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Department of the Air Force



Presentation

Before the Senate Homeland Security
and Governmental Affairs Committee

***Improving Interagency and
Intergovernmental
Coordination on PFAS for
Michigan Communities***

Witness Statement of

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Introduction

Chairman Peters, Ranking Member Portman, and distinguished members of the Committee, thank you for the opportunity to describe how the Department of the Air Force is addressing per- and polyfluoroalkyl substances (PFAS) at our installations. The Department of the Air Force is committed to continuously improving the responsiveness of its cleanup program, including addressing PFAS, by incorporating advanced technologies, best practices and validated science as rapidly as possible. And while this program is both legally and technically complex, its underlying purpose is simple: to address the releases attributable to the Air Force in a manner that transparently protects the American people.

Overview of the Department of the Air Force Environmental Restoration Program

The Department of the Air Force Environmental Restoration Program conducts cleanup in response to releases of hazardous substances, pollutants and contaminants resulting from our mission activities. It operates on a risk-based framework, which prioritizes the sites posing the greatest risk to human health or the environment, to ensure we address our worst sites first. We comply with all applicable legal requirements governing cleanup, including the Defense Environmental Restoration Program (DERP) statute; the Comprehensive, Response Compensation and Liability Act (CERCLA); and associated implementing regulations. Additionally, our cleanup activities are guided by policies issued by the Department of Defense and the Environmental Protection Agency (EPA).

The Department of the Air Force Environmental Restoration Program addresses two categories of cleanup sites: Installation Restoration Program sites and Military Munitions Response Program sites. The Environmental Restoration Program covers Air Force, Space Force, Air Force Reserve, Air National Guard, and Base Realignment and Closure (BRAC) installations in the United States and U.S. territories. The Defense Environmental Restoration Account is authorized to fund cleanup at Air Force, Space Force, and Reserve installations, and at certain Air National Guard installations, including funding response to perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) releases. My testimony today focuses on how the Department of the Air Force addresses PFAS under the Installation Restoration Program.

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Our first objective is to identify, investigate, and prevent human exposure to hazardous substances, pollutants or contaminants attributable to Department of the Air Force operational activities at our installations, off-site locations where these substances may have migrated, and sites the Department of the Air Force formerly owned. Second, we work to complete the environmental restoration process for impacted soils, groundwater, and/or surface water. Third, we emphasize maximizing transparency, public participation, and collaboration on our cleanup activities through engaging with federally recognized Tribes, our regulatory partners, Alaska and Hawaii native organizations, and the local communities that surround and support our installations.

Department of the Air Force PFAS Cleanup Progress

PFAS encompasses hundreds of synthetic fluorinated chemicals found in many different consumer, commercial, and industrial products. In 1970, the Department of the Air Force began using the Aqueous Film Forming Foam (AFFF) firefighting agent that contained PFOS and PFOA because it provided rapid extinguishment and protection against vapor release. When more environmentally responsible AFFF formulas were added to the DOD's qualified products list for firefighting agents in late 2015, the Department of the Air Force started phasing out use of legacy AFFF. Although the Air Force expects the legacy use of AFFF for firefighting is the primary source of PFAS at Department of the Air Force sites, we are committed to performing additional investigations and learning more about PFAS use and releases at our sites

The Department of the Air Force is committed to using the CERCLA process to address PFAS releases resulting from our mission activities to protect the health of our personnel, their families, and the communities in which we serve. The cleanup process at CERCLA sites is complex, which is why meaningful community involvement and engagement are fundamental to our cleanup program. We are committed to transparency about our restoration program with Congress, state officials, regulators and our local communities. We use multiple venues to share information including formal Restoration Advisory Boards, *ad hoc* community meetings, public-facing websites and installation commander interactions.

As of Jun 30, 2022, the Department of the Air Force completed Preliminary Assessments at 203 of 204 (99%) currently identified installations, of which 13 required no further action, while

191 continued to the next step in the CERCLA process. While 13 required no further action, the Air Force is reevaluating those installations to incorporate new EPA screening levels released in May 2022 for PFOS at 4 parts per trillion (ppt) and PFOA at 6 ppt. These assessments initially look at whether there was a likely release of contaminants due to Department fire-fighting related activities. The next investigatory phase, a CERCLA Remedial Investigation, is critical to providing comprehensive information about the breadth and impacts of PFAS, and has been initiated at 85 installations. Consistent with Department of Defense guidance and CERCLA, the Air Force will assess other potential sources of PFAS releases, like metals plating, in the near future. This investigation phase can take several years to complete. As described below, we may undertake interim response actions, such as installing a filter on a private drinking water well or intercepting and treating PFAS-impacted groundwater before it enters a lake, to protect the health of our communities while information gaps are filled and a growing body of scientific work is underway. In total, the Department of the Air Force has obligated nearly \$1 billion on PFAS response through FY2021.

The Department of the Air Force Environmental Restoration Program funding has remained stable over the last three years. The dedicated additional PFAS funding Congress provided to DoD has greatly facilitated our ability to promptly implement drinking water response actions and accelerated our efforts to mitigate the human health and environmental impacts of PFAS.

Department of the Air Force PFAS Restoration Program Examples

The Department of the Air Force BRAC and Air National Guard sites in Michigan reflect both the successes and challenges we face in investigating and remediating these emerging contaminants across the country. I will briefly describe our activities at the former Wurtsmith Air Force Base BRAC site and Selfridge Air National Guard Base, to illustrate how the Department of the Air Force applies the CERCLA process to investigate and remediate PFAS.

Established in 1923, the former Wurtsmith AFB served primarily as a combat crew and bomber training base throughout its 70-year history. It housed the 332d fighter group, which includes important heritage associated with our Tuskegee Airmen who were awarded the

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Presidential Unit Citation for their longest bomber escort mission to Berlin, Germany on March 24, 1945. Wurtsmith was selected for closure under the 1991 BRAC decision and was officially closed on June 30, 1993. Most of the acreage of the former base has been transferred for reuse.

The Air Force began the Preliminary Assessment and Site Investigation at Wurtsmith in 2016 and completed it in 2019. Twenty potential AFFF release areas were identified at the former base. Within the potential release areas, the Air Force sampled 54 private and two community water system supply wells from 2015 to 2020. Of the 54 wells, only one private residence drinking water well had PFOS/PFOA concentrations above the EPA's 2016 lifetime health advisory level, and was connected to a public water supply

The Site Inspection confirmed 17 out of 20 of these potential release sites. The Air Force then implemented an expanded Site Inspection at seven of the release areas to further evaluate groundwater flow pathways and potential impacts to down gradient drinking water wells off base.

The CERCLA process is comprehensive and lengthy, and interim removal actions are often needed to protect human health and the environment before an ultimate remedy is selected and implemented. The Department of the Air Force is implementing a number of interim removal actions at the former Wurtsmith AFB. For example, starting in 2015 and through the present day, the Department has implemented four groundwater pump and treat systems to intercept PFAS-impacted groundwater before it enters Clark's Marsh or Van Etten Lake. The Department is currently constructing a fifth pump and treat system and has plans for a sixth to be completed in December 2024. The Air Force designed these systems to meet discharge requirements established by with the Michigan Department of Environment, Great Lakes and Energy (EGLE).

The Air Force also completed a time-critical removal action in October 2021 to remove PFOS/PFOA impacted soil at a former fire training area. The soil was excavated to minimize migration of PFOS and PFOA from the soil to groundwater and surface water. A total of 24,780 tons of impacted soil was excavated and transported for disposal at a hazardous waste landfill.

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The Remedial Investigation phase began in 2020. Once the Remedial Investigation is completed, which includes a risk assessment, the Department of the Air Force will examine what remedies are feasible and select and implement a final remedy. Federal and Michigan cleanup standards will be evaluated at this stage to determine if they are Applicable or Relevant and Appropriate Requirements, as required by CERCLA 121(d).

All of the steps mentioned above require extensive collaboration. Wurtsmith BRAC Cleanup Team meetings provide a valuable forum for the Department of the Air Force to work closely with EGLE throughout the CERCLA process. The Department of the Air Force also incorporates the very valuable hydrogeological information and analytical data collected by EGLE into our hydrogeological conceptual site model for the former base and surrounding area. We look forward to continuing to work closely with the EGLE technical team as this program moves forward.

In addition to the BRAC Cleanup Team, the Department of the Air Force re-established the Restoration Advisory Board (RAB) at the former Wurtsmith AFB in November 2017 at the request of the community. The RAB, which is comprised of eight government and nine community stakeholders, offers community members the opportunity to discuss proposed cleanup decisions and provide input to the Air Force. Because representatives of EGLE, the Michigan Department of Health and Human Services (MDHHS) and the District Health Department No. 2. participate in the RAB, the RAB also offers members and the public an opportunity to share their questions, concerns and ideas with the State agencies involved in the cleanup. We appreciate the contributions of these dedicated community members to the successful implementation of the CERCLA process. To ensure that RABs continue to be effective and robust at Wurtsmith and other sites, the Department is undertaking a deliberative process to evaluate ways in which the RABs can be improved.

Selfridge ANGB is one of the oldest continuously operating military airfields in the nation and marked 105 years of service this year. More than 40 tenants, including components of the U.S. Army, Navy, Air Force, Marine Corps, Coast Guard and Customs & Border Protection, are located here.

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The Preliminary Assessment and Site Inspection phases of the CERCLA process at Selfridge are complete, and the Remedial Investigation phase is projected to begin in 2023. Once the Remedial Investigation, including the risk assessment, is complete, the Department of the Air Force will perform the Feasibility Study and select and implement the remedy. As described in the Wurtsmith summary above, the Department will evaluate Federal and Michigan standards to determine if they are applicable or relevant and appropriate requirements during the Feasibility Study, as required by CERCLA 121(d).

The City of Mount Clemens supplies drinking water to Selfridge ANGB and surrounding communities. The “Calendar Year 2021 Drinking Water Quality Report” indicated “very low” or non-detectable concentrations of the seven PFAS compounds sampled. Storm water outfall samples, however, detected PFOS concentrations above Michigan’s Water Quality Standard of 11 parts per trillion (ppt) migrating into Clinton River and Lake St. Clair. As a result, Selfridge ANGB implemented a storm water characterization study in 2019. Based on that study, an interim removal action pilot study was launched, and two storm water treatment systems were installed, one in January 2020 and the other in November 2021.

The objective of this removal action pilot study is to test the viability of a system in the field and then determine if a full-scale application is appropriate. Although both treatment systems have achieved significant decreases in PFOS concentration, the effluent concentrations still exceed the EGLE water quality standard. In December 2021, EGLE issued a letter requesting an Administrative Order on Consent due to the continued PFOS concentrations above the state standard. The Department of the Air Force is currently working with EGLE on the terms of the Administrative Order of Consent. Finally, the Department is preparing to send out a survey to community stakeholders to determine if there is sufficient and sustained interest in establishing a Restoration Advisory Board at Selfridge ANGB.

Interagency and Intergovernmental PFAS Policy Solutions

The Department of the Air Force recognizes that addressing PFAS impacts requires close collaboration with our federal and state partners. I and my colleagues at DoD are working closely with other federal agencies who are learning more about PFAS and how to address PFAS

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impacts. This collaboration includes my federal colleagues at EPA and the Agency for Toxic Substances and Disease Registry (ATSDR) – who join me here today.

Where the Department of the Air Force is the known source of PFOS and/or PFOA in drinking water, the Department has taken immediate steps in accordance with DoD guidance to ensure no one is drinking water above EPA's 2016 Health Advisory of 70 parts per trillion. If sampling identified human drinking water levels above 70 parts per trillion, the Department initiated immediate response actions to provide access to alternative drinking water sources such as: bottled water; point-of-use (faucet) filtration; whole-house filtration; municipal water supply hookup; municipal water treatment; or new well drilling.

On June 15, 2022, EPA announced updated interim lifetime drinking water health advisories for PFOS at 0.02 parts per trillion and for PFOA at 0.004 parts per trillion (or 4 parts per quadrillion). These levels are a significant reduction from the 2016 EPA Health Advisory of 70 parts per trillion, and are based on draft analyses that are undergoing review by EPA's Science Advisory Board. The interim Health Advisory levels are below current laboratory analytical quantitation limits of approximately 4 parts per trillion, which means they are lower than what can currently be measured. In anticipation of EPA PFAS drinking water regulation, the Department of Defense is evaluating its efforts to address PFAS in drinking water to account for emerging science that shows potential health effects at levels lower than 70 parts per trillion.

The Departments of Defense and Air Force are committed to working with Congress and our federal, state and community partners to meet the challenges of holistically address PFAS risk, remediation, and research.

The Department of Defense is already contributing to this holistic approach through its work with EPA to develop expanded analytical capabilities to test for 40 types of PFAS compounds in wastewater, surface water, groundwater, soil, biosolids, sediment, landfill leachate, and fish tissue. This research partnership between EPA and the DoD will significantly expand the Department of Defense's and the nation's ability to detect and ultimately address PFAS.

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The Department of Defense is also making significant contributions to the development and deployment of treatment and remediation technologies. The Department of the Air Force is implementing research initiatives to accelerate cleanup and improve treatment of PFAS through the Department of Defense's Strategic Environmental Research and Development Program and Environmental Security Technology Certification Program. In parallel with this effort, the Department of the Air Force continues to provide substantial funding for field-scale demonstration validation projects of emerging technologies. Collaboration with EPA, state agencies and universities is critical to this effort, with the findings made publicly available.

Conclusion

The main priority of the Department of the Air Force Environmental Restoration Program is to protect our Airmen, Guardians, civilian workforce and the families who live and work on our installations and the surrounding communities. We remain committed to fulfilling our cleanup responsibilities and welcome the opportunity to be part of a coordinated response to holistically address PFAS research, risk, and remediation.