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March 8, 2016

**BY E-MAIL AND REGULAR U.S. MAIL**

Tom Burak, Commissioner  
New Hampshire Department of Environmental Services  
29 Hazen Drive  
P.O. Box 95  
Concord, NH 03302-0095

Ron Miner, Superintendent  
Merrimack Village District Water Works  
2 Green Ponds Road  
Merrimack, NH 03054

Re: Accuracy of New Hampshire/Merrimack Water PFOA Information

Commissioner Burak and Superintendent Miner:

Over the last 15 years, I have represented tens of thousands of individuals in various communities across the country who have been injured because of the contamination of their drinking water with PFOA. As a result of a 2005 settlement of the claims of approximately 70,000 such individuals exposed to PFOA-contaminated drinking water in Ohio and West Virginia, in which I served as class counsel for the residents, extensive investigation and study into the actual human health effects of community-level exposure to PFOA in drinking water was undertaken by an independent panel of scientists known as the "C8 Science Panel." Under the terms of that class action settlement, the C8 Science Panel spent over seven years and over \$30 Million analyzing data from approximately 69,000 residents (including actual PFOA blood results from tens of thousands of such residents and decades of actual medical records and actual drinking water exposure histories) to determine which diseases

actually were linked to community resident exposures to PFOA in drinking water for as little as one year and at PFOA concentrations as low as 0.05 ppb.<sup>1</sup>

By the end of 2012, the independent C8 Science Panel had determined, after reviewing all of the data from the tens of thousands of community residents and all available scientific data (epidemiological and toxicological), that human exposure to even low levels (as low as 0.05 ppb) of PFOA in that community drinking water had a probable link to six serious diseases: 1) kidney cancer; 2) testicular cancer; 3) ulcerative colitis; 4) thyroid disease; 5) preeclampsia/pregnancy-induced hypertension; and 6) medically-diagnosed high cholesterol (hypercholesterolemia). The C8 Science Panel's final reports on each of these diseases (and links to the peer-reviewed, published papers confirming all of their findings and the scientific standards they used) are publicly-available through the C8 Science Panel's website: [www.c8sciencepanel.org](http://www.c8sciencepanel.org).

Thus, the New Hampshire Department of Environmental Services' ("DES") representation to the public in its March 4, 2016, press release, (copy attached at Ex. A), that "[p]otential health effects from exposures to low levels of PFCs are not well understood" and that the available studies are "inconclusive," requiring "[f]urther research ... to determine whether PFCs can cause health changes in humans" is inaccurate, and ignores the vast wealth of published, peer-reviewed, and independent C8 Science Panel research. Likewise, DES' representations that EPA believes "that existing evidence is too limited to support a strong link between PFCs and cancer in people" and that there is a "lack of health effects studies" are not accurate. EPA's own Science Advisory Board recommended that PFOA be characterized as a "likely" human carcinogen *almost a decade ago* (even before the independent Science Panel cancer findings), and recent public presentations by EPA in connection with PFOA drinking water contamination in nearby Hoosick Falls, New York, reflect that EPA is well-aware of the published, peer-reviewed, independent Science panel work that confirmed probable links between PFOA drinking water exposures and both kidney cancer and testicular cancer. (See EPA Region 2 public presentation materials attached at Ex. B.) DES's public statements in this regard should, therefore, be modified accordingly.

DES and the Merrimack Village District Water Works (the "Village") also should correct their public representations<sup>2</sup> regarding the meaning and significance of the 0.4 ppb Provisional Health Advisory ("PHA") released by the United States Environmental Protection Agency ("EPA") in 2009. Comparing levels found in a public drinking water supply that may have been used by residents *for years* to the PHA is inappropriate. EPA has made clear, repeatedly, that the PHA was developed for use only in situations of ***acute, short term*** (only a few days or few weeks) of exposures to PFOA in drinking

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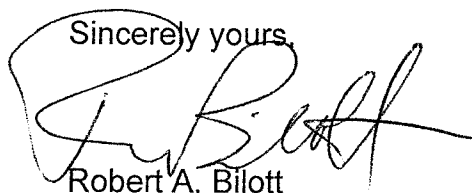
<sup>1</sup> More information on that settlement is available at: [www.C8claim.com](http://www.C8claim.com).

<sup>2</sup> The Village's most recent public statement on these issues, printed from its website, is attached at Ex. C.

water. Although we have been asking EPA to do so for more than fifteen years, to date, EPA has never released or adopted any standard or guideline to apply in situations where there may have been **long term** (more than a few days or weeks) exposures to PFOA in human drinking water. Moreover, both DES and the Village failed to point out in their public statements that EPA, as recently as January 28, 2016, advised the community near Hoosick Falls, New York, not to drink water containing more than 0.1 ppb PFOA. (See attached Ex. D.) Thus, at a minimum, EPA has dropped its 0.4 ppb guideline for short-term exposures down to 0.1 ppb while it continues to work on a long-term exposure guideline. In the meantime, other states have adopted even more protective PFOA drinking water guidelines. For example, in Vermont, the most recent State to evaluate PFOA drinking water guidelines, the State has advised residents not to drink water containing more than 0.02 ppb PFOA. (See attached Ex. E.) Based on the sampling date referenced in DES's and the Village's public statements, it appears that the level found in the Village's water – 0.03 ppb – exceeds that latest drinking water guideline.

Given the biopersistent nature of PFOA – meaning that even the tiniest, barely detectable amounts in drinking water will build up in the human body over time – and the finding of adverse health effects in laboratory studies at lower and lower dose levels, many scientists are questioning how a “safe” level can even be set for PFOA in drinking water. (See *e.g.*, attached Ex. F.) Regardless, while such research and work is underway, the public should not be led to believe that it is perfectly “safe” to drink water containing as much as 0.4 ppb PFOA or that there is no evidence of adverse health effects among people exposed to such levels of PFOA (or lower) in their drinking water.

We would be happy to discuss any of this publicly-available data with you in further detail. Thank you.

Sincerely yours,  
  
Robert A. Bilott

Attachs.

cc: Judith A. Enck (US EPA Region 2) (w/attachs.)

# **EXHIBIT A**



[DES Home](#) > [Media Center](#) >

## Media Center

FOR IMMEDIATE RELEASE:

DATE: March 4, 2016

CONTACT: Jim Martin, 603 271-3710

NHDES, Merrimack Village Water District, and Saint-Gobain Performance Plastics Investigating Perfluorochemical Found in Drinking Water

Concord, NH - The New Hampshire Department of Environmental Services (NHDES) is today announcing that it is working with the Merrimack Village District Water System (MVDWS) and Saint-Gobain Performance Plastics to investigate the potential presence of perfluorochemicals (PFCs) in drinking water in Merrimack. Late last week, Saint-Gobain notified NHDES that perfluorooctanoic acid (PFOA) was detected at low levels [0.03 micrograms per liter ( $\mu\text{g/L}$ )] in samples taken from four water faucets within their Merrimack facility, which is served by the Merrimack Village District Water System. Due in part to the lack of health effect studies, the United States Environmental Protection Agency (EPA) has not set an enforceable drinking water standard for PFOA. EPA's Office of Water has, however, established a Provisional Health Advisory of 0.4 micrograms per liter ( $\mu\text{g/L}$ ) for PFOA. Sampling to date in Merrimack has not identified PFOA at levels above the Provisional Health Advisory level. Provisional Health Advisories reflect reasonable, health-based hazard concentrations above which action should be taken to reduce exposure to unregulated contaminants in drinking water. Currently, this Provisional Health Advisory is under review and is expected to be revised this spring.


PFOA has been detected in the Hoosick Falls, NY, water supply and in some private wells in North Bennington, VT, near other Saint-Gobain facilities. Because materials containing PFOA have been used at the plant in Merrimack and out of an abundance of caution, Saint-Gobain voluntarily tested the water at its Merrimack facility and intends to test the groundwater at its facility. NHDES will oversee this investigation and is also working closely with MVDWS and the Town of Merrimack to determine if PFOA is present in any of the MVDWS wells that cumulatively serve 25,000 customers in Merrimack. NHDES will also investigate private wells in the vicinity of the Saint-Gobain facility and the MVDWS wells to determine whether they have been affected.


PFCs are a family of manmade chemicals that have been used for decades as an ingredient to make products that resist heat, oil, stains, grease, and water, such as non-stick cookware, weather resistant outdoor clothing and gear, and stain resistant carpeting. Many chemicals in this group, including PFOA, are commonly present in the environment and do not break down easily. According to the company, polytetrafluoroethylene (PTFE), which contains PFOA, has been used at the plant in Merrimack, by Saint-Gobain and previous facility owners.

Studies have shown that nearly all people have some level of PFCs in their blood. Potential health effects from exposure to low levels of PFCs are not well understood. To date studies have been inconclusive as to whether PFCs can affect growth and development, hormone levels including thyroid hormone, liver enzyme levels, cholesterol levels, immune function or occurrence of certain types of cancer. Further research is needed to determine whether PFCs can cause health changes in humans. The EPA states that existing evidence is too limited to support a strong link between PFCs and cancer in people.

The EPA has also done nation-wide sampling for PFCs as a preliminary step toward determining the need for national drinking water standards that would be enforceable under the Safe Drinking Water Act. In 2014, the wells in Merrimack that provide water to Saint-Gobain were tested and PFOA was detected once at 0.042 micrograms per liter ( $\mu\text{g/L}$ ) (which is below the Provisional Health Advisory level), but was not detected in a subsequent sample. MVDWS is resampling those and their other wells in response to the detection of PFOA in water samples taken at Saint-Gobain. This testing is in addition to the routine water quality monitoring performed by MVDWS.

NHDES will work closely with MVDWS and the Town of Merrimack to ensure that residents are promptly informed of the results of the MVDWS well tests and any additional information resulting from the planned groundwater investigations being conducted by Saint-Gobain and NHDES. For additional information please contact Jim Martin at (603)-271-3710.

Select Language 

Powered by  Google Translate

NH Department of Environmental Services | 29 Hazen Drive | PO Box 95 | Concord, NH 03302-0095  
(603) 271-3503 | TDD Access: Relay NH 1-800-735-2964 | Hours: M-F, 8am-4pm

[NH.gov](#) | [privacy policy](#) | [accessibility policy](#)  
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# **EXHIBIT B**



**Judith Enck**  
EPA Region 2 Administrator



**Larisa Romanowski**

EPA Public Affairs Specialist

(518) 407-0400

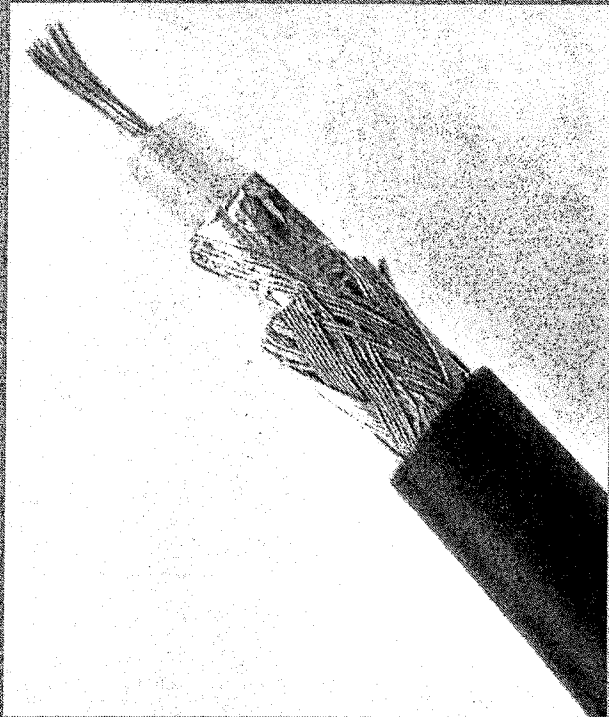
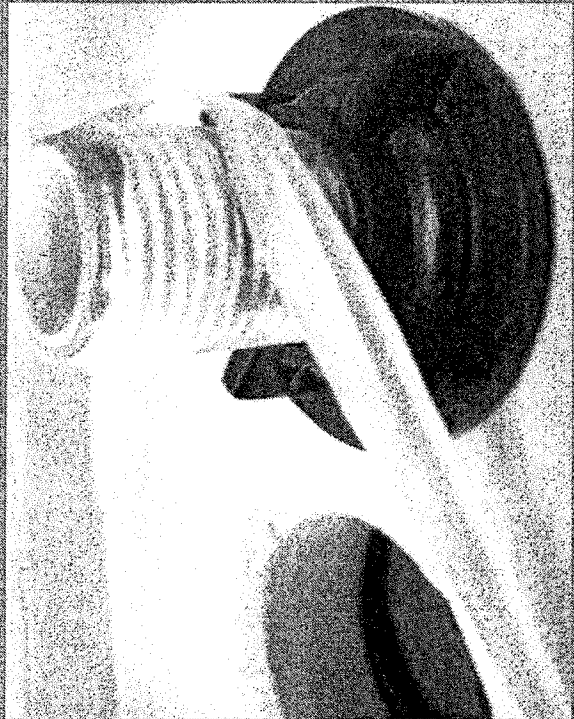
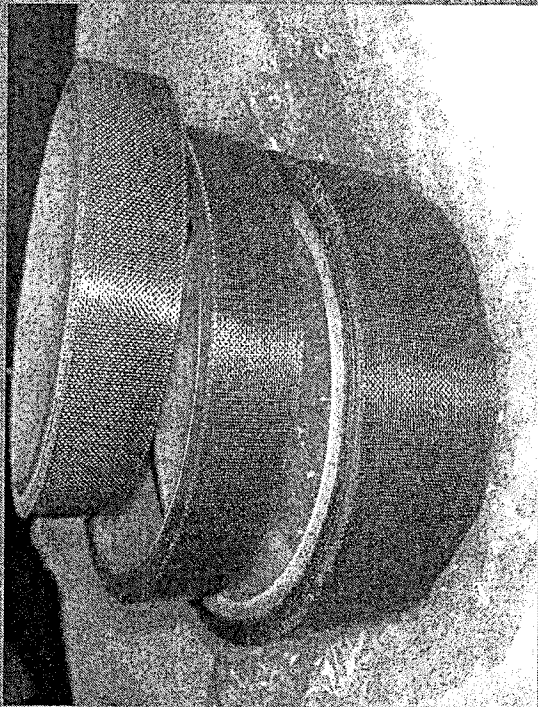
Romanowski.Larisa@epa.gov



For Information From EPA:

[www.EPA.gov/aboutEPA/  
Hoosick-Falls-water-contamination](http://www.EPA.gov/aboutEPA/Hoosick-Falls-water-contamination)







Arkema

Asahi

BASF

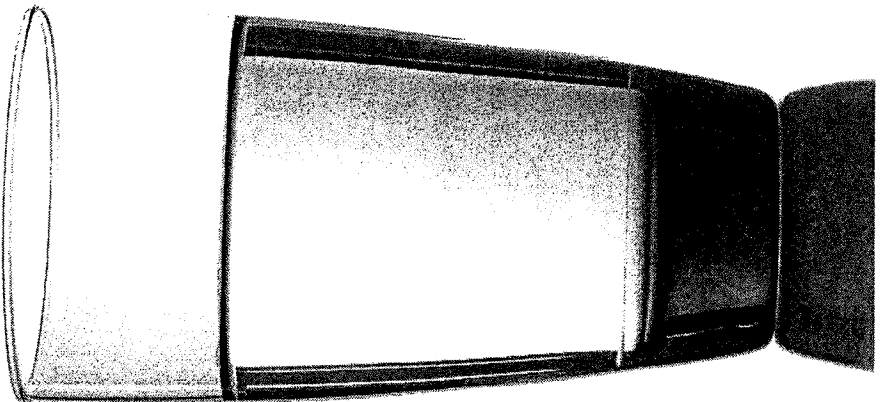
Clariant

Daikin

3M/Dyneon

DuPont

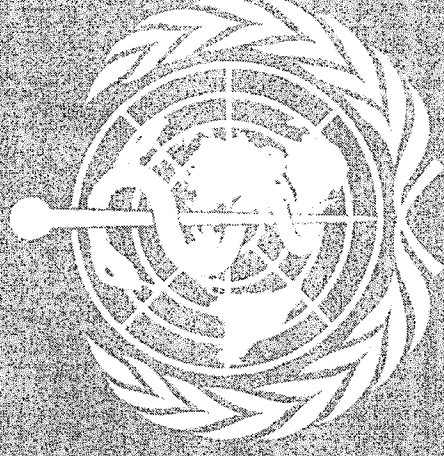
Solvay Solexis





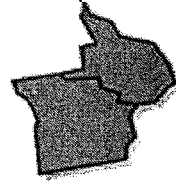
# “Possibly Carcinogenic in Humans”

International Agency for  
Research on Cancer  
(IARC) a part of the World  
Health Organization  
(WHO)



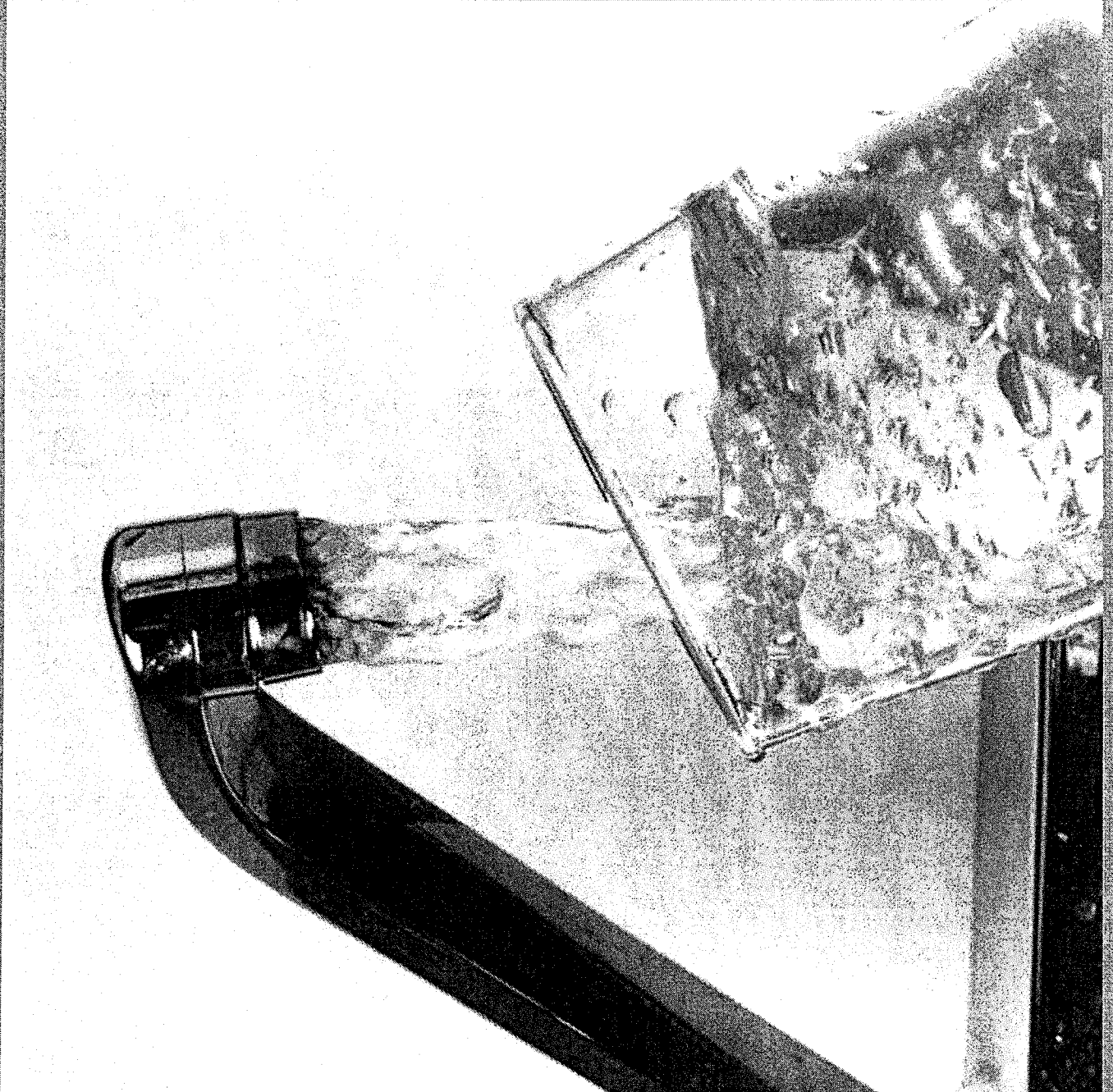


- Kidney cancer
- Testicular cancer
- Ulcerative colitis
- Thyroid disease
- Pregnancy induced hypertension
- Medically diagnosed high cholesterol



**C8 Science Panel**

[www.C8sciencepanel.org/prob\\_link.html](http://www.C8sciencepanel.org/prob_link.html)





EPA Provisional Health Advisory for short term exposure is 400ppt.

State Health Department Public Water Supply Sampling Results from Summer 2015:

Location

Level

Supply Well #3 Raw Water	151 ppt
Supply Well #7 Raw Water	620 ppt
Water Treatment Plant Finished Water	662 ppt
Tap Water from Building on Village Water System	612 ppt
Tap Water from Building on Village Water System	618 ppt

PFOA



Saint-Gobain sampled the groundwater of their McCaffrey Street facility.

Results showed PFOA levels as high as 18,000 ppt.



To get private wells tested contact:

**Albert DeMarco**  
NYS Health Department  
(518) 402-7860

[bee@health.ny.gov](mailto:bee@health.ny.gov)



**DO NOT drink the  
water from Hoosick  
Falls public water  
supply.**



**DO NOT cook  
with the water  
from Hoosick Falls  
public water  
supply.**



### Provision of Safe Drinking Water in Hoosick Falls, NY

#### Interim Measures

##### ***Bottled Water:***

- Immediately - continue current program of providing bottled water to residents, supplemented in the following ways:
  - Establish a procedure for delivery of bottled water directly to elderly or disabled residents and those with transportation issues. The deliveries should be arranged for by Saint-Gobain with a water delivery company and should not depend on volunteers in the community. The procedure should include:
    - Telephone hotline and/or email address for residents to use to request home delivery;
    - System for regular delivery starting the day following the request and approval; and
    - Maintenance of a log recording all requests for delivery and the actions taken. The log should include address and contact information.
  - Also establish a procedure for residents with a need for an additional volume of bottled water (beyond 5 gallons per day for the household) to request the appropriate volume needed by their household.<sup>1</sup> The procedure should include:
    - Telephone hotline and/or email address for residents to use to request the additional volume of water;
    - System for supplying a voucher that the requestor can present at water distribution outlet starting the day following the request and approval; and
    - Maintenance of a log recording all requests for additional volume and the actions taken. The log should include address and contact information.

- Within 21 days – submit an evaluation of the effectiveness of the program to provide bottled water, including the enhancements for home delivery and expanded volume. The evaluation should also include an evaluation of the feasibility of providing additional options for water delivery, including installation of tanks (to be filled by approved water haulers) to dispense water from other areas of the village.

- Ensure that all of the plastic water bottles used in the bottled water program are recycled.

<sup>1</sup> Until a treatment system is in place at the public water supply and confirmed to be consistently removing PFOA below the level set by EPA's health advisory, EPA is recommending the use of bottled water not only for drinking but also for cooking, teeth-brushing, and for use with a humidifier, if any.

##### ***Private Wells:***

- Within 15 days – identify all private wells (including wells serving non-community public water systems) in Hoosick Falls that are still being used for potable purposes.
- Within 15 days thereafter, make offer to well owner to sample the private well to determine whether PFOA contamination is present.
  - Collect samples within 5 days of obtaining access from well owner.
  - Have samples analyzed as soon as possible in a certified laboratory using EPA Method 537.
  - As soon as lab results are obtained, provide results to well owner and Village, Rensselaer County DOH, State DOH and EPA.
  - Maintain a log book listing the address and contact information for each such private well, the date of the offer to sample the private well, and whether the offer was accepted.
- If PFOA is detected in one of the private wells at a level at or above the EPA health advisory,
  - Immediately commence providing the impacted home or business owner with bottled water until the well can be eliminated or treated.
  - Within 30 days, provide for the installation of Point of Entry Treatment (POET) for the home or business served by the private well; or within 30-90 days (depending on the water line's proximity), connect the home or business to the public water supply.
  - If a POET system is used, maintain the system and continue quarterly monitoring for PFOA (both the raw water and the water treated by the POET system).

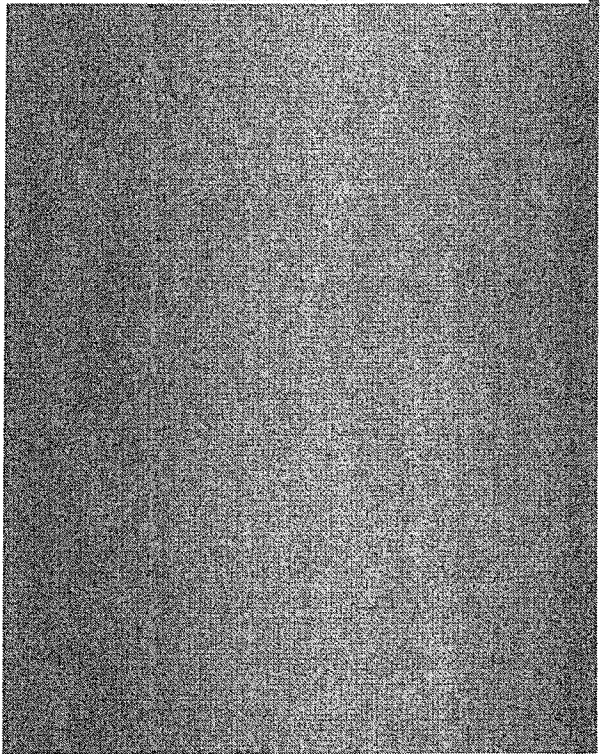
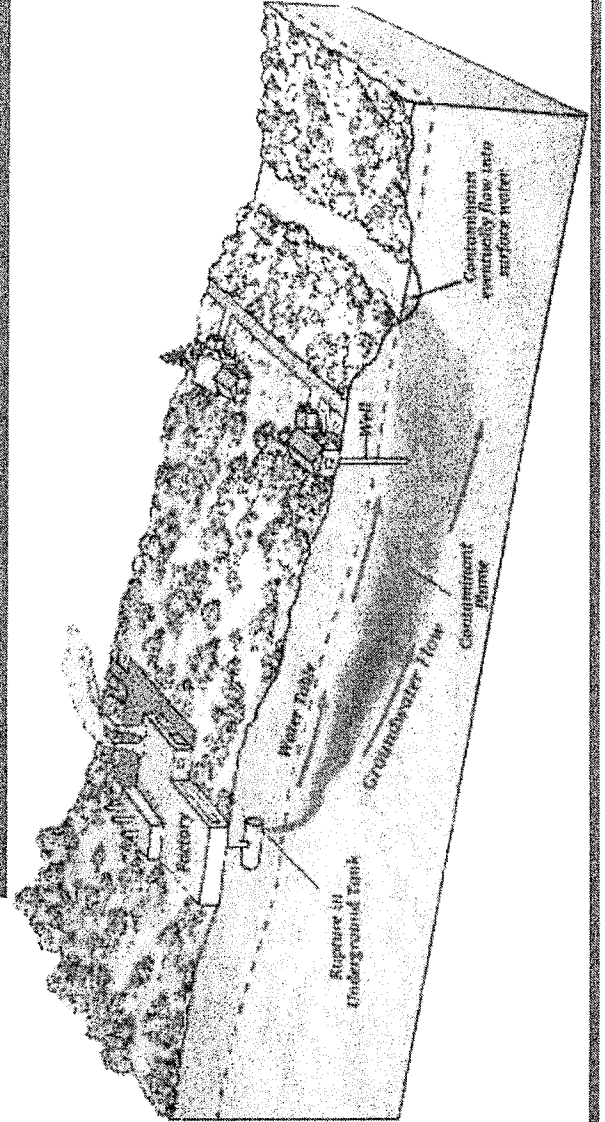
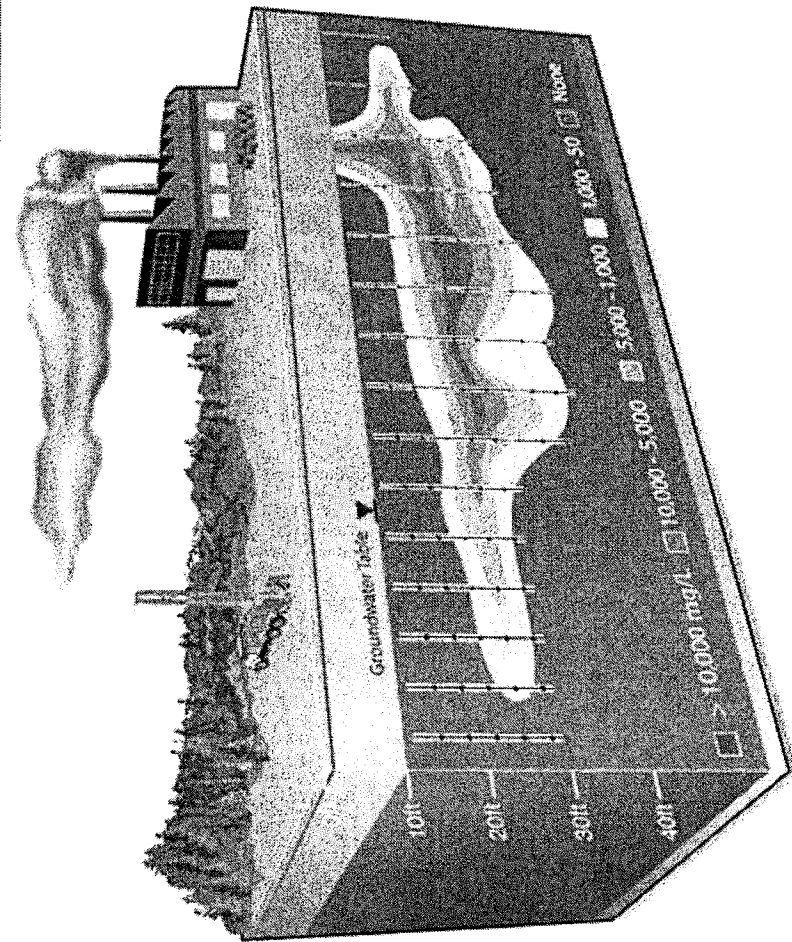
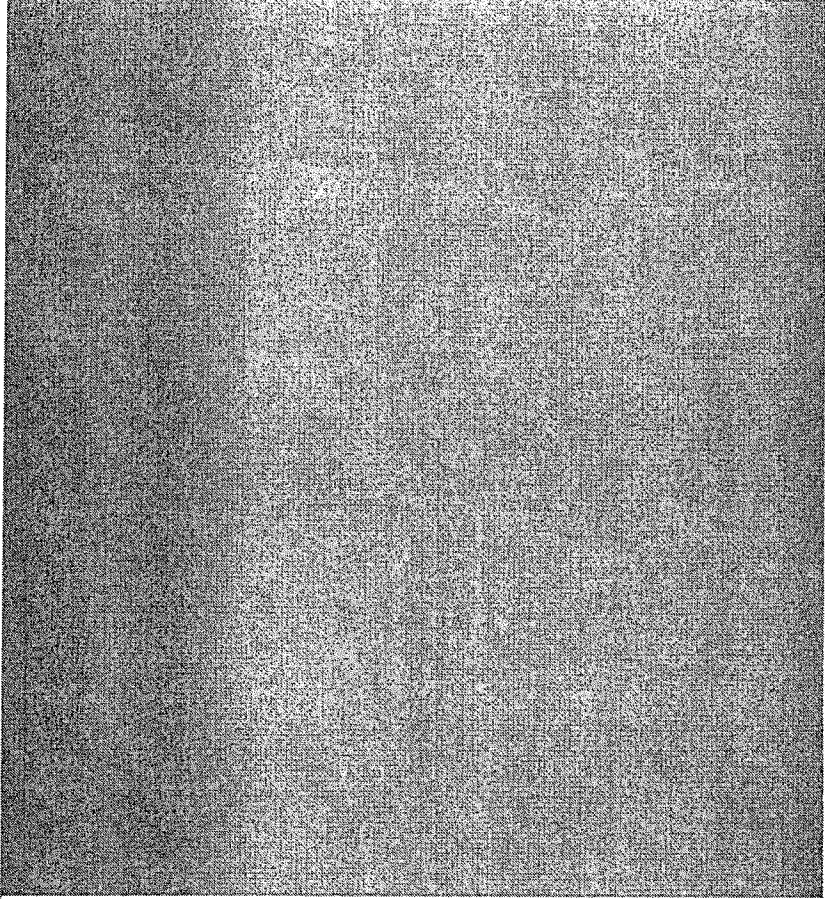
##### ***Temporary Public Water Supply Treatment System:***

- Within 10 days – submit an evaluation of the feasibility of installing temporary treatment (i.e., rented truck mounted GAC system) on the public water supply wells while the permanent treatment system is designed and built. The evaluation should include:
  - Costs of temporary treatment units and any retrofitting necessary to connect the temporary treatment;
  - Schedule for obtaining Rensselaer County DOH and State DOH approval for the temporary treatment;
  - Schedule for installation of temporary treatment system;
  - Monitoring plan to assure reduction in PFOA levels.
- If the evaluation shows a temporary treatment system is feasible, install the system and have it operational by February 1, 2016. The system should be designed to remove PFOA to the minimum reporting limit that can be reliably achieved by the analytical laboratory when using EPA Method 537.

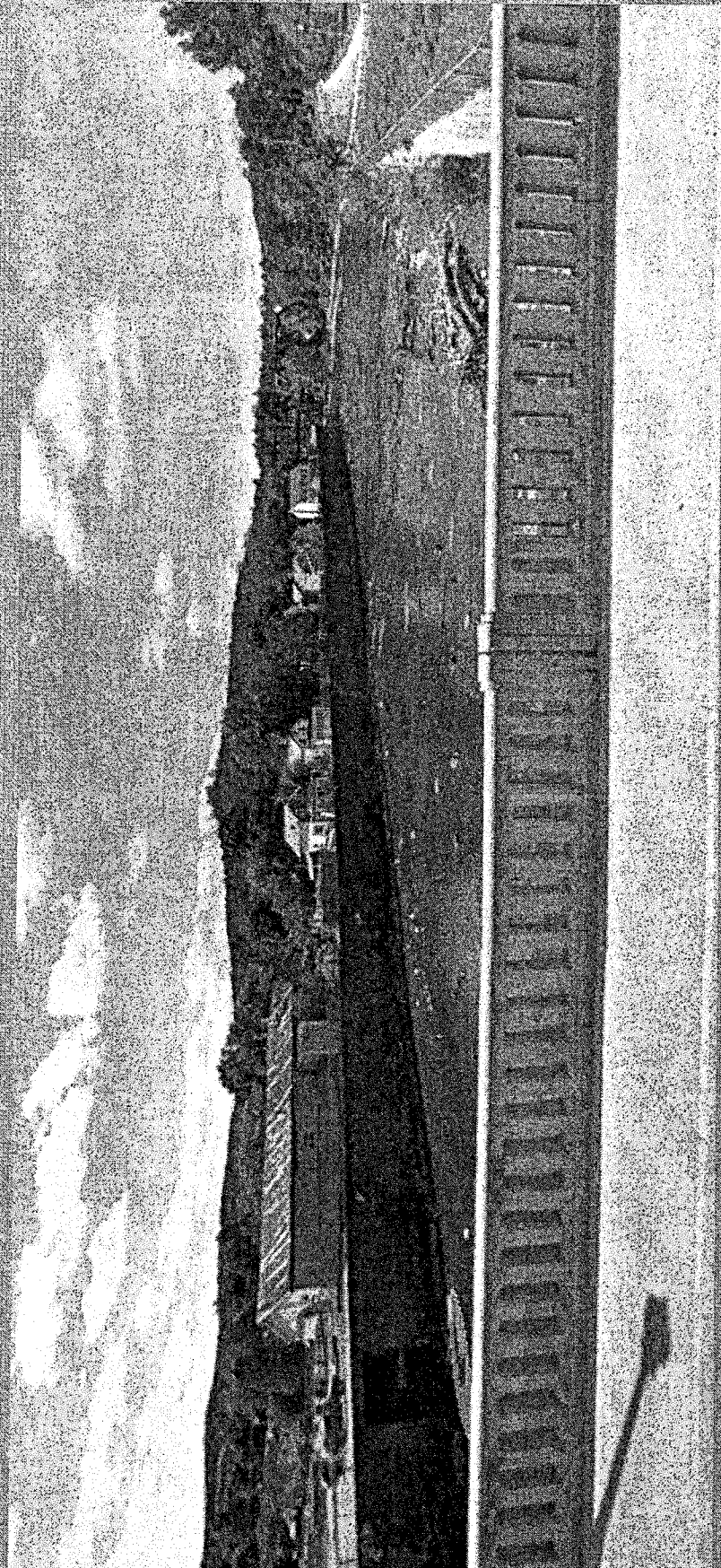
For Treatment System Schedule:

VILLAGEOFHOOICKFALLS.COM/NE  
WS.HTML













**Judith Enck**

Region 2 Administrator

(212) 637-5000

[Enck.Judith@EPA.GOV](mailto:Enck.Judith@EPA.GOV)

**Larisa Romanowski**

Public Affairs Specialist

(518) 407-0400

[Romanowski.Larisa@EPA.G](mailto:Romanowski.Larisa@EPA.G)

OV

# **EXHIBIT C**

603-424-9241



# Water Works

- Home
- About MVD
- Services
- Information
- Projects
- Q & As
- Contact



## Merrimack Village District Water Works

Merrimack, NH

### MVD Water Supply and PFOA

On February 29<sup>th</sup>, 2016 the Merrimack Village District (MVD) was notified by the New Hampshire Department of Environmental Services (NHDES) of a detection of Perfluorooctanoic Acid (PFOA) at the Saint Gobain facility in Merrimack. Those results have been evaluated by the NHDES and MVD. The Merrimack Village District has been and will continue working with the NHDES on resolving this issue.

As part of our NHDES sampling schedule the MVD participated in round 3 of the Unregulated Contaminant Monitoring Rule (UCMR3). MVD was required to sample all of our sources twice, approximately 6 months apart. Wells 4 & 5 had a detection of 42 parts per trillion (ppt) in April of 2014. Sources were again tested in October of 2014. Wells 4 & 5 presented with a non-detect result.

NHDES has no information suggesting the water is not safe to drink. The concentration of PFOA is well below EPA's current draft health advisory level of PFOA. Additional testing and assessments are ongoing. If people still have concerns, they can use a standard household carbon filter or utilize bottled water until we have more information.

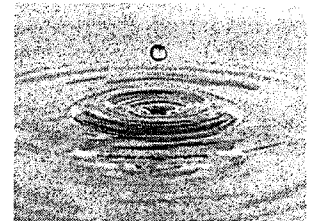
We have initiated further testing to determine any presence of PFOA in our water supply.

To view the EPA Fact Sheet for PFOA go to: [http://www.epa.gov/sites/production/files/2014-04/documents/factsheet\\_contaminant\\_pfos\\_pfoa\\_march2014.pdf](http://www.epa.gov/sites/production/files/2014-04/documents/factsheet_contaminant_pfos_pfoa_march2014.pdf)

To view the NHDES press release go to:

<http://des.nh.gov/media/pr/2016/20160304-saint-gobain.htm>

For questions please contact Superintendent Ron Miner at (603) 424-9241 x107 or via email at [ron.miner@mvdwater.org](mailto:ron.miner@mvdwater.org) or Jill Lavoie at (603) 424-9241 x103 or via email at [jill.lavoie@mvdwater.org](mailto:jill.lavoie@mvdwater.org).



#### Merrimack Village District Water Works

2 Greens Pond Road  
Merrimack, NH 03054

Phone: (603) 424-9241

#### Mission Statement

*"The Merrimack Village District will develop, operate and maintain our water system in a cost effective manner."*

Adopted by the  
Board of Commissioners  
September 16, 2013

### Quick Links

[Merrimack Village District Flushing Sept 21-25, 2015](#)

[Approved Budget-2015-16](#)

[Projected-Revenue-2003-2015](#)

[Treatment Plant Environmental Review](#)

### What is the odd/even water restriction?

The water restriction is a tool to help manage our distribution system. Withdrawing water from the aquifer in a controlled manner allows us to protect against seasonal fluctuations. The year round odd/even restriction limits the days on which outside watering is allowed, based on whether your street address is an odd or even number and the date is an odd or even number.

# **EXHIBIT D**





**EPA Statement on Private Wells in  
The Town of Hoosick and Village of Hoosick Falls, NY  
January 28, 2016**

The EPA is developing a lifetime health advisory level for PFOA. While this work continues, the EPA recommends that people in the Town of Hoosick and the Village of Hoosick Falls who have private wells at which PFOA has been found to be present at a level greater than 100 parts per trillion not use that water for drinking or cooking, and instead take advantage of the free bottled water that is being made available at the Tops Market in Hoosick Falls. In addition, the EPA recommends that people in the Town of Hoosick and the Village of Hoosick Falls who have private wells that have not yet been tested for the presence of PFOA ask the New York State Department of Health to test their well and, in the meantime, take advantage of the bottled water available at the Tops Market in Hoosick Falls.

# **EXHIBIT E**



Department of Health  
Agency of Human Services



## Perfluorooctanoic Acid (PFOA)

The Agency of Natural Resources/Department of Environmental Conservation tested a number of water sources near the former ChemFab plant in North Bennington, and results show varying levels of a potentially harmful chemical, perfluorooctanoic acid, or PFOA. The public water supplies in North Bennington and Bennington have been tested and are not affected, but five other residential and commercial wells had test results ranging from 40 to nearly 2,500 parts per trillion (ppt).

Additional residential wells in the area that may have been affected are being tested. The test to determine PFOA levels in water takes approximately two weeks for results to be known. Residents who have contaminated wells or are waiting for test results should not drink or use the water for preparing food, cooking or brushing teeth. The State is providing bottled water to homes within a 1-1/2 mile radius of the former ChemFab plant.

- **What is PFOA?**
- **Why is PFOA a health concern?**
- **Where can I learn more about PFOA studies?**
- **How is Vermont coordinating with New York?**
- **How to get your private well tested**
- **If your well water is contaminated with PFOA, or you have concerns about possible contamination**
- **PFOA and Human Health**
- **Medical Care**

### **How you can get your water tested**

Contact Chuck Schwer, Vermont Department of Environmental Conservation

Tel: 802-828-1138 (switchboard), or 802-249-5324 (cell)

Email: [chuck.schwer@vermont.gov](mailto:chuck.schwer@vermont.gov)

### **Website**

Laboratories in Vermont are not equipped to test for PFOA. The Department of Environmental Conservation will collect water samples to send to an out-of-state lab for this specialized testing.

### **For questions about potential health effects of PFOA:**

Call the Vermont Department of Health toll-free at 800-439-8550.

*Page updated: 02/29/2016*

## **What is PFOA?**

PFOA is a manufactured chemical that belongs to a group of chemicals used to make household and commercial products that resist heat and chemical reactions, and repel oil, stains, grease and water. These chemicals are widely found in nonstick cookware, stain-resistant carpets and fabrics, water repellent clothing, paper and cardboard food packaging and fire-fighting foam.

PFOA does not break down easily and therefore persists for a very long time in the environment, especially in water. Its toxicity and persistence in the environment means it is a potential danger to human health and the environment.

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## **Why is PFOA contamination a health concern?**

PFOA is a health concern because, if ingested over time, it could lead to health effects including liver toxicity, kidney damage, increased risk for cardiovascular disease, adverse effects on the reproductive system, immune system, infant and child development, and possibly some cancers, specifically testicular, prostate, thyroid and kidney cancer.

The Vermont Department of Health has established a health level of 20 parts per trillion (ppt) for drinking water. If water contains more than 20 ppt, it should not be used for drinking, food preparation, cooking, tooth brushing, or any other way it could be ingested.

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## **Where can I learn more about PFOA studies?**

The Health Department will continue to update information on its website as we learn more about PFOA.

The Agency of Toxic Substances & Disease Registry (ATSDR) is part of the Centers for Disease Control & Prevention (CDC). ATSDR published a toxicological profile for PFOA and the related perfluoroalkyl chemicals. You can [view the webpage](#), and download the PDF of the toxicological profile to read more about the scientific studies.

EPA also has a draft health effects document for PFOA, listed as **Health Effects Document for Perfluorooctanoic Acid**

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## **How is Vermont coordinating with New York?**

Vermont is working with the New York Health Department and the New York State Department of Environmental Conservation to understand their response.

**Return to Top**

## **How can I get my private well tested?**

Contact Chuck Schwer, Vermont Department of Environmental Conservation  
Tel: 802-828-1138 (switchboard), or 802-249-5324 (cell)  
Email: [chuck.schwer@vermont.gov](mailto:chuck.schwer@vermont.gov)

Laboratories in Vermont are not equipped to test for PFOA. The Department of Environmental Conservation will collect water samples to send to an out-of-state lab for this specialized testing.

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## **If my well water is contaminated with PFOA, or I am concerned about possible contamination:**

### **Should I drink the water?**

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No. Use bottled water or water from a known safe source for drinking, food preparation, cooking, brushing teeth – any way that you could ingest the water. The Department of Environmental Conservation is distributing bottled water to residences that have PFOA detected, and those potentially affected but not yet tested.

*The public drinking water supplies in North Bennington and Bennington have been tested and are NOT affected.*

### **Is it OK to shower or bathe?**

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Routine showering or bathing would not likely cause a significant exposure. Studies have shown very limited absorption of PFOA through the skin.

As a precaution, we recommend shorter showers, and use of bathroom fans (or opening bathroom windows) to help remove water droplets (aerosols) formed during showering. The shorter the shower, the lower the possible exposure to PFOA-contaminated water. We also recommend that children or people with skin conditions (rashes, cuts, abrasions, etc.) avoid prolonged contact with PFOA-contaminated water in the bath. Children are more likely to swallow while playing.

### **What about brushing teeth?**

Use bottled water for brushing teeth.

### **Can I do laundry and wash my dishes?**

Yes. Doing laundry or washing dishes is not likely to pose a significant exposure to PFOA. If washing dishes by hand, you can minimize exposure by wearing rubber gloves, especially if you have a rash, cuts or abrasions on your hands.

### **Can I use a humidifier?**

If you must use a humidifier, only use water from a safe source.

### **What can be done to take PFOA out of the water? Would an in-home treatment system help filter PFOA out of the water?**

#### **How effective is a filtration system?**

If your water has tested positive for PFOA, the Department of Environmental Conservation will be coordinating the installation of in-home water treatment.

Carbon filtration and reverse osmosis are two technologies that can remove organic contaminants such as PFOA from water. While there are currently no commercially available point-of-use filters (filters attached to a tap), or whole house filters specifically certified by the National Sanitation Foundation to remove PFOA, any activated carbon or reverse osmosis system should be able to reduce PFOA levels. The Minnesota Department of Health tested several point of use water treatment devices and found many to be effective.

If a treatment system is used, it is important to follow the manufacturer's guidelines for maintenance and operation – and periodic testing of the treated water would be necessary to ensure that the PFOA level stays below the health advisory for drinking water.

### **Will it be OK to eat produce from my garden, or fish from the Walloomsac river?**

We know people have many questions about this. The Department of Environmental Conservation is developing a sampling plan for testing soil and water from the river, and the Health Department is reviewing the science to help answer these questions. If PFOA is detected, the Health Department will evaluate the information to determine a health level of concern.

### **Should I be concerned about fishing in this area?**

Should I be concerned about fishing in this area? Fish do not appear to accumulate PFOA in their tissues. There is no specific advice to avoid fish due to the risk for PFOA. However, residents should be aware of the Health Department's fish advisory for Vermont. We advise that no one should eat fish from the Hoosic River, due to contamination with different chemicals, PCBs, that do accumulate in fish. The Vermont fish health alert is on the Health Department's website at [www.healthvermont.gov](http://www.healthvermont.gov), then go to 'fish' on the A-Z listing.

### **What about the water in my swimming pool?**

PFOA does not move very well through the skin. People who swim are unlikely to absorb very much through the skin. However, people may accidentally swallow pool water. If your water tested positive for PFOA, we recommend draining and refilling your pool after your water is treated to reduce any potential exposure.

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## **PFOA and Human Health**

### **Is PFOA found in humans?**

Studies show that human exposure to PFOA is widespread, and that most people have low levels of PFOA in their blood. PFOA does not break down in the human body and stays in blood for years after exposure, so levels of PFOA detected by a special blood test would reflect total exposure over many years. The time it takes for PFOA blood levels to go down by half is about two to four years, assuming there is no additional exposure to the chemical.

### **What health effects are associated with exposure to PFOA?**

PFOA ingested over time could lead to health effects including liver toxicity, kidney damage, increased risk for cardiovascular disease, adverse effects on the reproductive system, immune system, infant and child development, and possibly some cancers, specifically testicular, prostate, thyroid and kidney cancer.

### **What are the health effects of the levels that have been measured in the drinking water?**

We do not have an accurate way to predict what health effects people will experience if their water is contaminated. We have summarized the health effects from scientific papers, and suggest that people with contaminated water talk to their health care providers about their liver and kidney function.

### **What are the effects on animals?**

The health effects on animals are likely to be similar to the effects on people. If people have PFOA in their water, we recommend they do not drink the water and that they not give their pets the water.

### **What part of the body is affected by PFOA?**

The most consistent effects seen from exposure to PFOA are on the liver and kidney. Simple blood tests can determine the levels of important liver enzymes in your blood, as well as the level of uric acid. Uric acid can be a useful indicator of kidney health. Blood tests can also measure levels of lipids (fats) in your blood, such as cholesterol and low density lipoprotein (LDL).

### **Has EPA developed exposure limits for PFOA? Does PFOA accumulate in the body?**

EPA sets Maximum Contaminant Levels (MCLs) for chemicals that can be found in drinking water. So far, EPA has not set an MCL for PFOA. EPA advised the town of Hoosick Falls, NY to set a drinking water level of 100 parts per trillion (ppt).

Here in Vermont, the Health Department set the drinking water level for PFOA at 20 ppt, which is lower than what EPA advised. The Health Department based the calculations on the same science that EPA used, but Vermont accounts for exposure to children early in life. EPA considers exposure to adults. When people are exposed to PFOA, the chemical stays in the body. These chemicals do not dissolve in fat like other persistent pollutants. Instead, they accumulate in the blood. The time it takes for half the PFOA to leave your body is two to four years.

## **Medical Care**

### **Is there a medical test that can tell me if I have been exposed to PFOA?**

Yes. PFOA can be measured in blood, but the test is not routinely done. PFOA is found at low levels in the blood of almost all Americans. The results of blood tests can be used to determine if a person's PFOA blood level is lower than, similar to, or higher than blood levels found in the general population.

### **Does the Health Department recommend blood testing?**

**Will the State of Vermont pay for health testing for people exposed to PFOA? Can there be a central area for PFOA testing?**

**Routine clinical blood tests** – The Health Department recommends that people with PFOA in their water talk to their health care provider about routine blood tests for liver and kidney function. Results from these tests can help detect health conditions that may be treatable now.

**PFOA blood testing** – Many people have asked about getting blood tested for PFOA. Most people in the U.S. have PFOA in their blood, since PFOA is in a lot of products in our homes, and products that we use. People who have PFOA in their drinking water are very likely to have more PFOA in their blood than what is found on average in people in the U.S. The Health Department is committed to arranging blood tests for PFOA for people who have contaminated wells. We are currently evaluating options for this, looking for a lab that can analyze blood for PFOA, and will provide updates on the website, through listservs and through our health alert messaging network.

### **When should I see a health care provider?**

If PFOA is detected in your water, or if you or family members have signs or symptoms that you think are caused by PFOA exposure, discuss your concerns with your family's health care provider. The Health Department is providing health care providers in the area with information about recommended clinical blood tests.

### **Should we wait for the water tests before seeing our doctor?**

It would be helpful for your health care provider to know the results of your water test, but you don't have to wait to discuss your concerns with your health care provider.

### **How are you educating doctors?**

After learning of the well test results, the Health Department sent a Feb. 26, 2016 **health advisory** through our messaging network to health care providers in the Bennington County and Rutland County areas. The advisory was also directly emailed to the providers. The advisory lets providers know that PFOA is present in some wells. It also summarizes the potential health effects, and recommends that providers screen their patients who have PFOA in their drinking water, and consider evaluating liver and kidney function with a routine blood test. The Health Department is committed to arranging for specialized PFOA testing for affected residents.

### **What can be done to take PFOA out of the body?**

There are no medical interventions that will remove PFOA from the body. The best intervention is to stop the source of exposure. This means people who have PFOA in their water above 20 ppt should not drink the water.

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# **EXHIBIT F**





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## Tiny Concentrations Of Teflon Chemical Harmful To Public Health

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*FOR IMMEDIATE RELEASE: THURSDAY, AUGUST 20, 2015*



WASHINGTON – Newly published research shows that even very small doses of the Teflon chemical PFOA in drinking water pose a more serious threat to public health than previously thought. EWG’s report on the research, released today, shows that federal guidance on safe levels for PFOA is hundreds, even thousands of times too weak.

In June, two prominent environmental health scientists, Philippe Grandjean of the Harvard School of Public Health and Richard Clapp of the University of Massachusetts-Lowell, published a comprehensive review of PFOA research that found that levels in many water systems are “at least two orders of magnitude” higher than what the Environmental Protection Agency advises is safe.

PFOA has heavily contaminated the drinking water in the mid-Ohio River Valley of West Virginia and Ohio, near a plant where DuPont made and used the now-phased out chemical. Nationally, PFOA has been detected in 94 public water systems in 27 states, serving more than 6.5 million Americans.

**Click here to read the full report: Teflon Chemical Harmful at Smallest Doses**

Grandjean and Clapp termed 0.001 parts per billion, or ppb, the “approximate” safe level for PFOA, but EWG calculations based on their data yielded a level of just 0.0003 ppb –lower than the EPA advisory level by a factor of more than 1,300. One ppb is less than a teaspoon in an Olympic-sized swimming pool.

The EPA’s health advisory level for drinking water is 0.4 parts per billion.

“The new science indicates that all the PFOA standards are more than 1,000 times too weak to fully protect public health,” said Bill Walker, investigations editor at EWG and co-author of the new report. “Even the lowest level detected in nationwide water sampling is about five times higher than what the research says would be dangerous.”

“People should be protected against water contaminated with PFOA – especially children and women who plan to get pregnant,” said coauthor David Andrews, Ph.D., senior scientist at EWG. “Exposure to PFCs like PFOA has been associated with cancer, high cholesterol, abnormal thyroid hormone levels,

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pregnancy-induced hypertension and preeclampsia, obesity and low birth weight – all good reasons to reduce your exposure.”



“From an ethical and moral standpoint,” added **Walter** “it’s outrageous that babies and children are exposed to this chemical though no fault of their own. This is a horrible experiment, exposing Americans to chemicals before they can make choices to avoid it. While we know that PFOA can be passed from mother to unborn child in the womb, we don’t yet know what the health effects will be for those exposed so young.”

Through Teflon’s use in hundreds of household products – carpets, clothing, food wrappers and many more – PFOA and closely related chemicals have spread to the remote corners of the Earth and contaminate the blood of virtually all Americans.

In a sign of the growing scientific recognition that PFOA is more harmful than previously thought, the National Toxicology Program recently announced a **systematic re-evaluation** of the chemical’s effect on the immune system. The program’s Office of Health Assessment and Translation issued a call for ongoing or upcoming studies to be considered in the evaluation and for the nomination of scientists for an expert panel to review the findings.


In May, EWG released a report titled **Poisoned Legacy** to call attention to DuPont’s long history of covering up evidence of PFOA’s health hazards, including cancer and birth defects.

Ten years ago, EPA fined chemical giant DuPont an unprecedented \$16.5 million for knowingly contaminating the drinking water of residents in Ohio and West Virginia with toxic PFOA, also called C8. For generations, communities in West Virginia and Ohio had embraced DuPont, which repaid back their loyalty by poisoning the water and environment. Lawyers have waged an epic legal battle to ensure that these citizens get clean water and are compensated when they suffer from cancer and other diseases. The first of approximately 3,500 personal injury claims is scheduled to come to trial Sept. 14 in Columbus, Ohio.

"To this day, my family, my friends and tens of thousands of local residents in the mid-Ohio Valley are drinking untreated water contaminated at levels that are dangerous and unacceptable," said **Keep Your Promises Advisor** Dr. Paul Brooks. "I was at the Parkersburg Homecoming Parade last week, surrounded by young families oblivious to the fact that their children are growing up drinking water that is poisoning them. It's time for DuPont to step up, take responsibility, and immediately filter the water in Parkersburg, Vienna and in other affected communities. The fact that this company is still dragging its feet is shameful."

**EWG has also produced an interactive map that shows nationwide detections of PFOA, PFOS and four other PFCs.**

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Perfluorinated Alkyl Substances  
Emerging Insights Into Health Risks

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Abstract

Perfluorinated alkyl substances have been in use for over sixty years. These highly stable substances were at first thought to be virtually inert and of low toxicity. Toxicity information slowly emerged on perfluorooctanoic acid and perfluorooctane sulfonate. More than thirty years ago, early studies reported immunotoxicity and carcinogenicity effects. The substances were discovered in blood samples from exposed workers, then in the general population and in community water supplies near U.S. manufacturing plants. Only recently has research publication on perfluorooctanoic acid and perfluorooctane sulfonate intensified. While the toxicology database is still far from complete, carcinogenicity and immunotoxicity now appear to be relevant risks at prevalent exposure levels. Existing drinking water limits are based on less complete evidence that was available before 2008 and may be more than 100-fold too high. As risk evaluations assume that untested effects do not require regulatory attention, the greatly underestimated health risks from perfluorooctanoic acid and perfluorooctane sulfonate illustrate the public health implications of assuming the safety of incompletely tested industrial chemicals.

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