

Agency of Natural Resources
Department of Environmental Conservation

MEMORANDUM

Background.

Perfluorooctanoic Acid (PFOA) is a fully fluorinated, organic compound and is one of the two perfluorinated chemicals (PFCs) that have been produced in the largest amounts within the United States. PFCs were used in a wide variety of industrial and commercial products such as textiles and leather products, metal plating, the photographic industry, photolithography, semi-conductors, paper and packaging, coating additives, cleaning products and pesticides. Because of their chemical structure, PFCs, including and PFOA, are chemically and biologically stable in the environment and resist typical environmental degradation processes, including atmospheric photooxidation, direct photolysis and hydrolysis. As a result, these chemicals are extremely persistent in the environment. PFOA is suspected to result in both cancer and noncancer endpoints.

In February 2016, the Agency of Natural Resources discovered a release of PFOA in groundwater. Over the past nine months of investigation, the Agency has tested approximately 500 drinking water wells and results of testing from approximately 230 of those wells have been in excess of the Vermont Health Advisory.

On August 25, 2016, the Agency adopted amendments to the Vermont Hazardous Waste Management Rule (VHWMR) and Groundwater Protection Rule and Strategy (GWPR&S) pursuant to the authority for emergency rules under the Vermont Administrative Procedure Act. The amendment to the VHWMR listed PFOS and PFOA as a Vermont listed hazardous waste when at concentrations of 20 parts per trillion (ppt) or greater. The amendment to the GWPR&S established a groundwater enforcement standard for PFOA and PFOS of 20 ppt. Pursuant to 3 V.S.A. § 844(b) emergency rules may not be in effect for more than 120 days and as a result, these rules expire on December 23, 2016.

On December 16, 2016, the Agency filed adopted rules amending the VHWMR and the GWPR&S with the Vermont Secretary of State's Office. These rules were adopted consistent with the process established in the Vermont Administrative Procedure Act for permanent administrative rules. The amendment to the VHWMR listed PFOS and PFOA as a Vermont listed hazardous waste when at concentrations of 20 parts per trillion (ppt) or greater. The amendment to the GWPR&S established a groundwater enforcement standard for PFOA and PFOS of 20 ppt. Pursuant to 3 V.S.A. § 845(d), adopted rules take effect 15 days after filing and as a result these rules take effect on December 31, 2016.

In light of the four business days between when the Emergency Rules expire and the Permanent Rule takes effect, the Agency is adopting two interim standards: (1) the Agency is listing PFOA and PFOS as a hazardous waste pursuant to § 7-216(a); and (2) the Agency is adopting an interim standard for PFOA and PFOS pursuant to § 11-702(2).

Interim Groundwater Enforcement Standard

The GWPR&S authorizes the Secretary to adopt an interim standard when the Secretary, in cooperation with the Department of Health, determines that there is no groundwater quality enforcement standard and that a standard is needed. Interim groundwater quality enforcement standards have the same effect as a permanent standard.

The need for an interim groundwater enforcement standard is clear. There have been releases of PFOA and PFOS. Those releases have impacted over 230 water supplies in Bennington and North Bennington and the Town of Pownal's public drinking water supply. The USEPA and the Vermont Department of Health have concluded that exposure to PFOA and PFOS may potentially result in cancer and noncancer endpoints.

In addition, on December 24, 2016, there will not be a standard in place and there will not be a standard in place until December 31, 2016.

Therefore, until the final standard takes effect on December 31, 2016, the Agency adopts the following interim standard:

PFOA:	20 ppt
PFOS:	20 ppt
Any combination of PFOA or PFOS:	20 ppt

Interim Hazardous Waste Listing

The VHWMR authorizes the Secretary to list harmful materials as hazardous waste. Prior to making the decision to list the waste, the Secretary is to consider the following factors: the toxicity of the waste; the waste's persistence and degradability in the environment; the waste's potential to concentrate or bioaccumulate in tissue; the waste's potential to cause or contribute to adverse acute or chronic effects on the health of persons or other living organisms; and the waste's potential to have an unusually destructive effect on water quality if discharged to ground or surface water.

In light of the fact that PFOA and PFOS have been determined to: be persistent in the environment¹ have bioaccumulative properties², and that the waste has the potential to cause chronic effects on the health of persons and other living organisms³ the Secretary has determined to list PFOA and PFOS as a hazardous waste on an interim basis until the effective date of the amendments to the VHWMR.

¹ *Drinking Water Health Advisory for Perfluorooctanoic Acid (PFOA)*, United States Environmental Protection Agency, May 2016 at 25 (hereinafter *EPA PFOA Advisory*); *Drinking Water Health Advisory for Perfluorooctane Sulfonate (PFOS)*, United States Environmental Protection Agency, May 2016 at 25 (hereinafter *EPA PFOS Advisory*).

² *EPA PFOA Advisory* at 25; *EPA PFOS Advisory* at 25.

³ See generally *EPA PFOS Advisory* and *EPA PFOA Advisory*.

Therefore, until the final standard takes effect on December 31, 2016, the Agency is listing any liquid wastes containing contaminants in the following amounts:

PFOA: 20 ppt

PFOS: 20 ppt

Any combination of PFOA or PFOS: 20 ppt

The adoption of interim standards for PFOA and PFOS is a final act of the Agency of Natural Resources and is appealable to the Vermont Superior Court, Environmental Division within 30 days of the date of this decision pursuant to 10 V.S.A. Chapter 220.

Date

12/23/16


Alyssa B. Schuren, Commissioner
Department of Environmental Conservation

