

Reporter's Note: Ken Ward, Jr. is an award-winning journalist in West Virginia. He has covered the PFOA issue there extensively. His reports follow, and note the term "C8" is used instead of PFOA. They are different names for the same chemical.

I asked DuPont spokesman Dan Turner if the company ever disputed the reporting. Turner said he has "taken issue" with the story about DuPont's Scientific Advisory Board disputing the company's statement, but has never asked for a retraction or correction. Ken emailed these stories to one of my editors.

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Headline: WOOD WATER WOES MAY BE WORSE CONTAMINATION MAY BE MORE HARMFUL THAN DUPONT SAYS, RECORDS SHOW

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Last week, DuPont Co. officials announced that they would replace drinking water for all Parkersburg-area residents whose water contains more than 14 parts per billion of a mysterious chemical called C-8.

But public records and DuPont's own studies indicate that much smaller concentrations of C-8 than that could cause a variety of serious health problems.

For more than a decade, internal DuPont policy has mandated a "community exposure guideline," or CEG, of 1 part per billion, according to documents on file with the federal Environmental Protection Agency and the state Department of Environmental Protection.

C-8 is another name for ammonium perfluorooctanoate. At its Washington Works factory outside Parkersburg, DuPont uses C-8 to make polymers that are later used in the production of Teflon.

Last November, state and federal agencies formed a team to investigate concerns that C-8 from Washington Works had polluted water supplies in Wood County and across the river in Ohio.

In a new deal with federal regulators, DuPont said Tuesday it would provide a new water source for anyone whose water contained more than 14 parts per billion of the C-8.

Concentrations of C-8 greater than 14 parts per billion "may present an imminent and substantial endangerment" to public health, according to a consent order signed by DuPont and the EPA.

EPA based that concentration on a study performed for DuPont by ENVIRON International Corp., the federal agency's consent order said.

The report, completed in January, does not mention the company's guideline of 1 part per billion for C-8.

C-8 has been found in public wells in concentrations ranging from 0.8 parts per billion to 7.7 parts per billion, according to EPA records. C-8 has been found in water supplies that serve more than 20,000 people in the Wood County area, court records show.

Today, DuPont still maintains its 1 part per billion guideline for C-8.

Company officials said last week that doesn't mean that levels greater than 1 part per billion are dangerous.

"We believe that number is safe," said Robert Rickard, director of DuPont's Haskell Laboratory of Industrial Toxicology.

"We're not saying that above that number is not safe," Rickard said Thursday. "We don't know what the number is that might not be safe, because we've never had any adverse health effects from C-8."

Actually, DuPont has evidence that exposure to even very small amounts of C-8 is hazardous, according to documents filed as part of a lawsuit over water contamination from the Washington Works plant.

On Wednesday, lawyers for Jack W. Leach and other residents said that DuPont had "confirmed by at least 1961 that C-8 was toxic in animals and caused observable changes in certain organ functions."

Citing internal DuPont records dating back to 1978, the residents' lawyers said that DuPont was "disturbed" that tests revealed that C-8 might be causing "toxic" effects among some of the Washington Works employees.

"DuPont decided that this new toxicity information would not, however, be disclosed outside the company except 'on a need to know basis' and that DuPont would not 'be informing the appropriate regulatory agencies of this situation,' " the residents' lawyers told Wood County Circuit Judge George W. Hill in a legal brief.

In 1982, DuPont's director of employee relations recommended to management that all "available steps be taken to reduce this [C-8] exposure."

Among other things, all "employees, not just Teflon area workers, are exposed" and "there is obviously great potential for current or future exposure of members of the local community from emissions leaving the plant perimeter," the director said, according to court records filed in Wood County last week.

The residents are represented by the Charleston firms of Hill, Peterson, Carper, Bee & Deitzler and Winter, Johnson & Hill, and the Cincinnati firm Taft, Stettinus & Hollister.

"DuPont has taken steps to purposely and intentionally conceal from the public the fact that C-8 has been detected in the human drinking water supplies at levels exceeding DuPont's 1 ppb CEG for C-8 in drinking water," the lawsuit alleges.

DuPont officials and EPA representatives say that the company's internal CEG is not designed to mean the same thing as the "screening level" of 14 parts per billion EPA agreed to for well water replacement.

"It is not a health-based or safety-based limit," said Dawn Jackson, a public relations spokeswoman at the Washington Works plant. "It is an internal management tool. It is just a signal to the company to take a look at a set of circumstances and determine whether anything should be done."

However, documents filed with EPA show that DuPont and its Haskell lab defined a community exposure guideline this way: "The CEG assumes a 24-hour lifetime exposure by all, including the most sensitive individuals, in an exposed community population. Exposure above the CEG will not necessarily result in any adverse effects. Where data indicates that the CEG may be approached or exceeded, Haskell, the appropriate Business and Legal will evaluate what action, if any should be taken. It is the company's intent to maintain exposure below the CEG."

Settlement

In August 2001, DuPont settled out of court a case brought by the Winter and Taft firm.

Wilber and Sandra Tennant alleged that C-8 pollution made them sick and killed hundreds of their cattle.

Before the case was settled, Rob Bilott, one of the Tennants' lawyers, asked EPA in a letter to "immediately cease all manufacturing activities" involving C-8. Bilott's letter outlined the history of DuPont's involvement with studies on C-8's potential health effects.

After the letter was written, DuPont lawyer John Tinney sought a court order to block Bilott and other plaintiffs' lawyers from discussing the C-8 issue publicly. In court papers, Tinney complained that Bilott's letter to EPA "could easily reach the mass media." Such publicity, Tinney said, "would result in a bias against DuPont at the trial of this matter."

U.S. District Judge Joseph R. Goodwin refused to gag Bilott and the other lawyers.

No EPA regulation

Despite its dangers, C-8 is not among the chemicals that EPA or other federal agencies regulates. There are no formal exposure limits or pollution restrictions. Of the thousands of chemicals used in modern society, only a few hundred are actually regulated.

In November 2001, the Wise administration signed a C-8 agreement with DuPont. Officials from DEP and the state Department of Health and Human Resources would work with the company to study C-8.

"The public needs assurance as to the safety of their environment," DEP General Counsel Bill Adams said at the time. "This order will go a long way toward giving people that assurance."

DEP Secretary Michael Callaghan put his newly hired science adviser, Dee Ann Staats, in charge of the study project. Staats did not return phone calls last week.

Since that November agreement, officials in West Virginia and Ohio have expanded their tests of public water supplies for C-8 to a 60-mile stretch along the Ohio River.

Starting as early as last week, tests from 137 private wells downstream from the DuPont plant were to be mailed to residents.

DuPont public relations officials have launched a Web site they say provides plant neighbors with solid information about the C-8 issue.

"As a longtime member of the Mid-Ohio Valley community, DuPont is dedicated to sharing with other community residents important information about its operations," says the site, www.c-8inform.com/.

Under the heading, "Quick C-8 Facts," the site says, "Although existing data do not show an association between C-8 exposure and adverse human health effects, DuPont is cooperating with federal agencies in their work to agree on human health-based screening levels for C-8."

In its consent order with DuPont, EPA disagreed.

"Studies performed by DuPont and Minnesota Manufacturing Corporation (a manufacturer of C-8)("3M") have determined that C-8 in sufficient doses, i.e., considering both amount and duration of exposure, is toxic to

animals through ingestion, inhalation and dermal contact," the consent order said.

"Studies have also found that C-8 is persistent in humans and the environment. EPA is conducting a preliminary hazard assessment of C-8 under the Toxic Substances Control Act."

EPA Regional Administrator Don Welsh signed that consent order on March 7. Five days later, EPA issued a news release to announce the move.

"This consent agreement is a proactive approach involving the cooperation of the state and federal governments, and private industry to ensure residents a safe drinking water supply," Welsh said in the release.

Under the EPA consent order, DuPont agreed to provide a temporary, new water supply for anyone whose supply is found to have concentrations of C-8 greater than 14 parts per billion.

DuPont agreed to provide a new, permanent water supply for anyone whose water is found to have levels of C-8 greater than the "screening level" developed under DuPont's separate deal with the state DEP.

Under the DEP agreement, DuPont will help state and federal regulators develop that screening level. The screening level is defined as "the concentration in a specific media such as air, water, or soil, that is likely to be without an appreciable risk of deleterious effects during a lifetime in the human population."

In an interview last week, EPA officials said they just don't know how much C-8 is dangerous.

"It basically isn't a regulated chemical," said Karen Johnson, chief of the safe drinking water branch at EPA's regional office in Philadelphia. "So we don't have a lot of information about it."

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Headline: DUPONT'S C8 CONTAMINATION WIDESPREAD, EPA SAYS
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In June 1984, officials from DuPont Co. put together a list of sampling results from drinking water near the company's Parkersburg chemical plant. The list, called "Update on C8 in water samples," was marked "personal and confidential."

A March sample from Washington showed 1.2 parts per billion. A June sample from Lubeck found 1.5 parts per billion.

Over the next few years, DuPont found similar concentrations of C8, a chemical it had used for decades to make Teflon products, in water supplies downstream from its Washington Works plant.

Along the way, in June 1991, DuPont had adopted a "Community Exposure Guideline" for C8 of 1.0 parts per billion. This guideline was set at the level "expected to be without any effect" on people who are exposed.

Now, after years of inaction, federal regulators have filed a major new pollution suit against DuPont, in part over these test results.

When they filed the suit against DuPont on July 8, U.S. Environmental Protection Agency officials alleged that the chemical giant has caused "widespread contamination" of drinking-water supplies near its Parkersburg plant.

EPA officials also alleged that this pollution has created a "substantial risk of injury to health or the environment."

In doing so, EPA has for the first time agreed with Wood County residents who contend that DuPont has poisoned their water with its controversial chemical.

EPA also threw its support behind charges that DuPont for more than 20 years hid key information about the dangers of C8 from the government and the public.

In a 31-page complaint, EPA said that DuPont "fails or refuses to recognize that its C8 contamination in public drinking water is ongoing, that C8 contamination extends into people's homes, and that DuPont had never informed [EPA] of levels of C8 contamination of drinking water

greater than three times higher than DuPont's" own limits.

Specifically, EPA officials allege that DuPont never told the government that it had water tests that showed C8 in residential supplies in concentrations greater than the company's internal limit.

Also, EPA alleges that DuPont withheld for more than 20 years the results of a test that showed that at least one pregnant worker from the Parkersburg plant had transferred the chemical from her body to her fetus.

That information, EPA said, supported animal tests that showed that C8 "moves across the placental barrier." EPA said that agency efforts to understand C8's health effects "might have been more expeditious" if DuPont had submitted the human test results back in 1981.

Further, EPA alleges that DuPont did not provide EPA with this information, even after the agency requested it under the terms of the company's hazardous waste permit.

The information at issue was not reported to EPA until a lawyer representing Parkersburg-area residents did so in March 2001.

DuPont has denied the allegations, and plans to fight the complaint and any monetary penalties that EPA eventually seeks.

"DuPont has provided substantial information to EPA supporting our conclusion that we have followed the law," said company lawyer Stacey Mobley. "We will take action to respond to the agency's complaint and will vigorously defend our position."

C8 is another name for perfluorooctanoate, and is also known as perfluorooctanoic acid, or PFOA.

At its Washington Works plant, Dupont has used C8 for more than 50 years in the production of Teflon.

For years, C8 - and DuPont's emissions of it - have been basically unregulated. But in the past few years, the chemical has come under increasing scrutiny.

In a class-action lawsuit, thousands of neighbors of DuPont's Washington plant allege that the company poisoned their air and drinking water with harmful levels of C8.

Trial in Wood Circuit Court is scheduled to begin in late September.

In September 2002, the EPA launched a "priority review" of C8 in response to studies that linked the chemical to developmental and reproductive problems, liver toxicity and cancer. The EPA repeatedly has delayed the release of results of that review.

Previously, DuPont has survived two regulatory reviews of C8 without major restrictions on its use or emissions of the chemicals.

In December 1996, DuPont agreed to pay \$200,000 in fines and upgrade its Dry Run Landfill to resolve complaints that pollution from the dump was killing area cattle and deer.

In November 2001, the Wise administration agreed to form a team that included DuPont representatives to study C8 and decide how much exposure is safe. Since then, the DEP has issued a series of reports stating that current levels of C8 exposure from the Parkersburg plant are not harmful.

This time, EPA said that it "is not proposing a specific [monetary] penalty at this time, but will do so at a later date."

The EPA complaint, filed under the Toxic Substances Control Act and the Resource Conservation and Recovery Act, gives DuPont 30 days to respond. The company can request a formal hearing to contest the allegations, or it can ask for an "informal settlement conference" with EPA officials.

Under federal law, DuPont could be fined more than \$300 million for the toxics reporting and hazardous waste violations cited in the EPA administrative complaint.

Last year, DuPont reported \$973 million in profits on \$27 billion in sales, according to filings with the U.S. Securities and Exchange Commission.

The Washington-based Environmental Working Group, which pushed for EPA to file the complaint, blasted the Bush administration for not immediately seeking a hefty fine.

"This is shaping up as another in a long series of industry-friendly environmental 'enforcement' actions by the Bush EPA," said group President Ken Cook. "This time, DuPont was caught in three serious violations of federal pollution laws. In the Bush administration, that automatically triggers the 'three strikes and we'll talk' policy."

Just days before issuing the complaint, EPA officials had told West Virginia regulators that they would seek "tens of millions of dollars" in fines.

"Everybody thought DuPont was in hot water with the Bush EPA, but instead it looks like they're sitting in the Jacuzzi," Cook said in a prepared statement.

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Headline: JUSTICES UNSEAL DUPONT C8 DOCUMENTS MEMOS DETAIL COMPANY LAWYERS' VIEW ON VULNERABILITY TO POLLUTION SUIT

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DuPont Co. lawyers worried that the company was "vulnerable" to a lawsuit over pollution of Wood County water supplies with the chemical C8, documents released Thursday showed.

In-house DuPont lawyer John R. Bowman warned that the company would "spend millions to defend these lawsuits and have the additional threat of punitive damages hanging over our head."

In a November 2000 memo, Bowman advocated DuPont "getting out in front and acting responsibly [to] undercut and reduce the potential for punitives."

Bowman wrote that he and another DuPont lawyer, Bernard J. Reilly, "have been unsuccessful in even engaging [company officials] in any meaningful discussion of the subject.

"Our story is not a good one," Bowman wrote. "We continued to increase our emissions into the river in spite of internal commitments to reduce or eliminate the release of this chemical into the community and the environment because of our concern about the bio-persistence of this chemical."

Bowman's memo was one of three internal DuPont documents unsealed Thursday by the state Supreme Court.

The records - including one called the "Win for DuPont" document - detail the views of company lawyers about DuPont's liability for C8 contamination of area water supplies.

DuPont had argued the documents were internal, but had been inadvertently released to lawyers for area residents.

On Thursday, justices voted 5-0 to unseal the documents.

In a prepared statement issued Thursday, DuPont lawyer Tom Flaherty said that the company was disappointed by the court's action.

"The documents in question offered individual opinions that do not

represent the opinions of DuPont," Flaherty said.

"DuPont is confident that the trial will provide an opportunity to rebut the claims and allegations made in this case with the facts and science," he said. "DuPont believes that once a jury hears those facts, they will conclude that C8 at trace levels found in the community does not harm the members of the community or the environment."

In his memo, Bowman said that DuPont should have sought to provide a new drinking water source for Lubeck, one of the first communities where C8 showed up in city water supplies.

Bowman said he talked to lawyers from Exxon and the firm Archer and Greiner about lawsuits over water contaminated with the gasoline additive MTBE.

"They told me that experience has told them it is less expensive and better to remediate or find clean drinking water for the plaintiffs than to fight these suits," Bowman wrote.

"I think we are more vulnerable than the MTBE defendants because many states have adopted a drinking water guideline for MTBE and it is not bio-persistent," he wrote. "My gut tells me the bio-persistence issue will kill us because of an overwhelming public attitude that anything bio-persistent is harmful."

In the "Win for DuPont" memo, a DuPont lawyer said that the company's goals were to "not create [the] impression that DuPont did harm to the environment" and to "keep [the] issue out of press as much as possible."

That memo listed the company's weaknesses as "permit exceedances," "chemicals in the groundwater and stream," and a letter in which the company promised to only dispose of "non-hazardous" materials in its Dry Run Landfill.

Also, the memo said that DuPont needed "background" research on U.S. District Judge Joseph R. Goodwin. At the time, Goodwin was hearing a related case over C8 exposure from the Dry Run dump.

At its Washington Works plant south of Parkersburg, DuPont has used C8 for more than 50 years in the production of Teflon. In their lawsuit against DuPont, residents alleged that the chemical giant has known for decades that C8 was harmful to humans, but concealed that knowledge from the public. Trial is scheduled to start in September.

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Headline: BOTH SIDES HOPE FOR ANSWERS ON C8
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PARKERSBURG - Joe Kiger had never heard of C8. He didn't know what PFOA was. He sure didn't know anything about ammonium perfluorooctanoate. Then, in October 2000, Kiger got a letter from his water company, the Lubeck Public Service District.

Lubeck officials warned that they had discovered C8 in the water they provided to Kiger's family and 8,000 other homes.

But they told customers not to worry. DuPont assured them that the water was safe, the letter said.

That wasn't good enough for Kiger.

"Curiosity got me," the former labor union official turned schoolteacher recalled last week. "I wanted to find out what this was all about."

Eventually, Kiger's curiosity led him to hire a lawyer. Kiger became one of the 13 named plaintiffs representing a now-estimated 80,000 people who alleged DuPont polluted their drinking water.

Last week, Kiger and other residents near DuPont's sprawling Washington Works plant south of Parkersburg got what they wanted - or at least their first big step in that direction.

On Feb. 28, a Wood County judge gave final approval to a \$107.6 million settlement.

Judge George W. Hill Jr. said that the class-action lawsuit against DuPont "certainly has served a good purpose to this community." As part of the settlement, DuPont will pay \$10 million or more to provide new equipment to remove most of the C8 from local drinking water supplies.

About \$5 million of DuPont's money will pay for an independent scientific team to figure out if C8 is harmful to humans. And, in a move dreamed up and insisted on by the residents' lawyers, up to \$70 million more will fund a first-of-its-kind, massive community health study.

In the end, supporters of the deal hope to find out not only if C8 can make people sick, but also if exposure to it can be tied to any ailments residents have already suffered.

"We want to know the answer," Kiger testified in a settlement hearing last week.

"I asked questions and time and time again couldn't get the answers," he said. "Now, we will find out."

On this one thing, DuPont's critics and company officials agree: Both want answers.

For its part, DuPont believes that the science study funded by the settlement will ultimately exonerate the company and its chemical. "At the end of the day, DuPont is a science company," said Laurence Janssen, one of the company's lawyers.

"We believe in science," Janssen said. "We want to put this issue to rest if we can, and we believe we can with this science panel."

An Unregulated Chemical

At its Washington Works plant, DuPont has used C8 for more than 50 years in the production of Teflon. The popular product is best known for its use on nonstick cookware, but it is also used in everything from waterproof clothing to stain-repellent carpet and ball-bearing lubricants.

In court documents, one DuPont executive testified that the company earns about \$200 million a year from products made with C8. For years, C8 - and DuPont's emissions of it into the air and water - have been basically unregulated. Residents downstream from the Washington Works plant complained to government agencies for years, but got little action.

In the last few years, C8 has come under increasing scrutiny. Last month, members of the EPA's Science Advisory Board urged the agency to elevate its cancer-causing classification for the chemical and do a more thorough review of the substance.

In a draft study, EPA had characterized C8 as a "suggestive" carcinogen. But advisory board members said that the evidence may indicate that the chemical is a "likely" carcinogen.

The Washington, D.C.-based Environmental Working Group said that EPA's draft study ignored evidence that links C8 to heart attacks, breast cancer, testicular cancer and other ailments.

In September 2002, EPA launched a "priority review" of C8's dangers, largely in response to new information about its toxicity that lawyers for Wood County residents uncovered as part of the lawsuit.

Last year, EPA also sued DuPont in a case that could prompt more than \$300 million in fines against the company. Based again on evidence uncovered by the residents' lawyers, EPA alleged that DuPont had illegally withheld data about potential dangers of C8 exposure.

DuPont is fighting that EPA suit, and is lobbying the agency seeking to have the federal study conclude C8 is not harmful.

'An imminent and substantial threat'

When he got the letter about his water, Joe Kiger called everybody he could think of - the county health department, the state DEP, the federal EPA.

"There was a chemical in our water - why was it there?" Kiger said he asked. "Nobody seemed to know. All I was being told was that it was an unregulated chemical."

Finally, someone from the EPA regional office in Philadelphia helped him a little.

The EPA official told Kiger he was going to send him some information. Kiger should read it, the official said, and then he would probably want to find himself a lawyer.

What the EPA official sent Kiger shocked him.

"I became very alarmed," Kiger said. He called Bilott and "That's what started this whole thing."

The EPA official had sent Kiger a copy of a March 6, 2001, letter that Cincinnati lawyer Rob Bilott had sent to more than a dozen state and federal government officials.

At the time, Bilott represented Wilbur and Sandra Tennant.

After repeatedly seeking help from regulators and getting no action, the Tennants had sued DuPont in 1999, alleging that the company's C8 pollution made them sick and killed hundreds of their cattle.

Bilott told EPA that lawyers for the Tennants had evidence that C8 from DuPont's facility "may pose an imminent and substantial threat to health or the environment."

Bilott urged EPA to join in the lawsuit against DuPont, and to force the company to "immediately cease all manufacturing activities" involving C8. Bilott outlined dozens of documents that, he argued, showed DuPont had known for years that C8 was harmful, but had hidden that information from regulators and the public.

After the letter was written, DuPont lawyer John Tinney sought a court order to block Bilott and other plaintiffs' lawyers from discussing the C8 issue publicly.

In court papers, Tinney complained that Bilott's letter to EPA "could easily reach the mass media." Such publicity, Tinney said, "would result in a bias against DuPont at the trial of this matter."

U.S. District Judge Joseph R. Goodwin refused to gag Bilott and the other lawyers. DuPont eventually settled the Tennants' lawsuit for an undisclosed amount of money.

Bilott and Tennants' other lawyers, though, continued to push state and federal agencies to do something about C8.

And, when Kiger called Bilott, the lawyers agreed to represent him and other residents who worried about the C8 in their water.

'No human health effects'

Throughout the case, and even with the settlement, DuPont continues to maintain that "no human health effects are known to be caused" by C8.

At last week's hearing, lawyers announced that the study of this issue - being conducted as part of the settlement - will be done by Tony Fletcher of the London School of Hygiene, David Savitz of the University of North Carolina School of Public Health, and Kyle Steenland of Emory University.

The panel will evaluate available scientific evidence to determine if there is a link between C8 exposure and any human disease, including birth defects.

Janssen said that initial results of the study should be completed within 12 to 15 months.

"Their main charge is to go with all deliberate speed, but no matter what, to do it right," Janssen said.

Plaintiffs' lawyer Larry Winter, who with Janssen picked the scientists, said that the study would be "thorough and unprecedented."
"There is a tremendous amount of interest in this process nationally and internationally," Winter told the judge.

While the three scientists are doing their study, other medical experts will be surveying the health of residents downstream from the DuPont plant.

Planning for that survey has already been going on for five months. Plaintiffs' lawyers advanced money out of their own pockets so that the project could get started before the settlement was finalized.

Dr. Paul Brooks, a physician and one of two former hospital administrators, said the survey would gather residents' medical histories and try to estimate potential C8 exposure.

Blood samples from residents who agree to that part of the survey will be screened in 50 or 60 ways. Tests will look for cancer markers, organ function and C8 levels.

Eventually, the survey should give some answers about whether residents with great C8 exposure are more or less likely to have suffered from various diseases.

Brooks hopes that most of the work can be done in about a year. No community health survey "of this magnitude" has ever been done anywhere before, Brooks said.

"It's important that we determine scientifically what effect C8 has had or will have in the future on the health status of those individuals who have been exposed," Brooks said.

More than that, Brooks said, the study will provide a wealth of information about other facets of the community's health. All of the results - without individual names or other identifying features - will be placed in the public domain.

"It's going to be an enormous amount of information," Brooks said. "I think it will be a gold mine [for health researchers]."

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VINCENT, Ohio - On Monday night, more than 200 people gathered in the steamy hot auditorium of Warren High School to find out if pollution from a DuPont Co. chemical plant is making them sick.

Dr. Edward Emmett of the University of Pennsylvania's School of Medicine delivered the good news: A landmark government-funded study found no link between C8 exposure and any illnesses. No connection to liver disease. No signs of kidney problems. No indication of thyroid maladies.

Still, Emmett recommended that residents near the DuPont Washington Works south of Parkersburg not drink water contaminated with the company's toxic Teflon ingredient.

If C8 isn't making people sick, why should people worry about drinking water polluted with it?

First, Emmett said, there were important limits to what his study examined. It did not consider whether C8 causes cancer or leads to development problems in children.

Second, Emmett said, absent more concrete information about those two issues, he believes residents should remain cautious.

"I think it's really prudent," Emmett said. "There is a difference between knowing something is harmful and being able to say that it's safe."

Emmett said that caution is especially important for children and older residents, who were found to have the highest concentrations of C8 in their blood.

"We can't explain all of the health effects, and I'm pretty concerned that the level is high in the very young," Emmett said.

"We may not be able to say it's harmful, but do we know it's safe? That's another thing," Emmett said. "We haven't seen any harm, but we can't say that this is safe."

The announcement of Emmett's findings was another significant chapter in the continuing controversy over C8 and DuPont's emissions of it.

The study is believed to be the first independent review of how C8 exposure might affect an entire community's health. Generally, previous studies - many funded by DuPont and other chemical makers and some by plaintiffs' lawyers - examined effects on plant workers and on laboratory rats.

C8 is another name for perfluorooctanoate, and is also known as perfluorooctanoic acid, or PFOA.

At the Washington Works plant, DuPont has used C8 for more than 50 years in the production of Teflon. The popular product is best known for its use on nonstick cookware, but C8 is also used in everything from waterproof clothing to stain-repellent carpet and ball-bearing lubricants.

For years, C8 and DuPont's emissions of it have basically been unregulated.

Fueled in large part by information uncovered by lawyers suing DuPont over C8 pollution, the U.S. Environmental Protection Agency has launched a priority review of the chemical's dangers. The EPA has also sued DuPont for allegedly hiding information about C8 toxicity, and the company is facing a criminal investigation for concealing data about the chemical's hazards.

Last August, DuPont agreed to pay more than \$107 million to settle the class-action suit on behalf of more than 50,000 current and former plant neighbors whose water was tainted with C8.

Much of the money will fund a detailed review by private scientists of C8's dangers and a landmark community health study in the Parkersburg area. The company has also offered to pay for new water treatment systems to remove C8 from local water supplies, and will pay for bottled water for the Little Hocking Water Association customers until the new treatment systems are installed.

Under the settlement, DuPont could be on the hook for another \$325 million in future medical monitoring if the studies find C8 could make people sick. On top of that, the company may also face additional lawsuits if residents actually get sick from C8 exposure.

In press releases and at last week's meeting, Emmett has taken great pains to emphasize that his work is not related to the legal wrangling over C8's potential dangers or DuPont's liability in releasing it into the environment.

Funded through a four-year grant from the National Institute of Environmental Health Sciences, the Emmett study is independent of any corporation, law firm or class-action lawsuit.

In his work Emmett sought to measure levels of C8 in the blood of Ohio residents who live across the river from the Parkersburg plant. He focused on four communities - Belpre, Little Hocking, Cutler and Vincent - that receive their drinking water from the Little Hocking Water Association. The survey examined blood samples and a variety of health information of 326 residents from 160 randomly chosen households.

Emmett also wanted to find out if most C8 exposure for humans came from drinking water or from the air they breathe. Finally, he sought to learn if this exposure put residents at a greater risk of getting sick.

Last month, Emmett reported in a news release that his work had found that residents who depend on C8-contaminated drinking water have 60 to 80 times more C8 in their blood than the general U.S. population.

The average American is believed to have about 5 parts per billion of C8 in his blood.

Residents studied by Emmett averaged about 340 parts per billion. The figures varied, depending on whether customers worked at DuPont, got water only from the Little Hocking system, and some other factors.

Emmett compared C8 blood levels in Little Hocking water customers who live upwind and downwind from the Washington Works plant. He found that the C8 levels were comparable. From that, he concluded that drinking water, not air emissions, is the most significant source of C8 exposure.

As part of his study, Emmett compared C8 levels in residents' blood to other blood tests commonly used to detect liver, kidney and thyroid diseases.

Emmett found no connection, a conclusion that was praised by DuPont officials and publicists who attended last week's meeting.

Bill Hopkins, the Washington Works plant manager, said that Emmett's results were "very consistent with what DuPont's own findings have been."

"We believe there are no known health effects, and that's what we heard here tonight," Hopkins told reporters after the meeting.

But Emmett said he found some things in his study that have him worried.

For example, Emmett found that residents who ate more locally grown fruits and vegetables had significantly higher concentrations of C8 in their blood.

"It went up as the number of servings increased," Emmett said.

Emmett said he is concerned because he cannot fully explain the finding.

"I wish I knew what was happening," he said. "Is the C8 in the fruit or vegetables, or is it in the cooking water, or does it have nothing to do with that?"

In response to Emmett's findings, the Washington-based Environmental Working Group, which has been following the C8 issue, published a "briefing memo" with its take on the study.

The group emphasized that Emmett "did not assess the most sensitive health effects linked to the Teflon chemical in lab studies - cancer and developmental harm."

Last year, a scientist working for lawyers suing DuPont found that people living near the Parkersburg plant had high rates of prostate cancer in men and cervical and uterine cancer in women. The study also found elevated rates of less common cancers such as non-Hodgkin's, leukemia and multiple myeloma.

And in late June, an EPA science advisory panel urged the agency, in a draft report, to list C8 as a "likely human carcinogen."

Emmett said that his study did not examine nearly enough people to properly consider C8's potential to cause cancer. He said that the larger health review launched as part of the lawsuit settlement should be large enough to look at the issue.

Last week, the private firm doing that health study said that 20,000 residents had signed up so far to take part. The firm, Brookmar, hopes that 60,000 to 80,000 eventually take part.

Until more detailed answers are available, Emmett said residents should seek alternate water sources - such as the bottled water DuPont agreed to fund for Little Hocking customers - until water treatment systems are installed to filter out the C8.

Emmett specifically advised parents not to use the polluted water to make infant formula and called his findings on children's blood levels "the exact opposite of what we would want to see from a public-health perspective."

Emmett's C8 findings highlight what critics say is a major weakness in the way the federal government regulates toxic chemicals.

In June, the Government Accountability Office reported that existing law provides only "limited assurance" that the 700 new chemical compounds entering the marketplace each year are safe.

"EPA does not routinely assess existing chemicals, has limited information on their health and environmental risks, and has issued few regulations controlling such chemicals," the GAO report said.

Two years ago, the Environmental Working Group issued its own report that urged Congress to require detailed testing to prove chemicals are safe before people are exposed to them.

"Industry must be required to prove the safety of a new chemical before it is put on the market," the report said.

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Headline: DUPONT LAWYER EDITED DEP'S C8 RELEASES
Byline: **KEN** WARD JR.

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In early March 2002, state environmental regulators planned to warn Wood County residents that the toxic chemical C8 was spreading across the area through air emissions from DuPont Co.'s Parkersburg plant.

"It is increasingly likely that the chemical is being spread in several ways - in groundwater, in the soil and now by air," said a draft news release written by then-Department of Environmental Protection spokesman Andy Gallagher.

But the public never got that news. The DEP killed its release after complaints from a DuPont lawyer, according to records obtained under the federal Freedom of Information Act.

Last week, Gallagher confirmed in an interview that Dee Ann Staats, a toxicologist hired as the DEP's science adviser, insisted that DuPont review, edit and approve all C8-related statements issued by the state.

"I thought it was a strange policy," Gallagher said. "I fought against that, because I thought we were withholding information."

In the case of the March 2002 news release, the DEP was to announce plans to expand testing of water supplies around the DuPont plant. DEP officials felt that the testing was needed to map contamination of drinking water with C8.

At the time, agency officials were telling Gallagher that they were also becoming worried that C8 was spreading through air emissions.

"Water testing area expanded around Parkersburg DuPont plant as concern over airborne spread of chemical grows," said the headline on Gallagher's news release.

After DuPont objected, Gallagher first edited all mention of air emissions from the release. Then, he scrapped it altogether - because of DuPont's complaints, according to the records.

In a sworn statement filed with the U.S. Environmental Protection Agency, Gallagher explained that DuPont regularly reviewed and edited DEP news releases concerning C8 issues.

Jessica Greathouse, the DEP's current communications chief, said that it was wrong for DuPont to be allowed to edit a government agency's press releases. She said the practice no longer occurs.

"Under my watch, it's not appropriate," Greathouse said. "Press releases written by me or anyone on my staff are under our editorial control."

Gallagher, a former Gazette and Associated Press reporter, was the DEP's top communications official from 1998 until 2002. He left the agency after making negative statements about Massey Energy Co. in the entertainment newspaper Graffiti.

Gallagher discussed details of DuPont's involvement in DEP press releases in a sworn statement in the class-action lawsuit filed by Wood County residents whose drinking water has been contaminated with C8. Gallagher was questioned by lawyers for the residents and lawyers for DuPont during a May 2004 deposition in Charleston.

In February, EPA lawyers filed Gallagher's statement and related documents with an administrative law judge as part of a suit that alleges DuPont covered up information about C8's dangers.

The Sunday Gazette-Mail obtained the records from the EPA through a FOIA request.

C8, or ammonium perfluorooctanoate, has been used by DuPont since 1951 at its Washington Works plant south of Parkersburg.

Since that time, C8 - and DuPont's emissions of it - have essentially been unregulated by state and federal agencies.

Fueled in large part by internal DuPont documents uncovered by lawyers for Wood County residents, the EPA began a detailed study of the chemical. DuPont also sued the EPA, for hiding information about C8's dangers. A federal grand jury also is investigating potential criminal violations by the company.

Previously, DuPont had been through two regulatory investigations of C8 without facing major restrictions on its use or emissions of the chemical.

In December 1996, DuPont agreed to pay \$200,000 in fines and upgrade its Dry Run landfill to resolve complaints that pollution from the dump was killing area cattle and deer.

That settlement included no limit on the amount of C8 that could be discharged from the landfill into nearby Dry Run Creek.

Currently, the state Environmental Quality Board is considering a DEP move to renew the landfill's permit for another five years - again with no limit on C8 emissions.

In November 2001, Gov. Bob Wise's administration agreed to form a team that included DuPont representatives to study C8 and decide how much exposure is safe. Since then, the DEP has issued a series of reports stating that current levels of C8 exposure from the Washington Works are not harmful.

In writing those reports, the DEP used teams of scientists that included DuPont representatives.

Lawyers for Wood County residents asked to have their own experts serve on the teams, but Staats and then-DEP Secretary Michael Callaghan refused.

In his sworn statement, Gallagher said that he told Staats it was a mistake not to have a citizen representative take part in the study.

"I was always looking to the sensitive nature of how it might be perceived by the public, how DEP was dealing with the issue, and I just thought it was a matter of fairness and balance that if we were going to have a company official on we should have somebody representing the public," Gallagher said in his statement.

Gallagher said that Staats "just did not want to upset the company." He said that she was "particularly sensitive" to any mention in news releases that C8 was being spread by air emissions.

"She excised that from every news release that I ever recall dealing with," Gallagher said. "She said that she didn't want that in there."

Gallagher said he tried to issue the March 2002 news release without getting prior approval from Staats and DuPont. Details of what happened next are included in e-mail messages attached as exhibits to Gallagher's sworn statement.

Someone from the DEP - it is not clear who - e-mailed a draft of it to a DuPont hydrologist, who forwarded it to various company officials, including Ann Bradley, a Spilman Thomas & Battle lawyer who represents DuPont. Company officials then moved to block the release from going out.

"I just spoke with Ann [Bradley], who reached Terry Headley and Andy Gallagher in the DEP public information officer," wrote Dawn Jackson, then a DuPont public relations official, in an e-mail message to other company representatives.

"The attached news release has been sent to the media," Jackson wrote. "Ann explained to Andy that releasing this kind of statement without input from Dr. Staats is unacceptable, stated that we had had this problem before with statements containing errors being released without Dr. Staats' approval, and asked that Andy Gallagher arrange a meeting with WVDEP Secretary Callaghan. Andy said that the Secretary is out of town, but he will set up something with his office when he returns."

Gallagher tried to edit the release to address DuPont's concerns, but the company was not satisfied.

"Ann Bradley, [DuPont official] Bernie Reilly and I conferenced briefly just a few minutes ago," Jackson wrote in an e-mail. "Ann had a chance to speak with Dr. Staats, the science adviser for the state consent order work, and she is furious that the press release was issued without her review. She agrees with the need to speak with Secretary Callaghan."

Jackson continued, "Also, Andy Gallagher called Ann back shortly before 6 p.m. to tell her that he had issued a notice to the AP wire service to pull the story that he had released earlier."

Jackson wrote that if DuPont received any media inquiries about the release, she would say, "We understand that the WVDEP has disavowed that statement, and it is appropriate that you contact them." She would then refer callers to Staats for any further comments.

Last week, Bradley said she did not recall specifics, but that the company "identified factual errors in press releases."

In Gallagher's deposition, DuPont lawyer Stephen Fennell asked about a May news release.

Bradley had reviewed it before it was issued. She corrected two misspellings of the full chemical name for C8, and suggested using the phrase "reduce exposure levels" instead of "remediate" to describe the requirements of the company's 2001 consent order with the DEP.

In an interview, Bradley said that she did not make a habit of editing the DEP's news releases.

"There may have been one or two press releases, but I don't recall it being a routine matter," Bradley said.

Before joining state government, DEP Secretary Stephanie Timmermeyer was a lawyer at Bradley's firm. Timmermeyer helped DuPont draft the 2001 consent order with the DEP, records show.

DEP officials say Timmermeyer does not get involved in C8 issues for the agency. No formal recusal arrangement has ever been put in writing.

In his deposition, Gallagher said that Timmermeyer once called him when she was still with the Spilman law firm and "asked me to change a news release."

"I don't even remember what the details were," Gallagher said. "I told her I would not, and we left it at that."

Through a spokeswoman, Timmermeyer said that she did not remember that incident.

"She does not recall having any conversation with Gallagher about press releases regarding DuPont, C8 or any subject," Greathouse said in an e-mail message.

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Headline: DUPONT PROPOSED, DROPPED '81 STUDY OF C8, BIRTH DEFECTS

Byline: KEN WARD JR.

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More than 20 years ago, the DuPont Co. found similar birth defects in two of eight children born to women who worked at the company's Parkersburg chemical plant.

A DuPont researcher said the number was "significantly greater" than the expected rate of birth defects in the general population.

In April 1981, the researcher proposed that DuPont do a detailed study to determine if exposure to the toxic chemical C8 was to blame.

Three months later, DuPont officials dropped the study, a former top corporate doctor has testified.

DuPont officials also decided not to report its preliminary findings to federal regulators, according to the testimony, obtained under the Freedom of Information Act.

Dr. Bruce Karrh, DuPont's former medical director, revealed the company's actions in a sworn statement in April 2004.

"To my knowledge, it was never reported to EPA, and, to my knowledge, I didn't ask anybody whether it was reported," Karrh said of the birth defects data.

Karrh was questioned for two days by lawyers for Wood County residents who sued DuPont over the contamination of their drinking water with C8.

C8 is another name for ammonium perfluorooctanoate, or PFOA. DuPont has used the chemical since 1951 at its Washington Works plant south of Parkersburg to make Teflon and similar products.

Since that time, C8 - and DuPont's emissions of it - essentially have been unregulated by state and federal agencies.

An EPA science advisory panel has urged the agency, in a draft report, to list C8 as a "likely human carcinogen."

Last August, DuPont agreed to pay more than \$107 million to settle a class-action lawsuit on behalf of more than 50,000 current and former plant neighbors whose water was tainted with C8.

Much of the money will fund a detailed review by private scientists of C8's dangers and a landmark community health study in the Parkersburg area. Town meetings to explain the health study are scheduled to kick off Monday night in Parkersburg.

Under the settlement, DuPont could be on the hook for another \$235 million in future medical monitoring if the studies find that C8 can make people sick. On top of that, the company also might face additional lawsuits if residents actually get sick from C8 exposure.

DuPont said again last week that it continues to believe that "the weight of evidence indicates that PFOA exposure does not pose a risk to the general public."

"To date, no human health effects are known to be caused by PFOA, even in workers who have significantly higher exposure levels than the general public," said Robert Rickard, DuPont's chief toxicologist.

Fueled in large part by internal corporate records uncovered by the residents' lawyers, the EPA in April 2003 launched a high-priority investigation of C8's dangers.

In July 2004, the EPA sued DuPont for hiding important information about the chemical's health effects. DuPont has announced that it has reached a tentative settlement with the EPA, but neither side has disclosed the terms of the deal.

At the same time, DuPont is facing a criminal investigation of its actions related to C8.

Late last year, EPA officials subpoenaed thousands of pages of documents from the residents' lawyers. The records included sworn statements by residents and DuPont officials, and previously undisclosed corporate records.

As part of their lawsuit against the EPA, agency lawyers filed some of these records with an administrative law judge that is hearing the case. Those records are part of a public case file, but EPA officials would not release them without a formal Freedom of Information Act request.

Karrh's discussion of the DuPont birth-defect data appears to be the biggest revelation in the previously undisclosed documents.

In his deposition, Karrh reported that a DuPont epidemiologist named Bill Fayerweather had proposed in April 1981 to do a detailed study of a potential link between C8 exposure and facial birth defects.

Fayerweather estimated that the rate of such birth defects in the general population was about two in every 1,000 people. If DuPont found two such problems in 10 children of plant workers, the rate would be "significantly higher" than that of the general population, Fayerweather found.

When he examined Washington Works employees, Fayerweather found two birth defects out of eight live births.

One child was born with an "unconfirmed eye and tear duct defect," the DuPont study found. The other was born with "one nostril and eye defect," the study said.

During a deposition, Rob Bilott, a lawyer for Wood County residents, showed Karrh photos of the children and asked him to describe them.

"The child has only one nostril," Karrh said of one of the children. "Apparently, the right nostril is absent and it looks like there's some growth on the inner surface of the right eye, on the medial surface."

Karrh said that when he learned of the children years ago, he asked another DuPont doctor to look into the matter.

"He went back and did the evaluations that were asked of him, that I asked for him to make," Karrh testified. "He came back to me and he was satisfied that it was not workplace related."

The other doctor never prepared a written report, and Karrh said he "didn't recall speaking with him about how he made that decision."

"He satisfied me, and we moved on to other things that we were doing," Karrh said.

Just a month before Fayerweather proposed his study, 3M told DuPont that it had found facial birth defects in baby rats exposed to C8.

For years, 3M had supplied DuPont with the C8 it used. In 2000, 3M stopped making the product, citing safety and environmental concerns.

The DuPont birth-defect data has been made public before. But details of DuPont's decision not to continue its study have not previously been disclosed.

In April 2003, the Washington-based Environmental Working Group wrote to the EPA to demand an investigation by the agency of DuPont's handling of C8 issues.

Among other things, the organization cited a 1981 internal company study that found similar facial birth defects in two of eight women studied by DuPont. In a letter, group President Ken Cook complained that DuPont wrongly did not report the study results to the EPA.

Under the Toxic Substances Control Act, or TSCA, companies must tell the EPA when they find information "that reasonably supports the conclusion that [a chemical] presents a substantial risk of injury to health."

In its lawsuit against DuPont, the EPA cited the same 1981 study document.

But the agency did not mention the birth-defects findings. Instead, the EPA focused on blood sampling that showed that C8 was able to move from mothers to babies through the umbilical cord. Agency lawyers noted that, a year later, in March 1982, DuPont did tell the EPA about similar movement of C8 from mother to baby in rat studies.

The EPA said that if it had known DuPont found C8 being transferred from mother to baby in humans sooner, federal officials could have moved more quickly to study the issue and perhaps take steps to protect the public.

DuPont has said, "there is no legal basis for the EPA's allegations."

"The company contends that it has fully complied with statutory reporting requirements and disputes any association between PFOA and harmful effects on human health or the environment," DuPont officials said in a prepared statement.

In March 1982, 3M and DuPont met with EPA officials to discuss 3M's rat study. No one from DuPont mentioned the human birth-defects data.

"We did not see that there was evidence that there was a substantial risk in those two possible cases of birth defects that could be related to C8 exposure," Karrh testified. "So, therefore, we made the conclusion that there was not a reporting requirement on that."

But it turned out that DuPont never really did the study that might have turned up that evidence.

By July 1981 - just three months after it was proposed - the C8 birth-defects study was listed in company documents as being "on hold."

"There were so many other things going on," Karrh testified. "There was no reason to do this study at that point in time, so, therefore, it was decided to put it on hold until we got the results from these other studies and then we could always go back and do it if we felt an indication for it."

In 1978, Karrh wrote a scientific journal article that advised companies to always report potential health threats from their chemicals to regulators.

"When it comes to such intensely emotional subjects as occupationally related cancer and chronic illness caused by workplace conditions, a company cannot risk the possibility of being placed in the compromising position of withholding information or making a false judgment about who should know what," he wrote. "It is the duty of every company's management to discover and reveal the unvarnished facts about health hazards."

Why then, Bilott asked, did Karrh not tell the EPA about DuPont's human birth-defects data?

"If you reported every little thing because it wasn't - just because it very possibly a thousand years from now could be, then you'd lose the whole purpose of it."

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Headline: FOOD WRAPPERS HAVE EXCESS C8, ENGINEER SAYS
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French-fry boxes, microwave popcorn bags and pet food containers could contain unsafe amounts of the toxic chemical C8, a longtime DuPont Co. chemical engineer testified last year in a lawsuit against the company.

Glenn R. Evers, who left DuPont in 2002, said the company discovered the problem but did nothing about it.

"We were out of compliance," said Evers, who received an internal DuPont e-mail that described the findings of a company study.

"It was one of these 'We are in deep trouble' memos," Evers recalled. "Everybody who knew what the extraction limits were knew there was a problem."

DuPont sells a variety of products called telomers, some of which are used in grease-repellent coatings for food packaging.

C8 is not used to make these products. But telomers are chemical cousins to C8. Scientists believe that telomers break down to form C8. They worry that this breakdown could be at least partly responsible for wide distribution of C8 in the environment around the globe.

DuPont says C8 is present in telomer products in only tiny amounts, and does not pose any public health threat.

"These products are safe," DuPont chemist Bob Bock said last week.

The debate over the potential dangers of C8 that leaches from telomers is an emerging part of the ongoing battle over chemicals that help create some of DuPont's best-known and most-popular products.

C8 is another name for ammonium perfluorooctanoate, or PFOA. It is part of a family of chemicals called fluoropolymers. DuPont has used the chemical since the 1950s at its Washington Works plant south of Parkersburg to make Teflon and other similar nonstick and stain-resistant products.

For decades, C8 - and DuPont's emissions of it - have essentially been unregulated by state and federal agencies. Fueled in large part by

internal corporate records uncovered by lawyers for Wood County residents, the EPA in April 2003 launched a high-priority investigation of C8's potential dangers.

In September 2004, DuPont announced it would pay \$107.6 million to settle the residents' suit, which alleged the company poisoned drinking water for thousands of homes.

During the months before the settlement, residents' lawyers obtained sworn statements from a variety of current and former DuPont employees.

In April 2004, Evers answered questions under oath from the residents' lawyers for nearly eight hours.

During this interview, called a deposition, Evers said DuPont learned from a 1966 study that chemicals like C8 can be transferred to food if they are used as package coatings. DuPont also knew from a study that dogs that had been fed fluoro-chemicals like C8 developed enlarged livers.

When the EPA launched its C8 review, the agency said it was concerned about studies that showed the chemical could cause development effects in laboratory animals. Agency officials were also worried about research that suggests it may be linked to cancer.

Researchers are finding that people around the world have C8 in their blood. The blood levels may be generally very small, but it is unclear whether these amounts are dangerous.

For years, DuPont purchased the C8 it used from 3M. But in May 2000, 3M announced that it would phase out the product because of concerns about its safety.

In his deposition, Evers said the 3M announcement had DuPont officials "licking their chops, saying there is \$150 million worth of fluorochemicals sales that we can jump into."

Earlier, DuPont had worked out a deal with the federal Food and Drug Administration to certify the use of its telomer products for food package coatings, Evers testified.

FDA officials told DuPont that this was a new product, and that the company should do a two-year study first, Evers said.

In response, DuPont said it had found no health effects at less than 1,000 parts per million of C8. The FDA said that wasn't good enough.

"It was a negotiating process," Evers testified. "What they did was they said what limit can we have that would be acceptable, and FDA said no higher than 0.1 parts per million extractable. So that translates to a pretty good safety margin for extraction."

DuPont convinced the FDA that its product ZONYL RP would extract to a range of 0.1 to 0.25 parts per million, Evers said. "FDA said, 'Fine. You are certified,'" Evers said.

Later, DuPont discovered that ZONYL RP was leaching more than 0.5 parts per million of C8 into food packaging, Evers said.

"What it meant was that we were out of compliance for that particular product," Evers said. "We shouldn't be selling it to the paper industry. More of the fluorochemicals product was extracting from the paper into water than what FDA allowed."

DuPont officials declined to answer specific questions about Evers' testimony.

Instead, the Wilmington, Del.-based company issued a general statement that it "does not sell any product or material into the paper industry that has not been approved for its regulated use by the U.S. Food and Drug Administration."

"DuPont products are compliant with all FDA applications and are safe for their intended uses," the statement said.

An FDA spokesman could not be reached for comment on Evers' testimony. Previously, FDA officials have said that they do not believe the levels of C8 in food packaging are a threat to public health.

In July 2004, the EPA sued DuPont for allegedly hiding important information about C8's potential health effects from regulators.

Under federal law, DuPont could face more than \$300 million in civil fines.

But, DuPont and the EPA have said they have reached an "agreement in principle." An announcement about the settlement terms could come as soon as Nov. 23, the deadline for a key filing in the EPA's case.

As part of its suit, the EPA subpoenaed from the Wood County residents' lawyers dozens of previously confidential depositions and other documents about C8. The EPA has released some of those records in response to a Freedom of Information Act request by The Charleston Gazette. A transcript of Evers' deposition is among the records that the EPA has disclosed.

In the interview, Evers said he was surprised that DuPont did not take action on the telomer issue.

"When something happens that your process is out of whack where it is out of compliance with federal regulation, DuPont normally, because they are a good, safe company, will follow up and do some work on it and find out what is going on," Evers testified.

Evers worked for DuPont for more than 20 years, from 1981 to 2002. It is not clear why he left.

Evers said he hired a lawyer because DuPont "threatened to prosecute me" and "I needed somebody who would protect my interest and allow me to do what is right."

Neither Evers nor his lawyer returned phone calls.

When Evers' testimony got a brief mention in a Chicago Tribune article in January, DuPont officials labeled him a "disgruntled employee with little direct knowledge" of C8.

Last week, DuPont corporate spokesman R. Clifton Webb declined to elaborate on that description. "We're not going to comment on Evers," Webb said.

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Headline: C8 LEVELS FAR ABOVE NORMAL, RESEARCH FINDS TOXIN CONCENTRATION HIGH IN PARKERSBURG-AREA PEOPLE

Byline: **KEN** WARD JR.

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Thousands of Parkersburg-area residents have significant levels of the toxic chemical C8 in their blood, according to previously confidential results of a landmark community health study.

Blood samples of more than 30,000 people in West Virginia and Ohio contained an average of 123 parts per billion of C8, according to the preliminary data.

That's 25 times the level of C8 that the average American is estimated to have in their blood.

"It's certainly much higher than in the general population," said Dr. Edward Emmett, a University of Pennsylvania researcher who conducted a much smaller C8 blood study of several Ohio communities across the river from Parkersburg.

Emmett tested 324 residents served by the Little Hocking Water Association, whose water supply is believed to be the most contaminated. He found a median C8 level of 340 parts per billion in their blood.

Emmett said, though his study did not definitively link C8 exposure to any specific illnesses in residents, the numbers are still cause for concern.

"There is the issue that it could cause cancer," Emmett said. "It certainly does cause cancer in animals, and it can interfere with the development of the young."

Preliminary data for more than 4,000 Little Hocking customers tested in the broader study found a median C8 concentration of 290 parts per billion.

In other communities, the broader study found residents with a median C8 level in the blood that ranged from 19 parts per billion in Pomeroy, Ohio, to 132 parts per billion among residents served by the Lubeck Public Service District in West Virginia.

Overall, the 30,629 residents examined in the preliminary data had an average C8 level in the blood of 123 parts per billion. The median, or

middle, level - which would be less sensitive to extremely high or very low numbers - was 48 parts per billion.

Previously, DuPont reported that a very small study of 12 Parkersburg-area residents found a median C8 concentration of 63 parts per billion.

Federal regulators have not set any limits on C8 emissions, or issued standards on how much is safe for humans to have in their blood. But in 2002, the U.S. Environmental Protection Agency launched a priority review of C8's safety after learning that the average American has about 5 parts per billion of C8 in their blood.

C8 has been linked to cancer, reproductive problems and birth defects in animals. Earlier this year, an EPA science advisory group recommended that the chemical be listed as "likely" to cause cancer in humans.

At its Washington Works plant south of Parkersburg, DuPont uses C8 to make Teflon. It is also used to make food packaging and thousands of other consumer and industrial products.

In February 2005, a Wood County judge approved a \$107.6 million settlement of a lawsuit against DuPont on behalf of thousands of residents whose drinking water was allegedly poisoned with C8.

Much of the money is funding a first-ever C8 health study that includes sampling the blood of nearly 70,000 area residents and a review by a three-person expert panel to determine if C8 makes humans sick.

In such situations, it is often difficult to collect health and chemical exposure information on a large enough group of people to do a statistically valid study.

Some of the cancers and other illnesses are rare, and scientists need large sample sizes to perform an accurate assessment. But with money from the DuPont settlement, such a large number of residents have been tested that the study should be able to answer questions about C8's effects.

The new C8 blood data is the first preliminary information from that community health study.

Records describing the data are buried in public files at EPA's headquarters in Washington.

The three-person team of scientists funded by the lawsuit settlement compiled the data more than three months ago, based on information given to it by Brookmar, the company formed to conduct the blood sampling and

other health survey research.

In July, the science panel provided that data to lawyers for DuPont and to the lawyers who represented residents who sued the company.

When they did so, the scientists instructed the lawyers not to make the information public.

"Included in the protocols are some data that should under no circumstances be allowed to fall into the hands of the press, general public or general scientific community," the science panel said in a July 19 letter titled, "Note for settling parties."

Dr. Kyle Steenland, an Emory University professor and science panel member, said that the group planned to provide the information to the Parkersburg community during a public meeting sometime this winter.

"They are all just preliminary [numbers] and we didn't want anyone making conclusions from them," Steenland said last week.

Art Maher, one of the coordinators of Brookmar, said that the science panel was not authorized to release the preliminary blood data.

Brookmar was planning to release final results of the blood sampling sometime around the end of the year, Maher said. Broader results of the health study - showing whether C8 is making people sick - won't be available for a year or more after that.

"There is no attempt on our part to stonewall anyone," Maher said. "Brookmar has been very open to the media and we are very thankful for the media's cooperation in getting information out."

The preliminary blood data reached a public file after DuPont lawyers concluded the company would give the information to EPA because of the federal agency's "continuing interest" in C8 and related substances.

In an Aug. 10 letter to EPA, DuPont lawyer Andrea V. Malinowski said the company does not believe any of the preliminary data "is indicative of substantial risk" as that term is defined in the federal Toxic Substances Control Act.

Late last year, DuPont agreed to pay \$10.25 million in fines to settle EPA allegations that company officials hid important information about C8's dangers from the agency.

DuPont did not submit the new C8 blood data to a C8-specific EPA docket where all filings are posted on the Internet and quickly available to

the public. Scientists, activists and reporters who are following C8 issues monitor that docket.

Instead, company officials submitted the information to a general chemical toxicity filing system where records are not posted on the Web for months.

Asked to explain why the company filed the information the way it did, DuPont spokesman Dan Turner said EPA wanted it handled that way.

"We take a very conservative approach when submitting to the EPA," Turner said. "Regardless of whether it is required to be submitted, we err on the side of caution.

"We want to get [the information] to the people most interested in it," Turner said. "EPA can move this if it chooses to another docket."

In its filing with EPA, DuPont did not submit a second set of numbers that it received in July from the science panel.

Last week, Rob Bilott, a lawyer for the residents, submitted that set of numbers to EPA "to ensure completeness of the submission."

That second set of numbers shows how many residents in the C8 health study reported having miscarriages, pre-term births, birth defects and various types of cancer. For example, it shows that 11 percent of reported pregnancies ended in miscarriages.

Science panel members have not yet compared those figures with C8 levels to determine if there is a correlation.

Steenland, the science panel member, said that as his group does various studies, "You'll get pieces of answers along the way, and as we get them, we'll announce them."

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Headline: NEW C8 STUDY FINDS BABY DEVELOPMENT PROBLEMS
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Newborn babies exposed to low levels of the chemical C8 have been found to have decreased birth weight and head circumference, according to preliminary results from Johns Hopkins University researchers.

The findings, if confirmed, could represent a dramatic new piece of evidence - actual developmental effects in humans - about the potential dangers of C8 and similar chemicals.

"We think it is significant," said Dr. Lynn Goldman, a professor at the Johns Hopkins Bloomberg School of Public Health.

"If this is confirmed, it is important," Goldman said during a phone interview. "It would say that there is a biological change that is going on."

Goldman is leading the study, with a team from Johns Hopkins and the federal Centers for Disease Control.

Last week, Goldman presented the preliminary findings at a workshop of the Society of Toxicology, a professional organization of scholars and scientists.

The workshop was co-sponsored by the U.S. Environmental Protection Agency and by DuPont Co., which makes and uses C8 to make Teflon, other non-stick products, oil-resistant paper packaging and stain- and water-repellent textiles.

C8 is another name for ammonium perfluorooctanoate, or PFOA. DuPont has used the chemical since the 1950s at its Washington Works plant south of Parkersburg.

Researchers are finding that people around the world have C8 in their blood. The blood levels may be generally small, but it is unclear whether these amounts are dangerous.

Nonstick cookware may be one route of exposure to C8, but recent studies suggest that food packaging may be a much bigger source. DuPont has consistently maintained there are no human effects known to be caused by C8.

In its most recent position paper on the subject, the company said, "Based on health and toxicological studies conducted by DuPont and other researchers, DuPont believes the weight of evidence indicates that PFOA does not pose a health risk to the general public."

Through a company spokesman, DuPont science director Robert Rickard referred questions about the Johns Hopkins study to Goldman, noting that a final version had not yet been published and DuPont has "not had an opportunity to review the final results."

"During her presentation last week, Dr. Lynn Goldman acknowledged limitations on drawing conclusions from the study," Rickard said. "As presented, the study does not change our position on PFOA."

Enesta Jones, an EPA spokeswoman, said that the agency is "absolutely" concerned about the Johns Hopkins findings and would consider the study as it finishes a broad risk assessment of C8.

"It's data that we will incorporate into our ongoing research," Jones said.

In the Parkersburg area, DuPont is paying to install new water treatment systems to get C8 out of local drinking water supplies. The company is also funding a detailed study of C8 health effects by an independent, three-scientist panel.

Goldman said that there are still unknowns, such as exactly how the babies were exposed to C8 and whether other factors may have also contributed to the developmental effects.

"We don't have all the answers yet," Goldman said. "We're still working on it."

Previous results of the Johns Hopkins study, announced in February 2006, found C8 in umbilical cord blood samples from 298 of 300 babies tested.

Goldman said that new tests found "very small decreases" in both birth weight and head circumference associated with C8 exposure. The amounts were "fairly low," she said, with the highest found being 7 parts per billion. That compares to the 5 parts per billion that EPA has said it believes average Americans have in their blood.

Overall, the C8 levels in the babies tested were "at concentrations lower than typically reported in adult [blood] collected from other regions of the United States," according to an abstract of Goldman's presentation last week.

Previous animal studies have shown that C8 can travel across the placental barrier. In animal studies, effects including birth defects, developmental delays and neonatal death have been observed.

C8 has also been linked to cancer in animal studies, and an EPA science panel recommended that the agency classify C8 as "likely" to cause cancer in humans.

Last week, the state of New Jersey moved to adopt a limit of 0.4 parts per billion of C8 in drinking water.

West Virginia continues to use a water "screening level" adopted five years ago of 150 parts per billion of C8.

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Headline: CANCER RATES HIGH IN C8 AREAS YEAR-OLD STUDY BY STATE RELEASED INADVERTENTLY

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Residents in the communities where water is polluted with the toxic chemical C8 have elevated levels of several cancers, according to a previously confidential state government analysis.

The study was drafted more than a year ago by the state Department of Health and Human Resources, but was never finalized or made public.

On Tuesday, DHHR officials offered varying answers about why the study wasn't completed - and whether they actually planned to finish it.

"I don't know that there was ever a conscious decision not to inform the public," said Chris Curtis, acting commissioner of DHHR's Bureau for Public Health. "It was one of those things that was simply put aside and never finished."

In the study, DHHR scientists used state cancer registry data to compare disease rates statewide with those in counties where water has been contaminated by C8.

Agency researchers found elevated rates of prostate cancer and non-Hodgkin's lymphoma in Wood and Jackson counties, according to a draft of the study.

DHHR also discovered high rates of leukemia and skin cancer in Wood County, where a DuPont Co. plant makes and discharges C8, according to the study.

The study found increased cancer rates in Mason County, but those were not elevated enough to be considered significant.

"The analyses presented here establish only that the rates of certain cancers previously associated with occupational PFOA exposure are elevated in counties in which residents may have been exposed to PFOA via the water supply," the study said. "They do not demonstrate a causal relationship between PFOA and individual cancer cases."

"These data do, however, establish the need for further examination of the impact of non-occupational exposures to PFOA on cancer incidence in communities," the study concluded.

Since the 1950s, DuPont has used C8 at its Washington Works chemical plant south of Parkersburg. The chemical is used to make Teflon, other nonstick products, oil-resistant paper packaging and stain- and water-repellent textiles.

C8 is another name for ammonium perfluorooctanoate, or PFOA.

Researchers are finding that people around the world have C8 in their blood. The blood levels may be generally small, but it is unclear whether these amounts are dangerous.

Nonstick cookware may be one route of exposure to C8, but recent studies suggest that food packaging may be a much bigger source.

In the Parkersburg area, DuPont is paying - as part of a \$107.6 million lawsuit settlement - to install new water treatment systems to get C8 out of local drinking water supplies. The company is also funding a detailed study of C8 health effects by an independent, three-scientist panel.

In its study, the state DHHR compared statewide data from the West Virginia Cancer Registry to the registry's data for Wood, Mason and Jackson counties.

After adjusting for age, DHHR researchers found statistically significant elevated rates of prostate cancer and non-Hodgkin lymphoma in Wood and Jackson counties. For example, the prostate cancer rate in Wood County was 162 cases per 100,000 people, compared to 148 per 100,000 people statewide, the study said.

The elevated prostate and skin cancer rates were consistent with previous studies of plant workers that reported associations of PFOA with those diseases, the DHHR study said.

However, some of the cancers found to be elevated in the DHHR C8 study - including non-Hodgkin lymphoma and chronic lymphocytic leukemia - have not been reported elsewhere to be associated with the chemical.

Also, some cancers found to be elevated in worker C8 studies, such as bladder and kidney cancer, were not found to be statistically significantly elevated in the DHHR study.

DHHR researchers said that some other factors, such as age, race and income, did not appear to be factors in their findings.

But the agency's study noted that pesticides used in the area could be a factor. More study would be needed to rule it out, the study said.

Also, the study noted the release into the area's air of the chemical 1,3-butadiene, which has been associated with elevated cancer rates. The GE Chemical plant in Wood County, located next door to DuPont, releases 1,3-butadiene into the air, according to federal records.

The DHHR study came to light only after a lawyer for Wood County residents who drank C8-contaminated water discovered it in state Department of Environmental Protection files and distributed it to various parties, including the Gazette.

Jessica Greathouse, DEP's communications officer, said Tuesday that her agency "inadvertently disclosed" the draft report in response to a Freedom of Information Act request.

But under state law, the basic facts of the study - including the cancer rate comparisons - would have to be released. Only commentary or recommendations by the study's authors could be withheld.

After the Gazette began asking questions about the DHHR study, DEP officials contacted the residents' lawyer to try to retrieve the document and prevent its public disclosure.

DHHR's Curtis said that she could think of no real harm that would have come from releasing the study.

"I don't know that it would have hurt anything in retrospect," Curtis said. "There was some talk about expanding it or looking at some other information, but ultimately that was never completed."

Study author Patricia Colsher said that she was waiting a year to add new data - cancer rates from 2006 and for other counties affected by C8 - to finalize the study.

"We did it, edited it, and then as the whole concern kind of expanded to other health outcomes and to other counties, we decided to hold off for another year's data," Colsher said.

With the 2006 data now available, she said, a final study could be completed sometime later this year.

One of Colsher's supervisors, state epidemiologist Loretta Haddy, agreed that the plan was to add new data and publish the report.

A timeline or exact plan for doing so has not been put together, Haddy said. "It's still in the evolutionary phase," Haddy said.

As for why the agency did not make public the preliminary findings in the draft study, Haddy said that decision was made by one of her superiors, Joe Barker, DHHR's director of Epidemiology and Health Promotion. Barker did not return repeated phone calls Tuesday.

Dan Turner, a media spokesman for DuPont, released a short statement about the study from Robert Rickard, DuPont's science director.

"We agree with the authors that studies of this kind can provide a useful initial screen of differences in disease rates across geographic areas," Rickard said. "But, as the authors themselves acknowledge, the study cannot and does not identify any cause that explains the observations."

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Headline: DUPONT DISTORTED C8 STUDY: SCIENTISTS
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On Jan. 11, 2005, DuPont publicists invited reporters to the company's Washington Works plant south of Parkersburg for a major announcement.

Scientists had completed a study of the potential health effects of the chemical C8, or PFOA. They had some good news.

"To date, no human health effects known to be caused by PFOA," announced the headline on DuPont's news release.

Plant manager Paul Bossert repeated the line in a letter to Washington Works employees. The study results, Bossert said, "Reaffirm what we have said all along: There are no known human health effects associated with exposure to PFOA."

DuPont officials touted the study as having the seal of approval from the company's Epidemiology Review Board, a team of independent experts from various universities, including Johns Hopkins and Yale.

It turns out those independent experts weren't really on board, at least not with the way DuPont chose to present the study results to company employees, the press and the public.

One of the experts, Noah Seixas of the University of Washington, was "a bit shocked" by DuPont's press statements. Another, David Wegman of the University of Massachusetts at Lowell, was "quite uncomfortable" with the way the company described the findings.

Four members of the expert team agreed that Bossert's letter to employees "was somewhere between misleading and disingenuous."

"We were unanimous in believing that the results do show a health effect," Wegman wrote in a Feb. 4, 2005, e-mail to other members of DuPont's Epidemiology Review Board, or ERB.

The board's concerns are spelled out in previously confidential e-mail messages. The messages were made public last week as part of a federal court filing in a lawsuit over PFOA pollution from DuPont's Chambers Works in Salem County, N.J.

DuPont has used the worker health study, and a follow-up worker death study, to bolster its public argument that C8 and products made with it are perfectly safe.

But the e-mail disclosures show the company's top science advisers believe strongly that DuPont is overstating its case.

DuPont ignored the scientists when they urged the company to tone down its press statements to reflect a more realistic view of C8's potential health effects, the e-mail messages show.

Dan Turner, a DuPont media spokesman, said the e-mail messages speak for themselves.

The board members, Turner said, "reviewed and approved the results and conclusions" of the company's studies. DuPont, Turner said, works with the board members "to incorporate their comments into our final conclusions.

"The public statements DuPont has made on PFOA and human health are consistent with our studies, as well as the weight of evidence of other studies reported in peer-reviewed journals," Turner said in an e-mail response to questions last week.

Since the 1950s, DuPont has used C8 at its Washington Works chemical plant south of Parkersburg. The chemical is used to make Teflon, other nonstick products, oil-resistant paper packaging and stain- and water-repellent textiles.

C8 is another name for ammonium perfluorooctanoate, or PFOA.

Researchers are finding that people around the world have C8 in their blood. The blood levels may be generally small, but it is unclear whether these amounts are dangerous. Nonstick cookware may be one route of exposure to C8, but recent studies suggest that food packaging may be a much bigger source.

Among the recent findings, from a Johns Hopkins study finalized this summer, are that babies exposed to low levels of C8 in the womb were born slightly smaller than other infants.

In the Parkersburg area, DuPont is paying - as part of a \$107.6 million lawsuit settlement - to install new water treatment systems to get C8 out of local drinking water supplies. The company is also funding a detailed study of C8 health effects by an independent, three-scientist panel.

DuPont has also been conducting studies of thousands of employees and former employees of the Washington Works to learn more about C8's potential effects.

The company's January 2005 announcement focused on the results of the first phase of a worker study. Researchers were looking for links between C8 exposure and various health effects, including liver functions, blood counts and cancer markers.

DuPont said the study found no such associations and said the results proved there were "no human health effects known to be caused by" the chemical.

The study did find a 10 percent increase in total cholesterol among some workers. The company said the finding was limited to those with the largest concentrations of C8 in their blood.

"The association of PFOA with the increases in total cholesterol and other endpoints in this study was observed in people in an industrial setting," Dr. Sol Sax, DuPont's chief medical officer, said at the time. "Given the extremely small levels of PFOA exposure generally seen outside the work setting, it is my medical opinion that no association would be seen in the general public."

But in an e-mail message, Wegman disputed DuPont's description of the study findings and Sax's views of what those findings meant.

First, Wegman wrote, elevated cholesterol level "is certainly a health effect." Next, he wrote, the study data actually showed "significantly elevated values" for cholesterol among workers with all levels of C8 exposure.

For more than a year, the independent scientists tried to persuade DuPont to tone down its statements about C8.

"We believe that no party can claim sufficient knowledge that PFOA does or does not pose any risk to health," the board members wrote in a March 2, 2006, e-mail to top DuPont officials. "Thus, we question the basis of DuPont's public expression asserting that PFOA does not pose a risk to health.

"In this circumstance, as we understand it, the burden of proof to establish the safety of PFOA is now placed on DuPont's shoulders," the board members wrote.

A few months later, in July 2006, Seixas warned DuPont scientist Robin Leonard that the actual study text "continues to attempt to avoid or downplay the significant findings.

"I think the level of evidence produced is fairly substantial," Seixas wrote. "Whether or not this is a 'major health effect' I guess is a matter of interpretation."

In October 2006, DuPont held another press conference, to release the results of the second phase of its worker study. This time, researchers were looking to see if C8 was linked to any worker deaths at the Wood County plant.

Again, the company's press release touted the results as good news. "No increased mortality in workers exposed to PFOA," the release said.

DuPont said the study did find "a slight, but not statistically significant" increase in the rate of kidney cancer mortality.

Sax said in the company's news release, "The Washington Works II study supports a conclusion that there are no human health effects known to be caused by PFOA."

The same day as DuPont's announcement, members of the company's ERB complained that the press statements went too far.

Jonathan Samet, a board member from Johns Hopkins, wrote that press release was "troubling" in part because Sax's "statement is overly certain."

Wegman wrote that another board member, Mark Cullen of Yale University, tried to convince DuPont to change its wording before the study was released, but "this was as far as he was able to push them."

"There is some comfort from the fact that the information, however well hidden, is present about the adverse findings," Wegman wrote in an Oct. 18, 2006, e-mail message. "But the release certainly appears written to leave the impression 'don't worry' and I guess we had to expect that."

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