

November 7, 2022

Environmental Protection Agency
EPA Docket Center Mail Code 28221T
1200 Pennsylvania Avenue NW, Washington DC 20460

Re: Docket ID No. EPA—HQ—OLEM—2019-0341 Proposed Rule on Designation of Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonic Acid (PFOS) as CERCLA Hazardous Substances

The Environmental Health Project (EHP) is a data-driven public health organization headquartered in McMurray, Pennsylvania, just south of Pittsburgh. EHP provides wide-ranging support to communities impacted by shale gas development (SGD). This support includes health impact assessments, environmental and health monitoring, data research and interpretation, and public health guidance. We are a skilled group of health professionals, scientists, community educators, analysts, and policy and communications experts.

EHP has a decade of community science experience, working directly with frontline residents concerned about how their health has been, or may be, impacted by SGD, including both air and water contamination. We seek to support communities more broadly in understanding the exposures and risks generated by SGD and to engage in policy dialogues at the local, state, and federal levels regarding the public health implications of shale gas activities. We have become national leaders in the comprehensive understanding of, and approach to, the public health consequences of SGD.

We are submitting this written comment to the Environmental Protection Agency (EPA) to express our unequivocal support for the classification of PFOA and PFOS as CERCLA hazardous substances. The creation of stricter guidelines and regulations around PFOA and PFOS, as well as guidance for testing and treating contamination in drinking water sources, will better protect public health and save the lives of many impacted residents. EHP would also like to share several recommendations for additions to this proposed ruling to better ensure resident health is protected.

PFAS and Shale Gas Development

The proposed rule thoroughly mentions many potential sources of PFOA and PFOS, such as food packaging and preparation, commercial household products, firefighting foams, non-stick cookware, etc. The rule, however, fails to mention shale gas development (also called hydraulic fracturing or fracking) as a potential source. New research over recent years has indicated that oil and gas development uses PFAS for industrial uses. In 2011, the EPA approved three chemical substances that can break down into PFAS for use in oil and gas drilling and fracking. These chemicals and similar ones were then found in more than 1,200 oil and gas wells across Arkansas, Louisiana, Oklahoma, New Mexico, Texas, and Wyoming between 2012 and 2020.ⁱ Additional research has also found PFAS present in other states such as Colorado,ⁱⁱ Ohio,ⁱⁱⁱ and Pennsylvania.^{iv}

There are many ways in which residents living in proximity to shale gas operations may experience PFAS exposure. One such pathway can occur during drilling activity, when chemicals can leach into the groundwater and aquifers if they are injected before the gas wells are sealed. Once the hydraulic

fracturing phase of the process has begun, residents may also be exposed when spills containing PFAS seep into groundwater and when chemicals from ground-level wastewater pools become airborne. Lastly, during the disposal process, it is possible for these chemicals to be present in waste that is transported to a variety of off-site locations, such as wastewater treatment facilities or landfills. While the EPA ruling mentions landfills and wastewater treatment plants as impacted facilities that would need to measure for PFOA and PFOS, there is no mention of shale gas development. EHP strongly urges the EPA to consider PFOA and PFOS contamination through shale gas development and ensure that levels of these chemicals are also being measured in those industrial activities.

Environmental Justice Communities and Community Impact

According to the [Oil and Gas Threat Map](#), over 17 million people live in proximity to oil and gas facilities in the United States. With the research showing shale gas operators using PFAS or PFAS precursors, EHP is very concerned about the magnitude of impact this could have on public health. In addition, the EPA should note that exposure to PFOA and PFOS has environmental justice implications. Research has shown that communities of color and low-income communities are disproportionately impacted by the negative health risks associated with exposure to PFOA and PFOS.^v EHP urges the EPA to consider the needs of the most vulnerable frontline environmental justice communities in its decision-making process. In addition, due to the large impact this problem has on frontline communities, EHP would like to advocate that the records of reported PFAS levels by facilities, especially those that exceed the set standard, be made available to the public.

Testing Methods and Standardization of Testing for PFOA and PFOS

EHP recognizes that the EPA does have some information available regarding PFAS testing strategy, specifically the National PFAS Testing Strategy Report, which the EPA released in 2021. However, the current proposed rule does not address a standardization of testing for PFOA and PFOS. Since many facilities and businesses, from car washes to chemical manufacturers to landfills, will be required to test for PFOA and PFOS under this ruling, EHP calls for specific testing guidelines to be provided to these facilities. Similar to how AOAC International issues the Official Methods of Analysis (OMA) publication with validated methods, the EPA should consider similar guidelines for PFAS testing. Without detailed guidelines on how to test for these hazardous substances, there could arise discrepancies in how different facilities test as well as differences in the sensitivity of the testing method. While testing is important, it is also crucial that the testing be accurate and conform to set standards across the board to prevent facilities from releasing higher amounts of these substances without it being registered on any testing devices. EHP therefore encourages the EPA to provide strict guidelines on what testing will look like as part of this rule.

Landfills and PFOS/PFOA Accumulation

EHP is glad to see that, under this regulation, landfills would be included in the type of facilities required to test for PFOA and PFOS. While the EPA mentions in the ruling that PFAS accumulation in landfills is of concern, EHP would like to note that this is also an additional concern for landfills that accept shale gas development waste. At EHP we are concerned with all aspects of SGD that can impact public health. This includes not just the process of drilling and fracking but also the transport, transfer, and treatment of waste from shale gas facilities.

Over the past ten years, we have partnered with [communities](#) and organizations to understand the health impacts for those living near landfill facilities accepting hazardous waste. There is cause for concern with additional PFAS ending up in the landfills from shale gas waste. PFAS could therefore be present in the leachate as well. The PFAS present that are volatile would be evaporated into the air

while those not volatile could be transported as aerosols and taken downwind. This evaporation and aerosolization could lead to the depositing of PFAS in soil, vegetation, or water, especially downwind from the facility. EHP recommends that the EPA examine the additional PFAS potential in landfills from shale gas waste and consider alternate methods of disposal that would protect residents' health and limit the amount of PFOA or PFOS being dumped into landfills.

Continued Regulation of Other PFAS chemicals

While EHP is in favor of the proposed ruling, we encourage the EPA to continue this conversation and not stop here. With over 9,000 chemical compounds in the PFAS family, the EPA needs to consider the idea of regulating chemicals as a class as opposed to one by one. The field of toxicology tells us that the toxicity of a mix of chemicals can be understood by adding the toxicity of all components together (i.e., additivity). Additivity allows us to understand how the presence of multiple chemicals can interact in the environment as well as inside a person. Sometimes the toxicity of the mix of chemicals is antagonistic, meaning the toxicity combined is less than the sum of all the parts. However, there are also some cases where the toxicity can be synergistic, meaning the components combined make each other more toxic.^{vi} It is important to look at the big picture of all PFAS chemicals that need regulating because they do not exist in a vacuum and often are found in combination with other toxic substances. Regulating these chemicals or classifying them as hazardous chemicals under CERCLA one or two at a time is not practical if the goal is to protect the health of all U.S. citizens.

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ⁱ Horwitt, D. (2021). Fracking with “Forever Chemicals”. Physicians for Social Responsibility. <https://www.psr.org/wp-content/uploads/2021/07/frackingwith-forever-chemicals.pdf>

ⁱⁱ Horwitt, D., & Gottlieb, B. (2022). Fracking with “Forever Chemicals” in Colorado. Physicians for Social Responsibility. <https://www.psr.org/wp-content/uploads/2022/01/fracking-with-forever-chemicals-in-colorado.pdf>

ⁱⁱⁱ <https://psr.org/wp-content/uploads/2022/09/fracking-with-forever-chemicals-in-ohio.pdf>

^{iv} Marusic, K. (2022). PFAS: The latest toxic concern for those near fracking. Environmental Health News. <https://www.ehn.org/pfas-fracking-in-drinkingwater-2657776204/pfas-contamination-fracking>

^v Johnston, J., & Cushing, L. (2020). Chemical exposures, health, and environmental justice in communities living on the Fenceline of Industry. *Current Environmental Health Reports*, 7(1), 48–57. <https://doi.org/10.1007/s40572-020-00263-8>

^{vi} Canadian Centre for Occupational Health and Safety. (2019, January 23). *Synergism and related terms: OSH Answers*. <https://www.ccohs.ca/>. Retrieved March 18, 2022, from <https://www.ccohs.ca/oshanswers/chemicals/synergism.html>