

PFAS Status Report

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Town of Merrimack NH

September 26, 2019



Overview

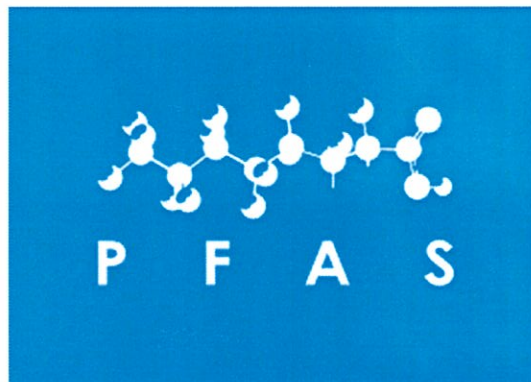
- PFAS Overview
- Summary of MCL – Drinking Water Standards for PFAS
- Groundwater Sampling Results
- Dip Pan Chemical Sampling Results
- Roof Drain Sampling Results
- Merrimack River Outfall Sampling Results
- Stack Testing Results
- Saint Gobain Wastewater Treatment System
- Discussion





PFAS Overview

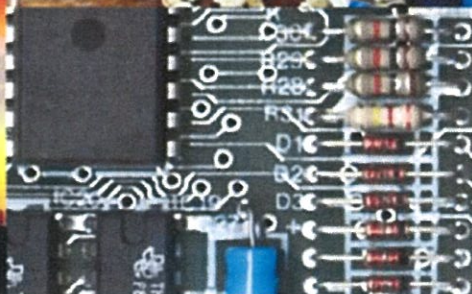
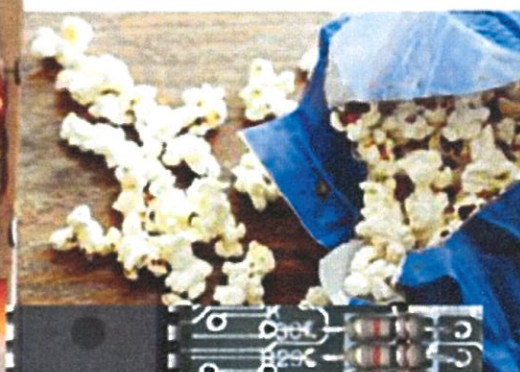
- PFAS are fluorinated organic synthetic compounds used to produce fluoropolymers.
- Manufacturing of non-stick, waterproof and grease-proof materials such as coating clothing, cookware, carpets, furniture, food wrappers and more.





Uses of PFAS

- Food contact surfaces such as cookware¹, pizza boxes, fast food wrappers, popcorn bags, etc.
- Polishes, waxes and paints
- Stain repellants for carpets, clothing, upholstered furniture, etc.
- Cleaning products
- Dust suppression for chrome plating
- Electronics manufacturing
- Oil and mining for enhanced recovery
- Performance chemicals such as hydraulic fluid, fuel additives, etc.



¹ PFOA has been phased out, however there is little evidence that the chemicals that have replaced PFOA are much safer.



Standards for PFAS

- On May 19, 2016 EPA issued lifetime health advisories for PFOA and PFOS of 70 ppt.
- States had the option to develop more stringent standards
- NHDES implemented the following drinking water standards to protect sensitive populations over a lifetime of exposure to PFAS.

PFAS	Final Proposed MCL and AGQS
PFOA	12 ppt
PFOS	15 ppt
PFHxS	18 ppt
PFNA	11 ppt



Recent PFOA Groundwater Sampling Results

- March 20, 2019 groundwater monitoring well MW-4S

69,500 ppt of PFOA

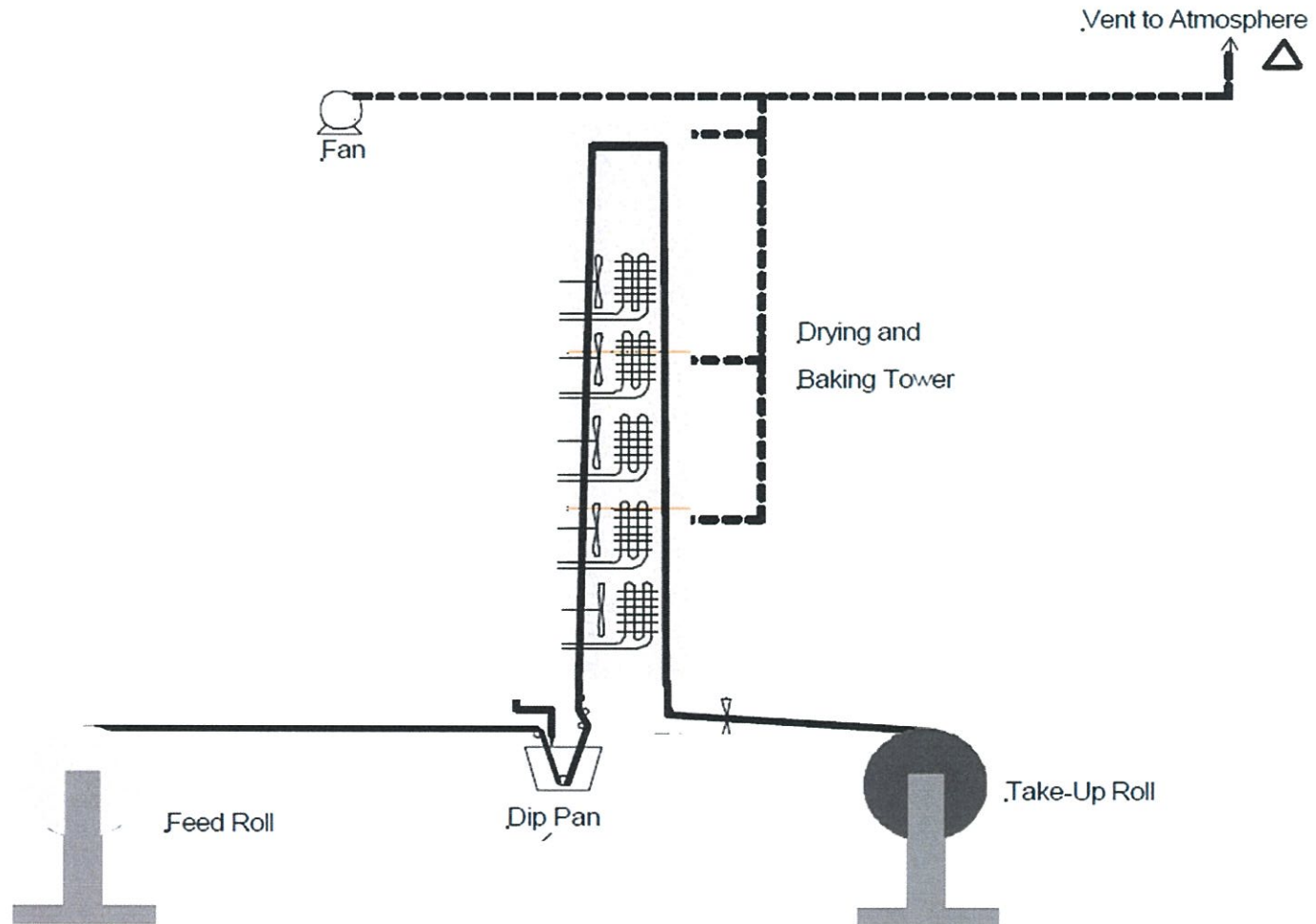
- Previous Sample November 16, 2018
 - 3,300 ppt of PFOA.



Why is This Important?

The March 2019 result represents
an order of magnitude increase in
the PFOA groundwater
concentration!!!!

Dip Pan Chemical Sampling





Dip Pan Chemical Sampling Results

- April 30, 2018:
 - **25,600 ppt of PFOA, and**
160,000 ppt of PFNA.
- May 1, 2018:
 - 21,100 ppt of PFOA, and
 - 128,000 ppt of PFNA.



Roof Drain Sampling Results

- On September 10, 2018, Golder sampled roof drains.
- The highest roof drain concentration of

PFOA was 52,000 ppt.

- This same roof drain contained PFOS up to 6,300 ppt.



Merrimack River Outfall Sampling Results

- Golder Sampling Outfall 001 on September 10, 2018.
- The concentrations of PFOA identified at Outfall 001 which discharges into the Merrimack River ranged from

7,900 ppt to 9,400 ppt.

- The PFOS concentration at Outfall 001 ranged from 1,600 ppt to 1,800 ppt.



Stack Testing Results

- Ambient Air Limits identified for ammonia, fluoride, and PFOA.
- All results from stack testing showed compliance with Ambient Air Limits.
- Ambient Air Limits do not exist for PFNA, PFHxS, and PFOS.
- NHDES concluded that Saint Gobain has the potential to continue to emit PFAS that can continue to contaminate groundwater.
- Saint Gobain is required to install a thermal oxidizer to destroy PFAS from their stack emissions.



Saint Gobain Wastewater Treatment System

- Saint Gobain installed a carbon pretreatment system to remove these compounds from their wastewater.
- Despite this treatment system, the Town suspects that the sewer line between Saint Gobain and the Merrimack Treatment Facility is contaminated. Therefore, it is likely that these compounds will continue to discharge to the wastewater treatment facility.



QUESTIONS?