Message

From: Stevens, Caroline [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=DFD9EB36DB0A44EAA6CABF85F3CF0550-STEVENS, CAROLINE]
Sent: 6/5/2020 12:42:06 PM
To: Washington, John [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=fdc3e8ce9f1d45c4894881ff420ca104-Washington, John]
Subject: RE: MORE Re: Very detailed Phila Inquirer story about DEP/EPA Science paper

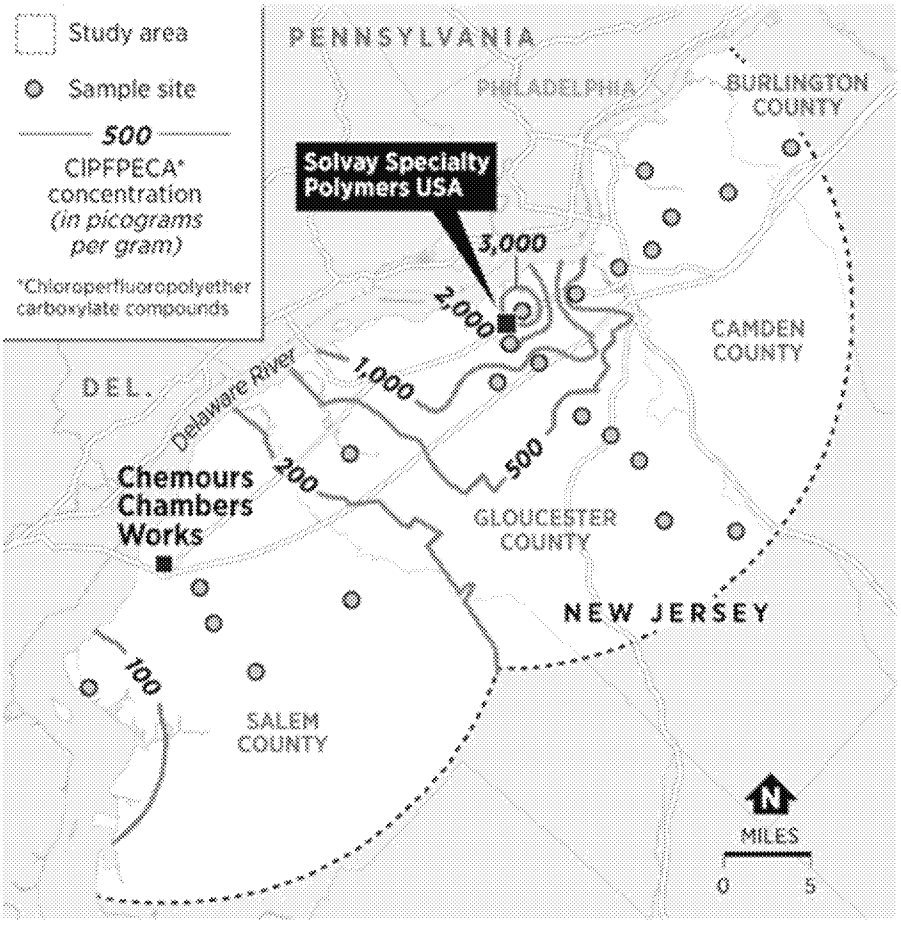
Wow! They have a good graphics/GIS person.

From: Washington, John <Washington.John@epa.gov>
Sent: Thursday, June 04, 2020 10:35 PM
To: Smith, Emily J. <Smith.Emily@epa.gov>; Gillespie, Andrew <Gillespie.Andrew@epa.gov>; Schumacher, Brian <Schumacher.Brian@epa.gov>; Stevens, Caroline <Stevens.Caroline@epa.gov>
Subject: FW: MORE Re: Very detailed Phila Inquirer story about DEP/EPA Science paper

More:

From: Post, Gloria <Gloria.Post@dep.nj.gov>
Sent: Thursday, June 4, 2020 8:02 PM
To: Washington, John <Washington.John@epa.gov>; Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>; Strynar, Mark <Strynar.Mark@epa.gov>; McCord, James <mccord.james@epa.gov>
Subject: MORE Re: Very detailed Phila Inquirer story about DEP/EPA Science paper

This is also in the story, but it did not copy into the earlier email!



OURCE: Research article by EPA scientist John Washington published in the June 5 edition of Science

JOHN DUCHNESKIE / Staff Artist

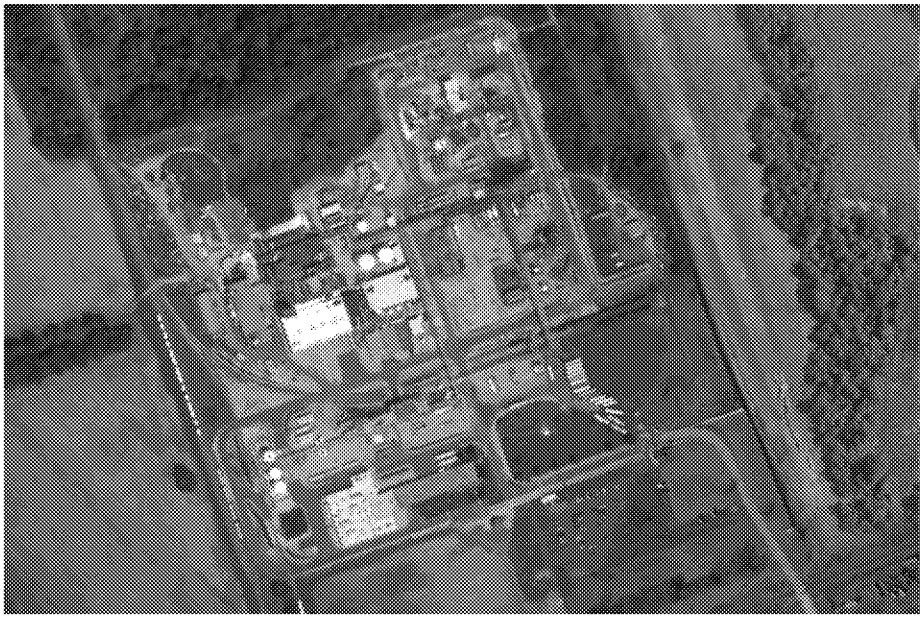
From: Post, Gloria <Gloria.Post@dep.nj.gov>
Sent: Thursday, June 4, 2020 6:10 PM
To: Washington, John <Washington.John@epa.gov>; Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>; Strynar, Mark <Strynar.Mark@epa.gov>; McCord, James <mccord.james@epa.gov>
Subject: Very detailed Phila Inquirer story about DEP/EPA Science paper

Please see news story below. A map from the paper is copied into the story below.

https://www.inquirer.com/science/climate/new-jersey-pfas-chemicals-solvay-plant-dep-20200604.html

Previously unidentified chemicals discovered across S. Jersey, linked to plant that used PFAS

by Frank Kummer and Dylan Purcell, Updated: June 4, 2020- 2:33 PM



A team of scientists report in a new study that they have found a recently identified group of chemical compounds, likely used as a substitutes for highly-toxic PFAS, in soil samples taken across New Jersey.

It's not yet known whether the new compounds, called ClPFPECAs, are toxic to humans or dangerous to the environment. However, it is believed they were used to replace some forms of PFAS, a group of chemical compounds used in the production of non-stick cookware, fire resistant furniture, and firefighting foam.

The research suggests the source of the new compounds was Solvay Specialty Polymers USA in West Deptford, Gloucester County, just off the Delaware River. Last year, New Jersey ordered Solvay, along with four other companies, to pay for cleaning up chemicals used at their sites that contaminated drinking water.

Representatives at Solvay's corporate offices in Brussels, Belgium, could not be reached Thursday for comment.

The report's release comes just days after the state Department of Environmental Protection adopted the most stringent drinking water standards in the country for types of PFAS known as perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS).

PFAS has drawn wide publicity. In 2014, residents in Bucks and Montgomery Counties living near former military bases learned their drinking water was contaminated by PFAS linked to firefighting foams used at the bases.

In 2017 the New Jersey DEP collected soil samples near two former PFAS-using plants in South Jersey: Solvay and Chemours Chambers Works in Penns Grove. During analysis of those samples, researchers discovered the unknown compounds. Their findings were published Thursday in the journal Science.

The research was paid for by the U.S. Environmental Protection Agency and New Jersey DEP. The EPA reviewed and approved the report but researchers said the conclusions are their own.

PFAS do not break down in the environment, and have been labeled "forever chemicals" by environmental groups. They are linked to human health issues. Although some PFAS are no longer made in the United States, they are still produced abroad and can be imported in consumer goods such as carpet, rubber, and plastics. Chemical companies have been trying to come up with safer alternatives to PFAS for years.

In the new study, led by John Washington, an EPA research chemist and an adjunct faculty member at the University of Georgia's geology department, scientists labeled the newly identified chemicals as chloro-perfluoro-polyether-carboxylate compounds, or ClPFPECAs.

Because the new compounds are considered proprietary, little is known about them or any risks they might pose to human health or the environment.

Washington's team evaluated soil samples from across the state and found 10 different ClPFPECAs, at least three of which were identified in all samples, as well as in a sample from a site more than 450 kilometers (280 miles) away.

That suggested to researchers that the ClPFPECAs were released into the atmosphere. Aided by weather data recorded near the Philadelphia International Airport, researchers collected soil along the downwind path from the plants.

The research team analyzed previously existing samples around a Solvay plant in Italy and found similar ClPFPECAs, suggesting that Solvay was the source. The company has locations in 61 countries.

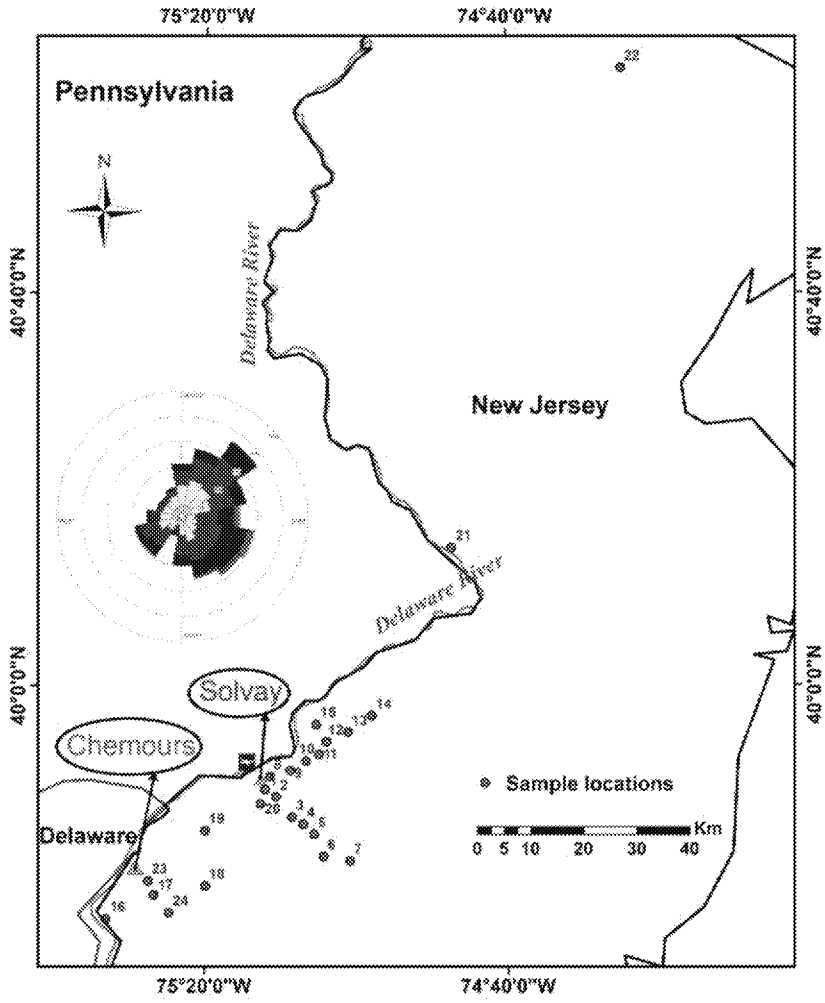


Figure S1: Soil sampling locations. The wind rose depicted in the western field represents data collected from the Philadelphia International Airport (jet icon).

SCIENCE

From a study published June 4, 2020 in Science by researchers who say they have found a previously unidentified group of compounds known as ClPFPECAs in soil throughout New Jersey. The researchers suggest the source was a Solvay facility in West Deptford, New Jersey.

In New Jersey, the samples were in highest concentrations when they were found closest to Solvay. The researchers don't yet know how long these compounds remain dangerous in the soil.

The search for PFAS replacements stems from 2006, according to the authors, when the EPA and leading PFAS manufacturers and users negotiated a voluntary PFOA Stewardship Program in which the companies agreed to work toward the elimination of those compounds by 2015.

Numerous companies began looking for substitutes, which are treated as confidential trade secrets. So environmental chemists began their search to identify the new compounds.

With little known about the safety of the compounds, the researchers believe more studies are needed to search for them in water used for crops and drinking, and in animals and humans. "In light of these findings," the report said, "numerous near-term pressing uncertainties merit investigation."

Posted: June 4, 2020 - 2:33 PM