Taking Steps Towards PFAS Compliance

BIA of NH - 2022 Air & Water Regulatory Conference

September 21, 2022

Kayla Turney

Agenda

- Overview
- Challenges
- New Hampshire Highlights
- Federal Highlights
- Helpful Tips and Best Practices

Overview – Product Examples

Stain-resistant coatings

Grease-resistant packaging

Paints, varnishes, sealants

Water-resistant fabrics

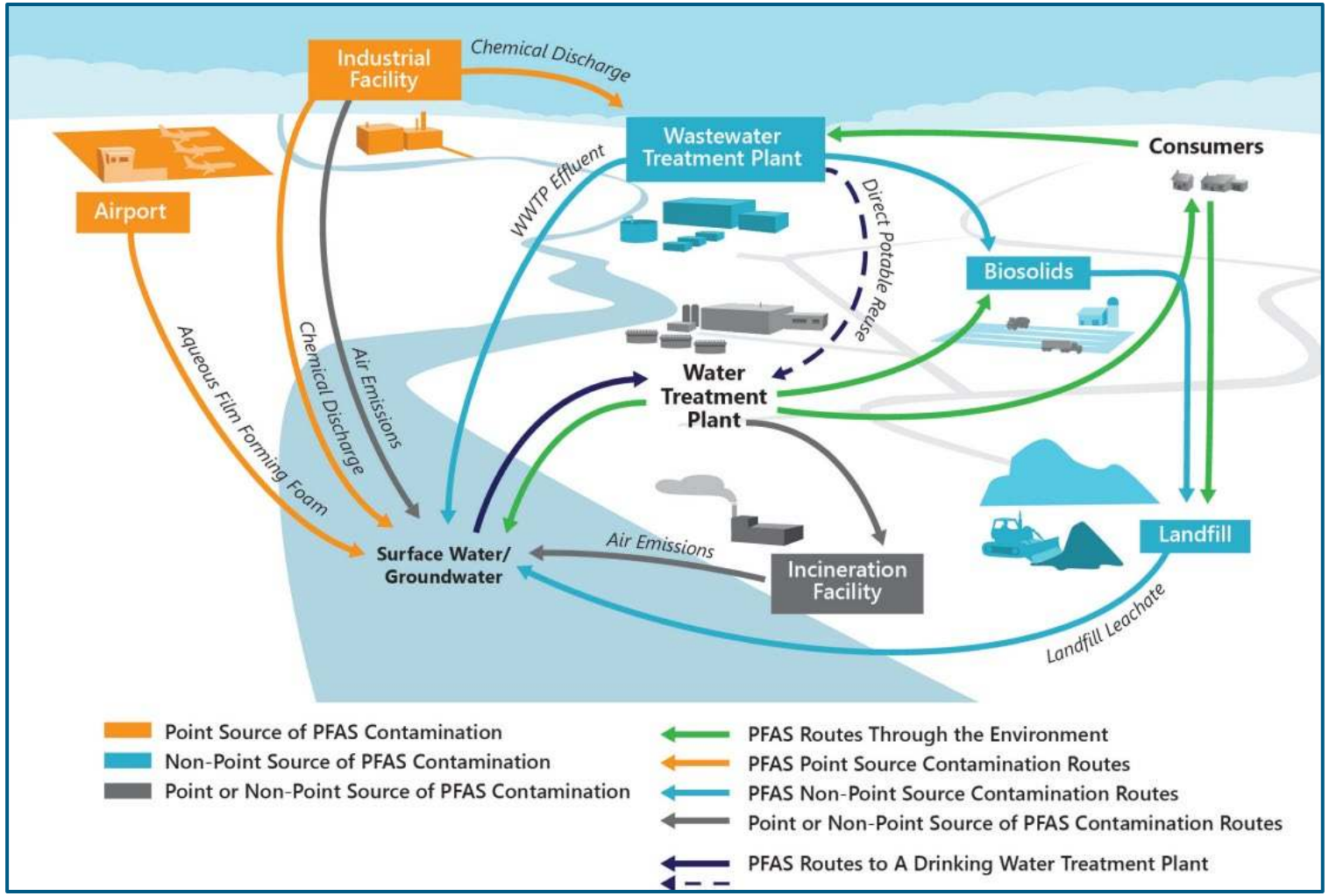
Aqueous Film Forming Foam (AFFF)

Overview – Industry Examples

- Upstream manufacturers
  - Industrial facilities that manufacture (or process) PFAS
    - Organic chemicals, plastics, rubbers, synthetic fibers and resins manufacturing
    - Commercial cleaning products manufacturing
- Downstream users
  - Industrial facilities that use PFAS-containing materials
    - Textile mills
    - Metal finishing, electroplating, semi-conductor/wire manufacturers
    - Packaging/paperboard mills
- Airports/military bases

Overview – Industry Examples

- Waste treatment facilities



Source: https://www.aaas.org/sites/default/files/2021-06/AAAS-EPI-Center_FactSheet__PFAS.pdf

Challenges

- Classification and definition of “PFAS”
- Detection levels vs. limits
- Limited information on Safety Data Sheets (SDS)
- Background concentrations
- Public scrutiny and media attention

New Hampshire Highlights

- Water
  - Drinking Water Maximum Contaminant Levels (MCLs) [RSA 485:16-e; Env-Dw 700-800]
  - Ambient Groundwater Quality Standards (AGQS) [RSA 485-C:6; Env-Or 603.03]
- Air
  - Best Available Control Technology (BACT) [RSA 125-C:10-e]
    - *"A device that emits to the air any PFAS or precursors* ***that have caused or contributed to an exceedance of an ambient groundwater quality standard*** *or surface water quality standard as a result of the deposition of any such PFAS or precursors from the air, shall be subject to the determination and application of best available control technology."*
  - Air Toxics [RSA 125-I; Env-A 1400]

Federal Highlights

- Water
  - Drinking water Health Advisory Levels (HALs)
    - PFOA (0.004 ppt)
    - PFOS (0.02 ppt)
    - HFPO or “GenX” (10 ppt)
    - PFBS (2,000 ppt)
  - **Interim HALs will remain in place until U.S. EPA establishes a National Primary Drinking Water Regulation**
    - Proposed MCL for PFOA and PFOS anticipated
    - Continued evaluations of additional PFAS

Federal Highlights

- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
  - Proposed designation of PFOA and PFOS as “hazardous substances”
  - Requires immediate reporting of certain releases greater than reportable quantity (RQ)
    - RQ of 1 pound listed in pre-publication version of proposed rule
  - Impact to site investigations/cleanups
  - Impact to due diligence/site transactions
  - Liability concerns

Federal Highlights

- Toxic Release Inventory (TRI)
  - Continued expansion of list of PFAS subject to TRI reporting (currently 180)
  - Potential removal of “de minimis” exemption
- For additional info, “PFAS Strategic Roadmap: EPA’s Commitments to Action 2021-2024”

TRI On-site and Off-site Reported Disposed of or Otherwise Released (in pounds), for All industries, for Per- and polyfluoroalkyl substances (PFAS) Chemicals, U.S., 2020

Row #	Chemical	Total On-site Disposal or Other Releases	Total Off-site Disposal or Other Releases	Total On- and Off-site Disposal or Other Releases
1	Perfluorooctane sulfonic acid	54,482.18	362.0002188	54,844.18
2	Hexafluoropropylene oxide dimer acid	3,861.32	314.499979	4,175.82
3	Sulfonic acids, C6-12-alkane, ɣ-ω-perfluoro, ammonium salts	0	1,800.00	1,800.00
4	Perfluorooctanoic acid	779.972	82.26	862.232
5	Hexafluoropropylene oxide dimer acid ammonium salt	623.68	.	623.68
6	Ethanol, 2,2'-iminobis-, compd. with α-fluoro-ω-[2-(phosphonooxy)ethyl]poly(difluoromethylene) (2:1)	8.3415	267	275.3415
7	Ethanaminium, N,N-diethyl-N-methyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-, methyl sulfate, polymer with 2-ethylhexyl 2-methyl-2-propenoate, α-fluoro-ω-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]poly(difluoromethylene), 2-hydroxyethyl 2-methyl-2-propenoate and N-(hydroxymethyl)-2-propenamide	0	160	160
8	Phosphonic acid, perfluoro-C6-12-alkyl derivs.	0	160	160
9	Perfluorohexanesulfonic acid	7.318	115.3	122.618
10	Ethanol, 2,2'-iminobis-, compd. with α,α'-[phosphinicobis(oxy-2,1-ethanediyl)]bis[ω-fluoropoly(difluoromethylene)] (1:1)	0.3415	54	54.3415
11	Octanoyl fluoride, pentadecafluoro-	10.3276346	.	10.3276346
12	1-Decanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-	10	.	10
13	Poly(difluoromethylene), α-[[phosphinicobis(oxy-2,1-	10		10

Source: U.S. EPA TRI Explorer

Tips, Take Aways, and Best Practices

- Conduct evaluation of potential PFAS-related operations (past and present)
  - AFFF usage
  - PFAS-containing product formulas
  - Environmental releases
  - Background concentration contributors
- Develop site procedures for identification and quantification of PFAS materials/releases

Tips, Take Aways, and Best Practices

- Establish frequent review of material SDS and supplier notifications
  - Look out for proprietary “perfluoro chemicals”
- Establish frequent review of specific PFAS CAS Nos. that are regulated under relevant rules (e.g., TRI)
- Assume PFAS regulations will expand to encompass additional PFAS chemicals and plan accordingly
- Prepare “back up” options for raw materials that may contain PFAS

Tips, Take Aways, and Best Practices

- Expect public comments on permit renewals, construction permits, etc.
- Be mindful of publicly available information
- Consider commenting on proposed rulemaking
- Choose experienced sampling teams and laboratories
- Engage legal team
- Follow along with NH PFAS news: https://www4.des.state.nh.us/nh-pfas-investigation/

Questions or Comments?

Kayla Turney

Technical Manager

kturney@all4inc.com // 610.422.1143

www.all4inc.com