



# DoD PFAS Disposal, Cleanup, and Environmental Justice



## Why is DoD issuing interim Per- and Polyfluoroalkyl Substances (PFAS) Disposal Guidance?

DoD is issuing this PFAS interim guidance to help DoD make informed decisions in the evaluation of existing PFAS destruction and disposal options. This DoD guidance applies only to DoD and identifies the considerations the DoD Components will follow before disposing of PFAS-containing materials. It directs the DoD Components to dispose of, or destroy PFAS in the safest, most effective, and technologically sound manner. DoD worked closely with the U.S. Environmental Protection Agency (EPA) to incorporate the best currently available safeguards on disposal to ensure PFAS cleanup advances the Administration's priorities on the environment, public health, and environmental justice. This guidance is interim because it will be updated annually based on developing PFAS destruction and disposal technologies, monitoring the effectiveness and potential environmental effects of

all technologies, and collaborating Administration-wide on best practices.

DoD needs a comprehensive destruction and disposal PFAS strategy because of the large volumes of PFAS-containing materials it generates from its cleanup program, its replacement of certain firefighting foam that contains PFAS, and its current emergency use and spill response to releases of this PFAS-containing firefighting foam. This strategy needs to be comprehensive and include all available technologies that address PFAS destruction and disposal, to include incineration.

This guidance fulfills section 343 of the FY 2022 National Defense Authorization Act (NDAA), which prohibits the incineration of DoD PFAS materials until DoD issues guidance implementing 1) the December 2020 EPA Interim Guidance on the Destruction and Disposal of Perfluoroalkyl and Polyfluoroalkyl Substances and Materials Containing Perfluoroalkyl and Polyfluoroalkyl Substances (hereinafter referred to as the EPA guidance), and 2) section 330 of the FY 2020 NDAA.



## What does the DoD PFAS Disposal Guidance say?

The guidance directs the DoD Components to dispose of or destroy PFAS in the most protective, effective, and technologically-sound manner. The guidance complies with section 343 of the FY 2022 NDAA and is consistent with the EPA guidance.<sup>1</sup> DoD is committed to using and advancing the best available science and treatment technologies to treat, destroy, and dispose of PFAS and has identified disposal options with the most stringent controls where an environmental regulator has issued a permit for the facility.

In addition to these four DoD-wide options, the DoD Components will consider onsite hazardous waste storage on a site-specific basis, and may consider underground injection control, consistent with the DoD guidance. The DoD Components, upon notification to the Office of the Assistant Secretary of Defense for Energy, Installations, and Environment, may also consider, on a site-specific basis, other existing and developing PFAS treatment or destruction technologies that are approved/permitted by the appropriate State or Federal regulator, instead of utilizing hazardous waste incinerators.

DoD has identified the following four commercially available options to destroy or dispose of DoD PFAS-containing materials, in the order of consideration:

- **Carbon reactivation units with environmental permits (for used granular activated carbon only).**
- **Hazardous waste landfills with environmental permits.**
- **Solid waste landfills with environmental permits that have composite liners, and gas and leachate collection and treatment systems.**
- **Hazardous waste incinerators with environmental permits.**

<sup>1</sup>Interim Guidance on the Destruction and Disposal of Perfluoroalkyl and Polyfluoroalkyl Substances and Materials Containing Perfluoroalkyl and Polyfluoroalkyl Substances, Environmental Protection Agency, (Dec. 18, 2020, <https://www.epa.gov/pfas/interim-guidance-destroying-and-disposing-certain-pfas-and-pfas-containing-materials-are-not>).



## How is DoD incorporating environmental justice principles when addressing PFAS?

DoD acknowledges that many of the communities surrounding our military installations are communities with environmental justice concerns and shares the Administration's commitment to addressing PFAS, safeguarding public health, and advancing environmental justice. Through this guidance, we address exposures to communities with environmental justice concerns (e.g., drinking water) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, also known as Superfund). In addition, DoD actively seeks public participation in the CERCLA cleanup process, and additional public outreach and engagement (e.g., Restoration Advisory Boards) to ensure that the voices and lived experiences of communities with environmental justice concerns inform DoD's work. We also address impacts of PFAS releases and cleanup on communities with environmental justice concerns by supporting the Superfund Community Involvement Toolkit referenced in the EPA guidance.

We considered the potential impacts to communities that exist near landfills and hazardous waste incinerators where PFAS disposal and destruction could take place. Through this work, we found that a disproportionate number of landfills and other hazardous waste facilities,

such as incinerators, are located in communities with environmental justice concerns. DoD used EPA's Environmental Justice Screening and Mapping Tool ("EJScreen", <https://www.epa.gov/ejscreen>) to identify potential impact to communities living near PFAS destruction or disposal sites identified in this guidance, as well as communities surrounding our military installations where PFAS cleanups are ongoing and firefighting foam that contains PFAS will be replaced. DoD considered the relative risk between its top priority of addressing elevated levels of PFAS in drinking water from DoD activities versus indirect potential PFAS exposures from destruction and disposal facilities. In choosing among disposal options, DoD paid particular attention to the additional oversight and controls provided at disposal and destruction facilities with environmental permits to ensure the least exposure to communities.

**DoD will explore new partnership opportunities with EPA and other Federal agencies to advance environmental justice in accordance with Executive Order 14096. DoD is committed to early and meaningful engagement with communities and will also continue to identify opportunities for engagement and provide updates on its PFAS cleanup progress. For additional information regarding OSD's current PFAS-related outreach efforts, see DoD's PFAS website and the "Public Outreach" page at <https://www.acq.osd.mil/eie/eer/ecc/pfas/po/index.html>.**



## What are the potential health effects from PFAS?

PFAS is found in everyday consumer items – from nonstick cookware to water-resistant clothing. PFAS is also found in essential use applications such as in microelectronics, batteries, and medical equipment. Reports indicate most people in the United States have been exposed to PFAS and have PFAS in their blood. Health monitoring studies show PFAS is most prominently detected in workers associated with manufacturing activities and in communities with elevated levels of PFAS in their drinking water. Current scientific research suggests that exposure

to high levels of certain PFAS may lead to adverse health outcomes such as reproductive effects (e.g., decreased fertility), immune effects, and increased risk of some cancers. The science on PFAS is evolving.<sup>2</sup> There is extensive research being done to determine where PFAS exist and what impact they have on human health and the environment.

**Additional information regarding PFAS exposure can be found on the EPA website (<https://www.epa.gov/pfas>) and on the Centers for Disease Control and Prevention's Agency for Toxic Substances and Disease Registry website (<https://www.atsdr.cdc.gov/pfas/>).**

<sup>2</sup>White House Office of Science and Technology Policy (OSTP), National Science and Technology Council, *Per- and Polyfluoroalkyl Substances (PFAS) Report*, [https://www.whitehouse.gov/ostp/news-updates/2023/03/14/nstc\\_pfas\\_report/](https://www.whitehouse.gov/ostp/news-updates/2023/03/14/nstc_pfas_report/), March 2023.



For more information regarding DoD's PFAS efforts visit: [www.defense.gov/pfas](http://www.defense.gov/pfas)