ATSDR Releases Final Toxicology Profile for PFAS

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Minimum Risk Levels (MRLs) for PFAS Chemicals

On May 5, 2021, the Agency for Toxic Substances and Disease Registry (ATSDR), a federal agency within the Department of Health and Human Services focused on minimizing human health risks associated with exposure to hazardous substances, released its final toxicological profile for certain per- and polyfluoroalkyl substances (PFAS). The profile preserved the draft minimum risk levels (MRLs) the agency proposed in 2018, all of which are more stringent than the toxicological risk factors used by EPA to craft its guidance on exposure limits for drinking water.

ATSDR defines MRL as "an estimate of the daily human exposure to a hazardous substance that is likely to be without appreciable risk of adverse noncancer health effects over a specified route and duration of exposure." MRLs are intended to help public health officials determine the safety of a community living near a hazardous substance emission, given the concentration of a contaminant in air or the estimated daily dose in water. In the remediation context, MRLs can be used as screening levels to inform when a contaminant may be of concern. The toxicological profile also states that exposure above the MRLs does not mean that health problems will occur.

The toxicological profile sets a final MRL for perfluorooctanesulfonic acid (PFOS) at a level 10 times more stringent than EPA's reference dose that the agency used in its 2016 health advisory for lifetime chronic exposure. The final MRL set by the profile for perfluorooctanoic acid (PFOA) is seven times stricter than EPA's 2016 health advisory reference dose. Both MRLs are for intermediate-duration oral consumption.

The toxicological profile also includes limits for perfluorohexane sulfonic acid (PFxHS) and perfluorononanoic acid (PFNA) substances for which EPA has not created a reference dose.

Final MRL Determinations Set for PFOS, PFOA, PFHxS, and PFNA

ATSDR did not create MRLs for all the PFAS substances it studied. ASTDR analyzed exposure risks for a total of 10 PFAS chemicals: PFOA, PFOS, PFHxS, PFNA, PFDA, PFHpA, PFUnA, PFBS, PFDoDA, and FOSA. It also analyzed two compounds, PFBA and PFHxA.

Of the compounds analyzed, the toxicological profile sets final MRL values for PFOS, PFOA, PFHxS, and PFNA.

Implications of PFAS Final Toxicology Profile on EPA Action

The conservative MRLs are notable because in 2016 EPA developed and used a less protective toxicological risk factor to establish its health advisory levels (HALs) for PFOA and PFOS in drinking water. The HALs established drinking water standards for PFOS, PFOA or the combination of the two compounds at 70 parts per trillion (ppt). Health advisory levels are non-enforceable and non-regulatory but provide technical information to states and public health officials.

The MRLs released by ASTDR consider different data and factors than the toxicological factors developed by EPA, so it is unlikely EPA will immediately adjust its current HALs for PFOA and PFOS based on the new MRLs. Still, the MRLs will likely inform EPA's own drinking water standard, particularly since they appear to be more conservative than the reference dose relied on by EPA to develop the current HALs. For example, some states, such as Massachusetts have already developed more stringent state standards for PFAS than the federal EPA HALs, in part based on ATSDR MRLs.

EPA could also use the lower ATSDR risk values to compel additional sampling and cleanup work for PFAS at Superfund sites. Currently, EPA already requires sampling of the chemicals at many cleanup sites, including non-manufacturing sites. EPA has already begun sampling for PFAS at Superfund sites impacted by industries or releases considered high risk for PFAS use. Because EPA already requires sampling for PFAS at many sites, the additional sampling requirements may not be much more onerous.

Following ATSDR's release of MRLs more conservative than those set by EPA, Rep. Debbie Dingell of Michigan is already urging regulators and other federal officials to "to end unnecessary uses of PFAS in food packaging and cosmetics, to get PFAS out of drinking water, and to clean up legacy PFAS pollution." Rep. Dingell previously introduced a bipartisan bill in Congress, the PFAS Action Act, that would require EPA to develop waste and water regulations for PFAS, and designate PFOA, PFOS and possibly other PFAS as hazardous substances under Superfund. The same bill passed the House in 2020.

For more information, please contact Ally Cunningham, Shanna McCormack, Matt Walker, or your regular Lathrop GPM attorney.

Additional Resources:

https://wwwn.cdc.gov/TSP/ToxProfiles/ToxProfiles.aspx?id=1117&tid=237

https://www.asdwa.org/2021/05/07/atsdr-issues-final-pfas-toxicological-profile/

https://www.atsdr.cdc.gov/ToxProfiles/tp200-c7.pdf