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House Armed Services Committee
Subcommittee on Readiness

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Hearing: September 15, 2020

Chairman John Garamendi, Ranking Member Lamborn, and distinguished members of the Sub-Committee. Thank you for the opportunity to discuss DoD's actions related to per- and polyfluoroalkyl substances (PFAS).

Background:

PFAS refers to the entire class of per- and polyfluoronated alkyl substances, of which perfluorooctane sulfonate (PFOS) and perfluorooctanic acid (PFOA) are the most well-studied substances. These substances are present in many industrial and consumer products because they increase a product's resistance to heat, stains, water, and grease. As such, they are not uniquely attributable to Department of Defense (DoD) activities.

DoD's use of PFAS started in the 1970s, with the introduction of aqueous film forming foam (AFFF) for aircraft fuel fire-fighting purposes. DoD is one of many users of AFFF, with other major users including commercial airports, the oil and gas industry, and local fire departments. AFFF is mission critical because it quickly extinguishes petroleum-based fires, thus minimizing loss of life.

In July 2019, as one of his first acts, Secretary Esper stood up a Task Force to provide strategic leadership and direction to ensure a coordinated, aggressive, and holistic approach on DoD-wide efforts to proactively address PFAS. The Task Force has focused on three goals: Mitigating and eliminating the use of the current AFFF; Understanding the impacts of PFAS on human health; and Fulfilling our cleanup responsibility related to PFAS.

To accomplish these goals and support the Department's commitment to the health and safety of our Service members, their families, the DoD civilian workforce, and the communities in which DoD serves, priority Task Force actions include:

- Researching a PFAS-free firefighting foam;
- Providing information on health effects to DoD stakeholders;
- Ensuring consistent investigation and cleanup of past releases; and
- Coordinating DoD efforts with other Federal agencies.

Drinking Water On-Base:

On May 19, 2016, the Environmental Protection Agency (EPA) issued Safe Drinking Water Act (SDWA) lifetime Health Advisories (HA) and recommended actions for drinking

water systems with individual or combined levels of PFOS and PFOA greater than 70 parts per trillion (ppt). DoD began proactively taking action to address drinking water impacted by DoD releases of PFOS and PFOA, even though the lifetime HAs are not regulations under the SDWA and are not enforceable drinking water standards.

DoD provides drinking water to approximately 2 million people on its installations worldwide. The Department began testing DoD-operated drinking water systems worldwide in June 2016 to identify drinking water that exceeded EPA's HA levels. DoD completed testing of all 524 DoD-owned drinking water systems in August 2017. These tests determined that twenty-four DoD drinking water systems contained PFOS and PFOA above EPA's HA levels. These DoD installations followed the EPA recommendations issued with the HA, to include providing consumers with bottled water or additional water treatment. In cases where DoD purchases drinking water, the Department identified 12 drinking water systems where the results were above the EPA HA level. These installations worked with the drinking water supplier(s) to encourage appropriate actions. To ensure that we maintain this information, this sampling data has been archived in a centralized DoD database.

The Department issued a new policy in March 2020 for continued periodic testing of DoD-operated drinking water systems for certain PFAS, including PFOS and PFOA. Enhancing our vigilance, the Military Departments will resample any DoD-operated drinking water systems that have not been tested within the last year by December 31, 2020. DoD will resample periodically based on the results. For example, if PFOS and PFOA are detected, but are below EPA's HA levels, DoD will resample quarterly for one year and once every two years thereafter until results are below the method reporting limit. All data is to be made available on the installation's public website.

For consistency across the nation, in July 2020 the Department issued a policy for monitoring drinking water at installations where we purchase drinking water. The Military installations are required to reach out to their drinking water provider and request the most recent PFAS sampling data. If the recent PFAS sampling data is not available or the provider will not re-sample, the military installation is required to sample the drinking water supplied at the point closest to the entry into the DoD distribution system. All data is to be made available on the installation's public website also.

Remediation:

DoD has also addressed PFOS and PFOA in drinking water off our installations under the Federal cleanup law, the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (42 USC § 9601 et seq.). CERCLA provides a consistent, science-based approach across the Nation for cleanup and includes environmental regulators and public participation. DoD follows the CERCLA process to fully investigate a release and determine the appropriate cleanup actions based on risk. The Department addresses on-base and off-base migration of its PFAS releases to protect human health and appropriately spend taxpayer dollars. The Defense Environmental Restoration Program (DERP) (10 USC 2701-2711) 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" like PFAS. DoD is thus taking cleanup actions, even though PFAS are not designated as CERCLA hazardous substances.

DoD's priority is to quickly address PFOS and PFOA in drinking water above EPA's HA levels from DoD activities, under the CERCLA process. DoD's actions are consistent with EPA's recommended actions, which include treatment of drinking water or closing drinking water wells and providing alternative water supplies, such as bottled water or connecting private residents to public drinking water systems.

DoD prioritizes its PFAS sites for cleanup actions using the well-established CERCLA risk-based process. Under this process, the Military Departments will address sites that pose a greater potential risk to human health and the environment first. DoD uses the toxicity information from EPA's HA when assessing risk to human health under CERCLA. Under the EPA's longstanding risk assessment and hierarchy of toxicity value policies, the HA toxicity information is used to determine whether the use of CERCLA response authority at a site is warranted. In October 2019, the Department issued clarifying technical guidance to the Military Departments to ensure the consistent use of screening levels at DoD cleanup sites to determine if advancing to the remedial investigation phase is warranted. As the Military Departments move through the CERCLA process, we will follow the December 19, 2019, EPA "Interim Recommendations for Addressing Groundwater Contaminated with PFOA and PFOS."

The Department recognizes the importance of addressing PFAS in a consistent manner across DoD. To that end, we evaluated and established policies and reporting requirements to track progress toward and ensure a proactive and consistent approach to investigating and cleaning up PFAS. As a result of the DoD PFAS Task Force's efforts, the Assistant Secretary of Defense for Sustainment issued the following:

- Clarifying technical guidance to ensure a consistent approach to investigating PFAS within the DoD cleanup program;
- Guidance on the use of analytical methods for analyzing PFAS concentrations in media other than drinking water;
- A requirement for the DoD Components to report actual and planned obligations and estimated costs to investigate and clean up PFAS;
- Guidance for consistent communication and tracking of PFAS-related requirements at enduring installations outside the United States; and
- A requirement for the DoD Components to report quarterly on cleanup progress and drinking water responses at installations with known or suspected PFAS releases.

These policies and guidance documents will ensure consistency across the DoD Components and help DoD track its PFAS cleanup progress and investments. DoD works in collaboration with EPA, other Federal agencies, and communities as we move through the CERCLA process.

AFFF Replacement:

To protect our Service members and prevent releases to the environment, DoD issued a policy in January 2016 requiring the Military Departments to limit uses of AFFF to responses to emergency events and no longer use it for land-based testing and training. The Department treats each release of AFFF as a spill event, to limit environmental effects. The policy also requires the Military Departments to remove and properly dispose of local warehouse supplies of AFFF containing PFOS (other than for shipboard use), where practical. Each Military Department has been taking actions to remove this AFFF containing PFOS from its inventory.

Furthermore, in May 2019, DoD updated the Military Specification (MILSPEC) for AFFF to ensure that new supplies available for emergency firefighting responses do not contain PFOS or PFOA above the 800 parts per billion (ppb) limit of quantitation. We have also established a policy – issued in January of this year – requiring the DoD Components to track and report usage and releases of AFFF. The requirement is for annual reporting, with an additional requirement to report within 24 hours any usage or release that exceeds 10 gallons of AFFF concentrate or 300 gallons of mixed foam.

The Department is working aggressively to meet the requirements of the Fiscal Year 2020 National Defense Authorization Act (NDAA) requirements related to AFFF. There are many different circumstances where we use AFFF, so we have been aggressively identifying these situations and evaluating what needs to be done to meet the FY2020 NDAA requirements.

We are actively testing and evaluating the performance capabilities of commercially available PFAS-free firefighting agents to determine which ones may be viable alternatives to MILSPEC AFFF. We are also developing analytical techniques to test and determine that these PFAS-free agents meet the requirement to contain less than 1 ppb total PFAS, as required by the NDAA.

<u>Facilities</u>

The Department is implementing a comprehensive, methodical process to evaluate and determine the most appropriate and feasible alternatives to replace fluorinated AFFF in our facilities, such as aircraft hangars and bulk fuel facilities. In June, the Department issued a data call to collect the inventory of facilities with installed AFFF systems. This inventory is being assessed by our Fire Protection Engineers to categorize similar facility structures together and then identify viable fire protection options and criteria. We are evaluating several alternatives. One alternative could be use of a future PFAS-free MILSPEC firefighting agent as a drop in solution, if the current systems can be cleaned to ensure PFAS residues do not impact the new product. Research is underway to determine the level of decontamination possible, as this appears to be the most economical option. Other alternatives, such as conversion to high expansion foam or liquid floor drainage systems are being assessed, but would require complete system retrofit at increased costs. The Department is working to document the viable options and criteria per facility type, determine the best approaches, and then develop funding requirements and implementation schedules. Completing these actions and meeting the NDAA required schedules is a formidable task.

Joint and Shared Use Airports

Over the last several months, the Department evaluated over 200 bases – active, reserve, and National Guard – that have joint or shared use airports to determine the level of Air Rescue Fire Fighting (ARFF) support that the Military Departments provide or depend on. At these airports, there is a mixture of emergency response services with almost all currently using AFFF that meets the DoD MILSPEC. Regardless of whether the airport is joint or shared use, the level of ARFF support falls in to four categories: full, partial, minimal, or none. For context, currently the Federal Aviation Administration (FAA) requires the use of MILSPEC AFFF for civilian airports to receive Part 139 Certification to operate. However, the 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. While DoD and FAA are working on different timelines, DoD will coordinate with FAA/airports to ensure there isn't a mixture of incompatible foams (basically non-PFAS and PFAS foam) for some of the civilian/joint use airports that have both FAA oversight and DOD presence. Furthermore, we will continue to partner with FAA and the civilian airports where DoD provides full ARFF support on their Part 139 Certifications going forward. We must ensure that all of these airports – ours or the commercial airports – have the capability to respond to incidents that maintains the current level of protection for the passengers, crews, and equipment.

It is important to note that mutual aid is the cornerstone of National fire and emergency services response. The Department has well established agreements with the community fire departments surrounding our military installations. When requested by local departments, the DoD fire crews respond as an additional member and report to the Fire Incident Commander on scene. These emergencies range beyond aircraft crashes to include overturned vehicles on a highway, large industrial fires, or large structural or wildland fires. It is the collection of fire and emergency services capabilities, both military and civilian, which protect not only the lives of our Service members and their families, property, and the mission, but also protect the surrounding communities outside our installations. We will need to maintain these levels of firefighting support and understand the feasibility of using alternative foams in the future.

Finding an effective firefighting alternative that meets the life-saving performance standards of AFFF and does not have negative health or environmental effects continues to be one of the Department's top priorities. We have been and will continue to invest in research, development, testing, and evaluation to identify alternative firefighting material and practices.

There are many challenges associated with meeting the timelines established in the FY2020 NDAA. The Department is fully committed to finding and implementing solutions to successfully overcome these challenges while not compromising the safety of our service members, our firefighters, and the public that rely on our outstanding firefighting capability.

Exposure Assessment and Health Study:

We are working with the Agency for Toxic Substances and Disease Registry (ATSDR) to support their efforts to conduct an exposure assessment at not less than 8 military installations and a multi-site health study, as required by the FY2018 NDAA. To date, we have provided ATSDR $40M to begin conducting the exposure assessment and health study. DoD plans to transfer another $10M in FY2021.

Conclusion

As the Department addresses its part in responding to this national issue, we continue to work in collaboration with regulatory agencies and communities to ensure our resources are applied effectively to protect human health as part of a national effort. We must ensure our response and clean-up resources are effectively applied to result in reduced risk and exposure of personnel on our installations and in our surrounding communities. We are prioritizing our investments to those actions in order to address the greatest degree of risk. DoD has taken the lead in protecting the health of persons on and near DoD installations by following the CERCLA process to fully investigate releases and determine the appropriate cleanup actions based on risk. This is a national problem involving a wide array of industries and commercial applications, as well as many Federal and state agencies. Therefore, it needs a nation-wide solution.

In summary, DoD is proactively taking action to reduce the risks posed by PFOS and PFOA to human health. The Department is committed to mitigating PFOS and PFOA in the drinking water it supplies, as well as addressing releases to the environment under CERCLA that are the direct result of DoD's AFFF use. DoD is also investing in research to develop fluorine-free substitutes for AFFF that meet the military's stringent performance criteria, and to develop technologies to quantify and clean up PFOS and PFOA and related PFAS chemicals. These combined efforts reinforce DoD's commitment to meeting critical mission requirements while protecting human health.