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Senate Committee on Homeland Security and Governmental Affairs

By: Mr. Richard Kidd
Deputy Assistant Secretary of Defense (Environment and Energy Resilience)
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Chairman Peters, Ranking Member Portman, and distinguished members of the Committee: Thank you for the opportunity to discuss the Department of Defense' response to per- and polyfluoroalkyl substances (PFAS) in Michigan communities and the related interagency and intergovernmental coordination. The Department is committed to addressing our releases of chemicals under the federal cleanup laws, and protecting the health of our personnel, their families, and the communities in which we serve. We must also protect the environmental resources that the country has placed in our care.

Thanks to strong and consistent support from Congress, the Department has been able to establish and maintain a mature, effective cleanup program. This program follows best available science to address the highest risks first, successfully addressing risks to human health and the environment and mitigating impacts from DoD activities. Nonetheless, all should understand that cleanup is a long-term endeavor, requiring sustained funding and persistent attention.

Many of the hardest clean-up challenges remain to be addressed. We are committed to continuously improving the responsiveness of the program, incorporating advanced technologies, best practice and new knowledge as rapidly as possible. And, while this program is both legally and technically complex, its underlying purpose is simple: to address the releases we made and remain accountable to the American people.

Interagency Cooperation

The Department recognizes that working with other Federal Agencies, particularly the Environmental Protection Agency (EPA), is essential to maintain progress and address the particularly tough challenges related to PFAS.

For DoD to be effective we need clear, enforceable, implementable and predictable standards to guide our work. It is for this reason that we welcome ongoing formal rule-making efforts, led by EPA, to establish such enforceable standards for PFAS. For example, the PFAS drinking water regulatory process, based on science and giving due consideration to technical feasibility and economic factors, should result in an outcome that will guide the Department's efforts for decades to come.

The Department also cooperates with EPA in the area of research and development. A partnership between EPA and the Strategic Environmental Research and Development Program (SERDP) has produced draft Method 1633, an analytical method to test for 40 PFAS in

wastewater, surface water, groundwater, soil, biosolids, sediment, landfill leachate, and fish tissue. In addition, SERDP and the Environmental Security Technology Certification Program (ESTCP) are sponsoring research by scientists and engineers on projects ranging from PFAS thermal destruction mechanisms to ecotoxicity.

Finally, DoD participates in a range of inter-agency working groups and committees focused on PFAS. The Council on Environmental Quality leads the Interagency Policy Committee on PFAS and the Office of Science and Technology Policy continues to coordinate accelerated PFAS research within the National Science and Technology Council's Joint Subcommittee on Environment, Innovation, and Public Health. DoD is an integral participant in both groups as they continue to assess the need for new policies and scientific research that result from emerging information about PFAS.

Defense Environmental Restoration Program: Structure and Cleanup Progress to Date

The Defense Environmental Restoration Program (DERP) (10 United States Code § 2700-2711) provides authorities to DoD to perform and fund its cleanup actions, and requires they be carried out in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980. Our response is further guided by EPA regulations and the best available science in the areas of toxicology, chemical detection/propagation, and remediation techniques. While the Department establishes overall goals and guidelines for the program, implementation is the responsibility of the individual DoD Components. Each Component is responsible for planning, execution, oversight, and communication of clean-up activities on their respective installations. These activities reflect a long-standing commitment to follow a nation-wide risk-based framework to apply available funding to highest risk sites first.

DERP addresses two categories of sites—the Installation Restoration Program (IRP) which manages the cleanup of chemicals released to the environment, and the Military Munitions Response Program (MMRP) which addresses former military range sites known or suspected to contain unexploded ordnance, discarded military munitions, or munitions constituents. Our cleanup program includes response actions at active military bases, locations closed through the Base Realignment and Closure (BRAC)¹ process, and Formerly Used Defense Sites (FUDS)² properties within the United States.

By the end of Fiscal Year (FY) 2021, the Department, in cooperation with state agencies and the EPA, has completed cleanup activities at 88 percent of IRP sites – out of a total of 34,638 sites – and is now monitoring the results to ensure these completed cleanups remain protective. While we have made significant progress, the remaining sites represent more complex cleanups requiring more time, a remedy based on advanced technology, or sites impacted by chemicals of emerging concern or by PFAS.

¹ BRAC locations were authorized for closure or realignment by Congress under one of the five BRAC rounds

² FUDS are properties that were formerly owned by, leased to, or otherwise possessed by the United States and under the jurisdiction of the Secretary of Defense prior to October 17, 1986.

DoD Environmental Restoration Funding

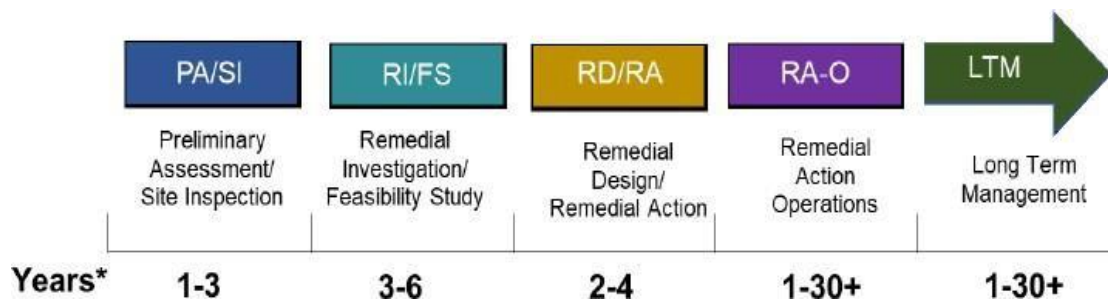
Since the Defense Environmental Restoration Account(s) (DERA) were established in the 1980s, the Department has invested approximately \$45B to clean up environmental sites on our active bases and FUDS, \$13B in the last 10 years alone. Despite these investments, according to the *United States DoD Agency Financial Report for FY2021*, the Department has an Environmental Liability of over \$29B in these areas and these liability numbers will increase as the full scope of PFAS related response activities becomes more defined.

In FY2022 the final Congressional appropriation for the DERA was \$1.5B, including Congressional adds exceeding \$450M. Congress has been very generous with DERA funding, appropriating more than \$1.5B above our requested funding levels since 2018 alone. This has allowed us to address impacts from hazardous substances or pollutants or contaminants, including PFAS. We appreciate this investment that is essential in developing and executing a cleanup that takes several years.

The CERCLA Cleanup Process

DoD follows the CERCLA, as amended, and long-standing EPA regulations for all chemicals in our cleanup program. CERCLA provides a consistent, science-based approach across the nation for cleanup and includes environmental regulators and public participation. The DERP statute provides authorities to DoD to perform and fund these actions, and requires they be carried out in accordance with CERCLA. DoD, like other Federal agencies, is specifically authorized under CERCLA Section 104 to take cleanup action to address “pollutants or contaminants” as well as chemicals designated as a CERCLA hazardous substances. DoD works in collaboration with EPA, other Federal agencies, and communities throughout this process.

DoD identifies several key steps in the CERCLA process for carrying out remedial actions. The approximate time it takes DoD to complete each step, are shown in the figure below:



In addition to CERCLA remedial actions, DoD can undertake removal actions which are typically shorter-term actions to address immediate threats to public health.

Community Engagement throughout the Cleanup Process

A fundamental tenet of DoD’s cleanup program is community engagement. Throughout the

cleanup process, we engage with the communities in which we serve. There are several opportunities for public participation as we move through the cleanup process, and DoD shares information on the status of the cleanup and site-specific cleanup data through several outreach practices. For example, before DoD selects the remedy in a decision document, it issues a proposed plan for the cleanup action, and provides an opportunity for public comment. DoD may also hold public meetings to discuss the proposed cleanup action, post information about the cleanup on the installation website, and is required to have an information repository with the supporting cleanup data available to the community (often located at a local public library).

In addition to the traditional public participation opportunities mentioned above, DoD also has some DoD-unique community engagement practices for our cleanup sites. One of our key community engagement tools is the Restoration Advisory Board (RAB), which provides communities or individuals affected by DoD cleanup activities with a forum for focused dialogue on the installation's cleanup program. DoD establishes a RAB when there is sufficient and sustained community interest in the installation's on-going cleanup efforts. RABs are community-oriented forums that encourage and facilitate communication between citizens and installation decision-makers regarding cleanup at active or BRAC installations and FUDS properties. RAB participants may include representatives from the community, installation, State, local or tribal governments, local activities, and federal, State or local regulatory agencies. Participants review cleanup progress and provide comments and advice to the installation's decision-makers.

The Department recognizes that effective and robust RABs are the best means to ensure transparency and collaboration at the local level. The Department values input from RABs and for these reasons we are undertaking a deliberative process to evaluate ways in which the RABs can be improved, including how we provide administrative and financial support to RABs, to ensure they are sufficiently resourced to create effective partnerships. In addition, RAB members can use the Technical Assistance for Public Participation (TAPP) grant program to obtain private sector, independent technical assistance to help them better understand the scientific and engineering issues underlying an installation's environmental cleanup activities. RABs may use TAPP funding to translate crucial public documents and prepare documents using non-technical language. RABs are eligible to receive TAPP funding when they need support reviewing human health risks, assessing technology, interpreting technical documents, and participating in relative risk evaluations, and other technical expertise is not available or the technical assistance will improve the effectiveness and community acceptance of the cleanup.

DoD is planning to develop additional guidance or a "best practices" guide to augment the current DoD RAB Handbook, which lays out the regulatory requirements for RABs. As part of this overall effort, the Department welcomes community members input for consideration to ensure RABs fulfill their intent as laid out in the regulation. Following the issuance of the updated RAB guidance, the Department intends to provide training to facilitate a better understanding from all stakeholders on the purpose and benefits of both RABs and TAPPs.

As of the end of FY2021, DoD was working with 240 RABs on active installations, BRAC locations, and FUDS properties. DoD has supported a relatively consistent number of RABs since it established the program in 1994. In FY2021, DoD obligated \$3.1 million to support

RABs. Obligations vary from year to year based on community interest and participation, as well as cleanup requirements.

Issue of Concern: PFAS

The Department recognizes the Congressional and Public interest in addressing requirements related to the cleanup of Per- and Polyfluoroalkyl Substances or PFAS. For this reason, we have invested significant effort into understanding and addressing the challenges posed by this particular class of chemicals.

PFAS are a large class of chemicals found in many consumer products, industrial products, as well as in a certain firefighting foam called aqueous film forming foam (AFFF). AFFF is mission critical to DoD because it quickly extinguishes petroleum-based fires, thus minimizing loss of life and valuable equipment. There is significant attention on DoD's use of AFFF and the subsequent potential impact to human health and the environment.

The Department established a PFAS Task Force in July 2019. This Task Force provides strategic leadership and direction to ensure a coordinated, aggressive, and holistic approach on DoD-wide efforts to address PFAS. The PFAS Task Force continues to focus on four main goals:

- Mitigating and eliminating the use of the current AFFF;
- Fulfilling our cleanup responsibilities;
- Understanding the impacts of PFAS on human health; and
- Expanding PFAS-related public outreach.

The Department has been following the science and direction of Congress for a number of years. Congress has provided the Department with significant additional funds to address PFAS clean-up as well as a clear set of requirements to guide our actions. One of the most notable of the FY2022 cleanup-related National Defense Authorization Act (NDAA) requirements being public disclosure of DoD drinking water testing results (section 345). The Department issued guidance to the Services and is now publicly disclosing final PFAS drinking water results taken from within a covered area, within 20 days of receiving them.

Cleanup. One of the top priorities of the PFAS Task Force is cleanup, and DoD is committed to addressing DoD's PFAS releases under CERCLA and sharing information with our DoD families and community members in an open and transparent manner. In May 2016, the EPA issued a drinking water lifetime health advisory (HA) of 70 parts per trillion for two PFAS, perfluorooctane sulfonate (PFOS) and perfluorooctanic acid (PFOA). Since that time, DoD has followed CERCLA to address its releases of PFAS. DoD is performing an assessment at 700 installations, where DoD may have used or potentially released PFAS. As part of the CERCLA process, DoD is addressing both drinking water (short-term action) and groundwater (long-term action) and works in collaboration with EPA, other Federal agencies, state agencies, and communities throughout this process.

In total, DoD has obligated approximately \$1.6 billion to address PFAS releases through FY2021

and current estimates for FY2022 and beyond exceed \$2.4 billion. These estimates are expected to grow as ongoing assessments are completed and new regulations are put into place.

For example, as of March 31, 2022, DoD has completed initial assessments at 305 of 700 military installations and State Guard facilities, where PFAS releases may have occurred. While 96 required no further action, DoD is reevaluating those installations to incorporate new EPA regional screening levels for PFOS at 4 parts per trillion (ppt) and PFOA at 6 ppt, released in May 2022. At facilities that only considered AFFF sources in their initial assessments, additional investigations are being planned to assess the potential contribution of non-AFFF sources. This may affect the Department's ability to complete all initial assessments by end of 2023.

Separately, in June 2022, EPA also announced updated interim lifetime drinking water health advisories (HAs) for PFOS at 0.02 ppt and PFOA at 0.004 ppt. These levels for PFOA and PFOS are a significant reduction from the May 2016 health advisories of 70 ppt and are based on draft analyses that are undergoing review by EPA's Science Advisory Board. As stated by EPA, these levels are non-regulatory, non-enforceable, and, currently below the level of both detection (determining whether or not a substance is present) and quantitation (the ability to reliably determine how much of a substance is present) of 4 ppt.

EPA is developing a proposed National Drinking Water Regulation for publication by the end of 2022 for PFOA and PFOS. As EPA undertakes this action, EPA is also evaluating additional PFAS and considering regulatory actions to address groups of PFAS. EPA anticipates finalizing the rule by the end of 2023. The proposal will include both a non-enforceable Maximum Contaminant Level Goal (MCLG) and an enforceable standard, or Maximum Contaminant Level (MCL) or Treatment Technique. EPA considers the ability to measure and treat a contaminant as well as costs and benefits in setting the enforceable standard. Once finalized, these drinking water standards will apply nationwide to drinking water purveyors and will be incorporated into the cleanup process.

In anticipation of the EPA regulation through a future MCL and to account for emerging science that shows potential health effects of PFOS and PFOA at levels lower than 70 ppt, the Department is evaluating its efforts to address PFAS in drinking water. We remain committed to fulfilling our cleanup responsibilities, operating within the law and authorities provided by the federal cleanup law, and clearly communicating and engaging with members of Congress and the American people for whom we serve.

Conclusion

DoD is taking deliberate and sustained action to address risks to human health and the environment resulting from DoD activities by following the CERCLA process. The DoD Components prioritize resources to meet cleanup goals in a risk-based manner. Specific to PFAS, the Department is incorporating EPA's revised screening levels into its clean-up efforts, including reevaluating installations where previous screening levels suggested "no further

action” was required. The Department is evaluating its approach to addressing PFAS in drinking water in anticipation of EPA’s regulation to be proposed by the end of 2022 that will take into account emerging science that shows potential health effects at levels lower than the previous EPA HA of 70 ppt. DoD will continue to address the effects of its releases to ensure that it protects the health of its DoD personnel, their families, and the communities in which they serve, as well as protect the environment.