TURA Science Advisory Board
PFAS Recommendation Category Definition

Based on OECD 2018 Methodology and Database

June 30, 2020

Recommendation by TURA Science Advisory Board June 25, 2020

Recommendation for listing a category of chemicals defined as "those PFAS that contain a perfluoroalkyl moiety with three or more carbons (e.g., $-C_nF_{2n}-$, n ≥ 3; or $CF_3-C_nF_{2n}-$, n≥2) or a perfluoroalkylether moiety with two or more carbons (e.g., $-C_nF_{2n}OC_mF_{2m}-$ or $-C_nF_{2n}OC_mF_m-$, n and m ≥ 1)".

The definition was crafted based on SAB review and recommendation to list individual PFAAs and their salts (PFNA, PFOA, PFHpA, PFHxA, PFBA, PFOS, PFHxS, PFBS, GenX, and PFPAs and PFPiAs), their review of OECD methodology and PFAS list, and their evaluation of the degradation/transformation of precursors to PFAAs.

Background notes for SAB discussions around the category definition

The above definition:

- Uses a subset of the OECD definition (doesn't include < C3 perfluorinated substances unless ethers), built around the database organization[1]
- Does **not** include (because the SAB did not evaluate substances with these structures or their precursors):
    - C1 or C2 alkyl chain lengths unless ether moiety is present.
        - Note that PFBA, the shortest fluorinated carbon chain evaluated by the SAB has 3 fully fluorinated carbons + 1 non-fluorinated carbon so while it is commonly referred to as a 'C4' chemical, it has a C3 perfluoroalkyl chain.
    - Chemicals with other halogen substituents in minimum perfluoroalkyl moieties.
- Includes all but 1 substance on 2018 OECD database spreadsheet (excludes CAS#359-70-6)[2]
- Has no max limit on carbon chain length, therefore includes polymers
- Includes perfluorocarbons (PFCs)

The recommendation to list the above category is the culmination of 3.5 years of review by the Science Advisory Board, beginning with an in-depth hazard review of the specific PFAAs above and building on OECD and others' work identifying PFAA precursors.

After this science-based recommendation, a policy analysis will be developed and presented for policy input at the TURA Advisory Committee. Then the recommendation will be reviewed by the TURA Administrative Council. If the Administrative Council votes to list, a regulatory package and public comment period would follow.

[1] OECD 2018. Toward a New Comprehensive Global Database of Per- And Polyfluoroalkyl Substances (PFASs): Summary Report on Updating The OECD 2007 List of Per- And Polyfluoroalkyl Substances (PFASs), Organisation for Economic Co-operation and Development. ENV/JM/MONO(2018)7, p. 15.

[2] 2-Iodononafluorobutane CAS RN 375-51-9 has 3 perfluorinated carbons, although the iodine position interrupts the C3 perfluorinated carbon chain.