for competitive reasons until long into the process. Chuck Corell of the state's water quality staff said that means the state often learns of new plants through newspaper articles.

"We are not finding out about these until plants are under construction or almost done," Corell said.

Plants that need air quality construction permits have to apply before construction, but

sewage permits are required only six months before operation starts.

Corell said the plants have dumped sewage that contained chloride, copper and other wastes that could be trouble for fish and plants. The problem: "There really isn't an economical way to get the stuff out of the water," he said.

Proposed water rules would affect plants

Hessenius, the environmental protection worker in northwest Iowa, said the pollution was strong enough to kill fish at times, although he doesn't know of any specific fish kills caused by ethanol plants. That may be because the streams were chronically polluted and didn't have any fish nearby, he said.

Four of the five largest ethanol plants in the northwest corner of the state had "significant violations," Hessenius said. A state inspector reported that a creek next to Siouxland Energy and Livestock Co-op in Sioux Center was milky and smelled like sewage. Otter Creek Ethanol LLC in Ashton was built in a flood plain, and the owners were told to build a levee or dike.

Jerke, the Galva plant manager, said one of the challenges is deciding what the rules are in the first place.

"The regulations themselves are often open to interpretation," he said, adding that those interpretations can vary among the state's regional environmental protection offices.

"It's a learning curve we are all going through," Jerke said. "We're working together as we go through this huge expansion."

More trouble will come if the state's proposed new water quality standards are approved, Corell said.

"My concern is that these plants favor remote locations and often discharge into small streams, and in some cases dry streams," Corell said.

The new rules would protect streams based on how much life they could have, rather than protecting waters based on what seemed reasonable to achieve under local conditions and environmental threats.

"In the past, those small streams didn't get the protection that permanent streams did," Corell said. "Now they will."

The new rules would protect small streams now getting sewage from the plants, plus streams next to new plant sites. The ethanol plants would be among the facilities that would have to sharply cut pollution going into the streams.

Jim Stricker, a state environmental inspector based in Des Moines, said the ethanol industry isn't the only seemingly environmentally friendly one to run afoul of state regulations. So have recycling plants and compost operations. "It happens all the time," Stricker said.

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