Report on Department of Defense's Per- and Polyfluoroalkyl Substances Task Force Activities

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Office of the Assistant Secretary of Defense
for Energy, Installations, and Environment

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I. INTRODUCTION

Section 341, of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2022 (Public Law 117-81), codifies the Department of Defense's (DoD's) Per- and Polyfluoroalkyl Substances (PFAS) Task Force in section 2714 of title 10, United States Code, and directs the Chairman of the PFAS Task Force to report 90 days after the date of the enactment and quarterly thereafter to Congress on the activities of the Task Force. In September 2022, the Department submitted a report that responded to both the first reporting requirement and the initial quarterly report and provided an update on the DoD PFAS Task Force's activities during the first and second quarters of FY 2022. This report covers the DoD PFAS Task Force's activities during the third and fourth quarters of FY 2022.

PFAS are a large class of chemicals found in many consumer products, as well as in a type of firefighting foam called "aqueous film forming foam" (AFFF). While DoD is only one of many users of AFFF, there is significant attention on DoD's usage and the potential impacts to human health and the environment. In July 2019, the Secretary of Defense stood up a Task Force to ensure a consistent and coordinated approach to DoD-wide efforts to address PFAS. The Department is committed to continuing to address its PFAS releases under the federal cleanup law (i.e., the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, also known as "Superfund") and to aggressively pursuing a PFAS-free firefighting solution.

To support the Department's commitment to the health and safety of its service members, their families, the DoD civilian workforce, and the communities in which DoD serves, the Task Force has focused on four goals:

- Mitigating and eliminating the use of the current AFFF;
- Understanding the impacts of PFAS on human health;
- Fulfilling DoD's cleanup responsibility related to PFAS; and
- Expanding PFAS-related public outreach.

DoD notes that Congress added two additional duties for the PFAS Task Force in section 341(b) of the FY 2023 NDAA, and these two additional duties will be addressed in future reports:

- Supporting PFAS research efforts
- Ensuring our PFAS research findings are publicly available

II. DOD PFAS TASK FORCE ACTIVITIES

The PFAS Task Force strategically prioritized actions and is aggressively working to complete them by evaluating and establishing policy positions and reporting requirements, encouraging and accelerating research and development, and ensuring the DoD Components are addressing and communicating about PFAS in a consistent, open, and transparent manner.

As the PFAS Task Force continues its work to address PFAS across the Department, some highlights of activities accomplished during the third and fourth quarters of FY 2022 include:

- Hosting Deputy Assistant Secretary PFAS Public Outreach Events;
- Providing PFAS-related reports and briefings to Congress;
- Issuing PFAS-related policies/data calls/guidance;
- Completing 68 preliminary assessments/site inspections at installations being assessed for PFAS use or potential release;
- Releasing a more comprehensive and user-friendly PFAS website;
- Continuing to expand outreach and increase communications and transparency in cleanup; and
- Conducting research on more than 100 projects, including alternatives to AFFF.

Appendix A contains detailed information about the PFAS Task Force's activities during the third quarter of FY 2022 and Appendix B contains detailed information about its activities during the fourth quarter of FY 2022. The information in this report accounts for some but not all additional work that may be required as the U.S. Environmental Protection Agency issues new guidance and regulations concerning PFAS, (e.g., regional screening levels in May 2022, interim drinking water health advisories for perfluorooctane sulfonate and perfluorooctanoic acid in June 2022, a proposed national drinking water standard expected in early 2023).

III. CONCLUSION

DoD's PFAS Task Force is working to address PFAS issues in a cohesive, consistent manner while coordinating and communicating with external stakeholders. The Task Force has made significant progress toward understanding and limiting the Department's use of AFFF and researching fluorine-free alternatives to AFFF; monitoring and communicating information about the health effects of human exposure to PFAS; establishing policies and collecting data to track PFAS cleanup progress and costs; and supporting research and development efforts. The Task Force will continue to identify and provide DoD with the tools needed to address the effects of its PFAS releases, and to ensure that the Department continues to protect the health of its service members, their families, the DoD civilian workforce, and the communities in which DoD serves.

Appendix A: Per- and Polyfluoroalkyl Substances Task Force Activities During the Third Quarter of Fiscal Year 2022

Appendix A describes the Department of Defense's Per- and Polyfluoroalkyl Substances Task Force's activities during the third quarter of Fiscal Year 2022.

Appendix A: Per- and Polyfluoroalkyl Substances (PFAS) Task Force Activities During the Third Quarter of Fiscal Year (FY) 2022

Section 341 of the FY 2022 National Defense Authorization Act (NDAA) identifies the following duties of the DoD PFAS Task Force:

- Monitoring the health aspects of exposure to PFAS as found by the Secretary of Health and Human Services;
- Identifying, and funding the procurement of an effective alternative to firefighting foam containing PFAS;
- Mitigating the effects of DoD releases of PFAS; and
- Assessing the perceptions of Congress and the public of DoD's efforts to mitigate PFAS effects from DoD activities.

Monitoring health aspects of PFAS exposure

For the past several years, DoD has been monitoring the impacts of PFAS on human health, especially the studies conducted by the Agency for Toxic Substances and Disease Registry (ATSDR) within the Department of Health and Human Services (HHS). The Department looks to HHS's National Institute for Occupational Safety and Health (NIOSH) for research on occupational exposure and health indicators related to PFAS. We are supporting and monitoring research and development efforts to better understand the potential health effects of PFAS exposure, and communicating this health risk information to our employees. DoD continues to fund ATSDR for PFAS-related studies and has provided $15M this fiscal year.

AFFF Alternative Research and Development

During the third quarter of FY 2022, the Department continued to fund efforts on aqueous film forming foam (AFFF) alternatives. Several commercial products have been tested at a variety of scales from 28 square feet up to scenario-based tests at 4000- and even 6,500-square-foot pool fires with jet fuel. A variety of nozzle configurations with different degrees of aspiration as well as compressed air foams and ultra-high pressure have been tested. Data from all tests has been or will be provided to Naval Sea Systems Command to inform alternative Military Specification (MILSPEC) development. Lessons learned here will also inform training doctrine.

The Department continued to fund alternative ingredients and formulations which are anticipated to improve performance under other conditions of interest to the DoD. That would include operations at low and high temperatures, dilution with salt in addition to fresh water, and also the use of alternative non-fluorinated surfactants. We also investigated fluorine-free alternatives on fuel fires with gasoline or alcohol gasoline blends or polar solvents.

Finally, the Department continued to fund fundamental work on bubble stability and bubble interactions with fuel and water.

- ***Policies/Data Calls/Guidance Issued***:
    - ***Response and Reporting of AFFF Usage, and Accidental Releases/Spills on Military Installations and National Guard Facilities,*** **April 7, 2022.** This policy

implements Section 323 of the FY 2022 NDAA by prohibiting use of AFFF for training personnel or testing equipment unless there are complete containment, capture, and proper disposal mechanisms in place to ensure no AFFF is released into the environment. This memorandum requires reporting within 24 hours AFFF usage, or spill that is above 10 gallons of AFFF concentrate or 300 gallons of mixed foam, in accordance with Section 318 of the FY 2021 NDAA. This policy ensures DoD takes consistent actions when responding to an allowable use or accidental release of AFFF on military installations and National Guard facilities. This policy also includes reporting requirements that will allow for transparency of DoD's AFFF usage and spills to include follow-on actions to address such activities.

- ***Component Plans for Replacing AFFF in Shore-Based Mobile Assets and Facilities*, April 26, 2022.** This memorandum directs the Military Departments to develop and submit replacement plans, schedules, and costs for replacing AFFF with newly vetted alternatives within 60 days of the date of the memorandum in order to remove AFFF from mobile assets and facilities by the congressional deadlines. The memorandum includes a list of planning assumptions, guidelines, and a list of priority lines of effort.

Mitigating the effects of DoD releases of PFAS

- ***Cleanup Progress Status.*** DoD has identified 702 active military installations, Base Realignment and Closure (BRAC) locations, National Guard facilities, and Formerly Used Defense Sites properties where it is conducting or has completed an assessment of PFAS use or potential release. During the third quarter of FY 2022, DoD completed the preliminary assessment/site inspection (PA/SI) phase at 37 installations; the Department determined that six of these installations require no further action, while 31 are proceeding to the next step in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process, the remedial investigation (RI) phase. Through the end of the third quarter of FY 2022, DoD has completed the PA/SI phase at a total of 343 installations (49 percent); the Department determined that no further action is required at 100 of these installations, while 243 are proceeding to the next step in the CERCLA process. DoD initiated the RI phase at nine installations during the third quarter of FY 2022. The RI phase is underway at a total of 178 installations as of the end of the third quarter of FY 2022.

  The Department is monitoring and providing alternative water in the communities surrounding the 53 installations where DoD has identified levels of perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) above U.S. Environmental Protection Agency's (EPA's) 2016 lifetime drinking water Health Advisory (HA).

  In May 2022, EPA issued new regional screening levels for certain PFAS and DoD will incorporate these new screening values into its cleanup process. This will involve DoD changing the screening level that we use to determine whether a site moves from a PA/SI to an RI, from 40 parts per trillion (ppt) for PFOS and PFOA individually, to 4 ppt for PFOS and 6 ppt for PFOA (in groundwater used for drinking water). The Department is

currently assessing the effects of these changes on our cleanup activities to include the additional work required and the associated increased costs.

In June 2022, EPA also announced updated interim lifetime drinking water 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 HAs of 70 ppt. As EPA stated, these levels are non-regulatory, non-enforceable, and currently below the levels 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 planning to propose a regulatory drinking water standard for PFOS and PFOA in early 2023. The Department looks forward to the clarity that a nationwide regulatory standard for PFOS and PFOA in drinking water will provide.

In anticipation of EPA issuing a drinking water regulation 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 actions to prepare to incorporate this new standard, such as reviewing our current data and additional sampling where necessary. Also DoD will incorporate nationwide PFAS guidance issued by EPA and applicable to all CERCLA owners and operators, as to when to provide alternate water when PFAS are present.

The Department remains committed to fulfilling our cleanup responsibilities, following the federal cleanup law (i.e., CERCLA), and clearly communicating and engaging with communities.

- ***Addressing On-base Drinking Water.*** DoD is ensuring a consistent approach to continued testing and monitoring of on-base drinking water across DoD to ensure no one on-base is exposed to PFOS or PFOA in drinking water above the EPA 2016 lifetime drinking water HA. In furtherance of its March 2020 policy, DoD has continued periodic testing of DoD-operated drinking water systems for certain PFAS, including PFOS and PFOA, and resamples these systems periodically based on the results. Additionally, DoD is continuing to monitor drinking water it purchases for use on its installations to prevent and address exposure to certain PFAS per its July 2020 policy.

  As mentioned previously, in anticipation of EPA issuing a drinking water regulation the Department is evaluating its efforts to address PFAS in drinking water and what actions we can take to prepare to incorporate this new standard, including our on-base drinking water systems. In addition, DoD will update its policies related to monitoring for PFAS in on-base drinking water to incorporate EPA's new drinking water standard.

- ***Policies/Data Calls/Guidance Issued***:

  - ***Temporary Prohibition on Incineration of Materials Containing PFAS,*** **April 26, 2022.** Pursuant to Section 343 of the FY 2022 NDAA, this memorandum temporarily prohibits the incineration of DoD PFAS materials after April 26, 2022, until DoD

issues guidance implementing the EPA interim guidance on the destruction and disposal of PFAS, and section 330 of the FY 2020 NDAA.

- ***Public Disclosure of DoD Testing Results of PFAS in Drinking Water Within a Covered Area*, April 26, 2022.** This memorandum requires DoD to publicly disclose a final result of testing drinking water for PFAS in a covered area[1] and to post such results on the DoD PFAS website. The policy also requires DoD to provide local notification prior to any testing of PFAS in drinking water within a covered area. This policy implements the requirements of section 345(a) and (d) of the FY 2022 NDAA.

- ***Addressing PFAS at BRAC Locations*, May 11, 2022.** Section 104 of CERCLA provides DoD the authority to address pollutants or contaminants, such as PFOS, PFOA, and perfluorobutanesulfonic acid at BRAC locations. This memorandum establishes that the DoD Components will follow a consistent approach, based on risk, under CERCLA, the National Contingency Plan, the Defense Environmental Restoration Program, and DoD PFAS guidance to investigate and respond to PFAS releases at DoD facilities.

- ***Public Disclosure of DoD's Planned Testing of PFAS in Drinking Water Within a Covered Area*, June 15, 2022.** This memorandum ensures consistency across the Department by establishing a policy concerning the reporting of PFAS planned testing in accordance with the requirements in section 345(b) of the FY 2022 NDAA. Specifically, the memorandum requires the DoD Components to provide the Office of the Deputy Assistant Secretary of Defense for Environment and Energy Resilience (ODASD(E&ER)) the anticipated timeline for, and general location of, any planned testing of drinking water within a covered area[1] beginning June 15, 2022, and every 90 days after.

- ***Research and Development.*** Also during the third quarter of FY 2022, the Department's Strategic Environmental Research and Development Program (SERDP) completed the peer review of 75 proposals that were submitted in the following areas: transformation of polyfluoroalkyl substances found in soil and groundwater at AFFF-impacted sites, improved management of stormwater impacts at DoD facilities, and improved understanding of concrete and asphalt impacted by historical releases of AFFF. A total of 56 proposals scored well in the peer review and were provided to the SERDP Technical Committee for further evaluation.

  Research and demonstrations continued among research projects addressing ecotoxicity of PFAS, more than 85 SERDP and Environmental Security Technology Certification Program (ESTCP) projects addressing treatment technologies, and more than 20 SERDP

[1] Per Section 345 of the FY 2022 NDAA, the term "covered area" means an area in the United States that is located immediately adjacent to and down gradient from a military installation, a formerly used defense site, or a facility where military activities are conducted by the National Guard of a State pursuant to section 2707(e) of title 10, United States Code.

and ESTCP projects addressing sampling, analysis, and monitoring during the third quarter of FY 2022.

Assessing the perceptions of Congress and the public of DoD's efforts to mitigate PFAS effects from DoD activities.

- ***Deputy Assistant Secretary (DAS) PFAS Public Outreach Events.*** On April 27, 2022, the DASD(E&ER) hosted a PFAS Public Outreach Event. The event allowed for an open and transparent dialogue between the Department and stakeholders affected by the presence of PFAS. The event focused on the Department's efforts for increased outreach and transparency, including improving communication and community relations through Restoration Advisory Boards (RABs), exploring resources for existing RABs, developing a new PFAS website, and providing an update on the progress meeting NDAA requirements. During the event, presenters also highlighted SERDP and ESTCP efforts on PFAS in the environment. DoD's responses to questions stakeholders raised during the event are available on the Department's PFAS website (https://media.defense.gov/2022/Jun/06/2003012426/-1/-1/0/DOD-PFAS-PUBLIC-OUTREACH-PRESUBMITTED-QUESTIONS-ANSWERS-PART-I-APRIL-27-2022.PDF).

- ***Congressional Reports/Briefings/Testimony Submitted***.

  - ***PFOS and PFOA at BRAC Locations***. DoD delivered the report to Congress on *PFOS and PFOA at BRAC Locations* on April 28, 2022, in response to requirements in House Report 116-445, page 29, accompanying H.R. 7609, the Military Construction, Veterans Affairs, and Related Agencies Appropriations Bill, and the House Report 117-81, page 22, accompanying H.R. 4355, the Military Construction, Veterans Affairs, and Related Agencies Appropriations Bill, 2022, and the Joint Explanatory Statement accompanying H.R. 2471, the Consolidated Appropriations Act, 2022. The report covers quarterly reports requested for fiscal year 2021 and the baseline of information regarding PFOS/PFOA at closed military installations as requested in the FY 2022 reporting language. Specifically, this report includes (1) background on the cleanup process; (2) recommendations for improving transparency in DoD's cleanup process; (3) a list of all BRAC locations; (4) an indication of whether PFOS/PFOA has been detected in drinking water and groundwater; (5) the level of PFOS/PFOA that has been detected; (6) information on the likely sources of PFOS/PFOA; (7) an explanation of current mitigation efforts and proposed remediation plans; (8) the status of remediation; (9) a timeline for cleanup; and (10) an estimate of the current and future costs to investigate and clean up PFAS at BRAC locations.

  - ***Progress of Cleanup Actions Related to Department of Defense-Caused PFAS Contamination***. Pursuant to the House Armed Services Committee Report 117-118, pages 107-108, accompanying the NDAA for FY 2022, the Department delivered the *Progress of Cleanup Actions Related to Department of Defense-Caused PFAS Contamination* briefing to the House Committee on Armed Services in April 2022.

The briefing contains information on the progress of all ongoing remediation efforts to clean up PFOS- and PFOA-impacted sites, including (1) a list of sites by service, (2) the status of environmental remediation at each site, (3) for sites that have completed the PA or SI phase, the number of sites that require no further action and justification for this finding; (4) for sites that have proceeded to the RI or feasibility study (FS) phase, the timeline for completion of this phase; (5) for sites that have completed the RI or FS phase, a discussion of next steps to include, where appropriate, the justification for a finding that no further action is required; (6) a discussion of any site where duly promulgated State standards or regulations have been assessed as applicable or relevant and appropriate requirements; and (7) the means by which the Department is communicating with community stakeholders about the progress of environmental remediation actions.

- ***Report to Congress on Chemicals Used for Aircraft Rescue and Firefighting Operations at Civilian and Joint Use Airports***. DoD delivered the *Report to Congress on Chemicals Used for Aircraft Rescue and Firefighting Operations at Civilian and Joint Use Airports* on June 23, 2022. This report responds to requirements in House Report 117-118, page 108, accompanying H.R. 4350, the NDAA for FY 2022, which requests that the Secretary of Defense provide a report to the congressional defense committees on the use of AFFF for Aircraft Rescue and Fire Fighting operations at Joint and Shared Use civilian airports that depend on military-controlled emergency response. The report contains (1) a description of coordination efforts between the DoD and the Federal Aviation Administration to replace AFFF with PFAS-free firefighting agents across the country; (2) progress toward establishing a formal consultation process to coordinate the review process and final actions on PFAS-containing foam with the Joint and Shared Use Airport operators; and (3) the timeline for the DoD to issue directives on PFAS-containing foam.

- DoD representatives participated in a House Appropriations Committee Subcommittee on Defense hearing on May 26, 2022, entitled "Defense Environmental Restoration", and responded to Questions for the Record.

- DoD regularly answered Congressional inquiries as well as discussed DoD's PFAS efforts with House Armed Services Committee and Senate Armed Services Committee staffers.

- ***PFAS Website.*** To improve communication and public outreach, the Department is developing a new comprehensive and user-friendly PFAS website. The website will include PFAS-related information and a searchable database of PFAS sampling data and PFAS cleanup status by installation as part of an interactive map. The website will continue to post PFAS data and present the results in a useful and clear format. The goal of the website is to provide a platform that promotes transparency and clearly communicates information to the public. The Department plans to release the new website in the fourth quarter of FY 2022.

Appendix B: Per- and Polyfluoroalkyl Substances Task Force Activities During the Fourth Quarter of Fiscal Year 2022

Appendix B describes the Department of Defense's Per- and Polyfluoroalkyl Substances Task Force's activities during the fourth quarter of Fiscal Year 2022.

Appendix B: Per- and Polyfluoroalkyl Substances (PFAS) Task Force Activities During the Fourth Quarter of Fiscal Year (FY) 2022

Section 341 of the FY 2022 National Defense Authorization Act (NDAA) identifies the following duties of the DoD PFAS Task Force:

- Monitoring the health aspects of exposure to PFAS as found by the Secretary of Health and Human Services;
- Identifying, and funding the procurement of an effective alternative to firefighting foam containing PFAS;
- Mitigating the effects of DoD releases of PFAS; and
- Assessing the perceptions of Congress and the public of DoD's efforts to mitigate PFAS effects from DoD activities.

Monitoring health aspects of PFAS exposure

For the past several years, DoD has been monitoring the impacts of PFAS on human health, especially the studies conducted by the Agency for Toxic Substances and Disease Registry (ATSDR) within the Department of Health and Human Services (HHS). Likewise the Department looks to HHS's National Institute for Occupational Safety and Health (NIOSH) for research on occupational exposure and health indicators related to PFAS. We are supporting and monitoring research and development efforts to better understand the potential health effects of PFAS exposure, and communicating this health risk information to our employees. DoD continues to fund ATSDR for PFAS-related studies and has provided $15M this fiscal year.

AFFF Alternative Research and Development

During the fourth quarter of FY 2022, the Department continued development of an aqueous film forming foam (AFFF) replacement. In addition, the Department continued to fund alternative ingredients and formulations that are anticipated to improve performance under other conditions of interest to the DoD such as operations at low and high temperatures, dilution with salt in addition to fresh water, and the use of alternative non-fluorinated surfactants. Finally, the Department continued to fund fundamental work on bubble stability and bubble interactions with fuel and water.

Proposals submitted in response to the Department's FY 2023 Strategic Environmental Research and Development Program (SERDP) solicitation completed the peer review process, were evaluated by the SERDP Technical Committee, and final recommendations were provided to the SERDP staff. The Department ultimately selected 7 projects aimed at improving performance of fluorine-free firefighting formulations. Projects must be approved by the SERDP Technical Review Board in September and October 2022 before funding can be provided.

The Navy developed a draft fluorine-free foams (F3) military specification (MILSPEC) and is working to publish a final MILSPEC by January 31, 2023, pursuant to the FY 2020 NDAA. The draft F3 MILSPEC includes a strict limitation on PFAS content, requires laboratory testing of F3s for specific PFAS content as part of product qualification, with a "non-detect" required to pass the test, and manufacturers will be required to provide written certification that their MILSPEC-compliant product contains "no intentionally added PFAS."

Appendix B: Per- and Polyfluoroalkyl Substances (PFAS) Task Force Activities During the Fourth Quarter of Fiscal Year (FY) 2022

Mitigating the effects of DoD releases of PFAS

- ***Cleanup Progress Status.*** DoD has identified 705 active military installations, Base Realignment and Closure locations, National Guard facilities, and Formerly Used Defense Sites (FUDS) properties where it is conducting or has completed an assessment of PFAS use or potential release. During the fourth quarter of FY 2022, DoD completed the preliminary assessment/site inspections (PA/SI) phase at 31 installations; the Department determined that five of these installations require no further action, while 26 are proceeding to the next step in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process, the remedial investigation (RI) phase. Through the end of the fourth quarter of FY 2022, DoD has completed the PA/SI phase at a total of 373 installations (53 percent); the Department determined that no further action is required at 100 of these installations, while 273 are proceeding to the next step in the CERCLA process. DoD initiated the RI phase at 57 installations during the fourth quarter of FY 2022. The RI phase is underway at a total of 251 installations as of the end of the fourth quarter of FY 2022.

  The Department is monitoring and providing alternative water in the communities surrounding the 53 installations where DoD has identified levels of perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) above the U.S. Environmental Protection Agency (EPA) 2016 lifetime drinking water Health Advisory (HA).

  In May 2022, EPA issued new regional screening levels for certain PFAS and DoD is actively incorporating these new screening values into its cleanup process, including reassessing sites that previously completed a PA/SI. This involves DoD changing the screening level that we use to determine whether a site moves from a PA/SI to an RI, from 40 parts per trillion (ppt) for PFOS and PFOA individually, to 4 ppt for PFOS and 6 ppt for PFOA (in groundwater used for drinking water). The Department is currently assessing the effects of these changes on our cleanup activities to include the additional work required and the associated increased costs.

  In June 2022, EPA also announced updated interim lifetime drinking water 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 HAs of 70 ppt. As EPA stated, these levels are non-regulatory, non-enforceable, and currently below the levels 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 planning to propose a regulatory drinking water standard for PFOS and PFOA anticipated in early 2023. The Department looks forward to the clarity that a nationwide regulatory standard for PFOS and PFOA in drinking water will provide.

  In anticipation of EPA issuing a drinking water regulation 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 actions to prepare to incorporate this new standard,

such as reviewing our current data and additional sampling where necessary. Also DoD is actively incorporating nationwide PFAS guidance issued by EPA and applicable to all CERCLA owners and operators, as to when to provide alternate water when PFAS are present.

The Department remains committed to fulfilling our cleanup responsibilities, following the federal cleanup law (i.e., CERCLA), and clearly communicating and engaging with communities.

- ***Addressing On-base Drinking Water.*** DoD is ensuring a consistent approach to continued testing and monitoring of on-base drinking water across DoD to ensure no one on-base is exposed to PFOS or PFOA in drinking water above the EPA 2016 lifetime drinking water HA. In furtherance of its March 2020 policy, DoD has continued periodic testing of DoD-operated drinking water systems for certain PFAS, including PFOS and PFOA, and resamples these systems periodically based on the results. Additionally, DoD is continuing to monitor drinking water it purchases for use on its installations to prevent and address exposure to certain PFAS per its July 2020 policy. As mentioned previously, in anticipation of EPA issuing a drinking water regulation the Department is evaluating its efforts to address PFAS in drinking water and what actions we can take to prepare to incorporate this new standard, including our on-base drinking water systems. In addition, DoD will update its policies related to monitoring for PFAS in on-base drinking water to incorporate EPA's new drinking water standard.

- ***Policies/Data Calls/Guidance Issued***:

  - ***Investigating PFAS Within the DoD Cleanup Program*, July 6, 2022.** This memorandum provides clarifying guidance on the investigation of PFOS, PFOA, perfluorobutanesulfonic acid (PFBS), perfluorononanoic acid (PFNA), perfluorohexane sulfonate (PFHxS), and hexafluoropropylene oxide dimer acid (HFPO-DA, or GenX) in the DoD cleanup program, based on recently updated EPA) information. This memorandum includes site-specific regional screening levels for these chemicals, which are to be used to determine if further investigation in the RI phase is warranted or if no further action is required. Consistent with CERCLA process, the DoD Components will incorporate these screening values into ongoing and future PA/SIs and will reevaluate completed PA/SIs with a determination of "no further action," to assess if an RI is now necessary.

- ***Research and Development.*** Also during the fourth quarter of FY 2022, the Department's Strategic Environmental Research and Development Program (SERDP) and Environmental Security Technology Certification Program (ESTCP) conducted a five-day meeting to gather SERDP- and ESTCP-funded investigators to exchange technical updates and foster collaborations. More than 150 experts attended, representing the DoD, EPA, Department of Energy, other federal organizations, academia, and industry.

Proposals submitted in response to the FY 2023 SERDP research solicitation completed the peer review process, were evaluated by the SERDP Technical Committee, and final recommendations were provided to the SERDP staff. The Department received more than 150 initial pre-proposals for the FY 2023 SERDP solicitation and ultimately selected 33 projects in the following areas: Transformation of Polyfluoroalkyl Substances Found in Soil and Groundwater at AFFF-Impacted Sites, Improved Management of Stormwater Impacts at Department of Defense Facilities, and Improved Understanding of Concrete and Asphalt Impacted by Historical Releases of AFFF. Projects must be approved by the SERDP Technical Review Board in September and October 2022 before funding can be provided.

Research and demonstrations continued among research projects addressing ecotoxicity of PFAS, more than 85 SERDP and ESTCP projects addressing treatment technologies, and more than 20 SERDP and ESTCP projects addressing sampling, analysis, and monitoring during the fourth quarter of FY 2022.

Assessing the perceptions of Congress and the public of DoD's efforts to mitigate PFAS effects from DoD activities.

- ***Deputy Assistant Secretary (DAS) PFAS Public Outreach Events.*** On August 25, 2022, Mr. Richard Kidd, the Deputy Assistant Secretary of Defense for Environment and Energy Resilience (DASD(E&ER)), hosted a PFAS Public Outreach Event. The event allowed for an open and transparent dialogue between the Department and stakeholders affected by the presence of PFAS. During the event, Mr. Kidd and Ms. Cristina Harvey discussed opportunities for community engagement in the cleanup process through the Response Selection and other input steps identified in a Community Involvement Plan, Restoration Advisory Board, and Technical Assistance for Public Participation. DoD also discussed next steps to improve community engagement. DoD's briefing presented during the outreach event, response to questions stakeholders raised, and event transcript are available on the Department's PFAS website (https://www.acq.osd.mil/eie/eer/ecc/pfas/po/quarterly-events.html).

- ***Congressional Reports/Briefings/Testimony Submitted.***

  - ***Report on PFAS Active Sites Cleanup Costs***. House Report 116-453, page 68, accompanying H.R. 7617, the DoD Appropriations Bill, 2021, requires that the Secretary of Defense submit a report on the costs of investigating and cleaning up PFAS at sites funded by the environmental restoration or operation and maintenance appropriation accounts. In response to these reporting requirements, DoD delivered the *Report on PFAS Active Sites Cleanup Costs* to Congress on July 7, 2022. The report includes actual obligations through the end of FY 2018; actual obligations in FY 2019; planned and actual obligations in FY 2020; planned obligations for FY 2021; and estimated obligations after FY 2021. The obligations are provided separately for investigations and cleanup and by DoD Component. The report is the second semi-annual report for this reporting requirement. The report also responds to requirements in House Report 117-88, page 65, accompanying H.R. 4432, the DoD

Appropriations Bill, 2022, which requests that the Secretary of Defense submit a report to the House and Senate Appropriations Committees on the costs of investigating and cleaning up PFAS at sites funded by either the environmental restoration or operation and maintenance appropriation accounts. The report includes actual obligations through the end of FY 2019; actual obligations in FY 2020; planned and actual obligations in FY 2021; planned obligations for FY 2022; and estimated obligations after FY 2022. The obligations are provided separately for investigations and cleanup, and by DoD Component and installation. This report is the first semi-annual report for this reporting requirement.

- ***PFAS Cleanup: Schedule, Status, and Cost Estimates***. In accordance with the requirements in Ssctions 348 and 349 of the NDAA for FY 2022 (Public Law 117-81) and House Report 117-118, page 112 and 113, accompanying H.R. 4350, the NDAA for FY 2022, the Department delivered the report, *PFAS Cleanup: Schedule, Status, and Cost Estimates* to Congress on July 27, 2022. The report contained a proposed schedule for the completion of remediation of PFAS and the associated cost estimates to perform remediation at military installations, National Guard facilities, and FUDS in the United States that are identified as of March 31, 2021, as having a release of PFAS; the status of efforts to remediate PFAS at certain military installations; and a proposed schedule for the completion of remediation of PFAS at military installations, FUDS, and State-owned National Guard facilities in the United States and the associated cost estimates to perform such remediation, and the status of efforts to remediate PFAS at certain military installations.

- ***Report on DoD's PFAS Task Force Activities***. Section 341 of NDAA for FY 2022 (Public Law 117-81) codifies the DoD's PFAS Task Force in title 10, United States Code, Section 2714, and requires the Chairman of the PFAS Task Force to report 90 days after the date of the enactment and quarterly thereafter. As a response to this requirement, DoD delivered the *Report on DoD's PFAS Task Force Activities* to Congress on September 21, 2022. The report reviews the accomplishments by the PFAS Task Force in the first two quarters of FY 2022.

- ***Status of Notifications to Agricultural Operations for FY 2022***. The report *Status of Notifications to Agricultural Operations for FY 2022* was signed to the Senate Committee on Agriculture, Nutrition, and Forestry and the House of Representatives Committee on Agriculture on September 8, 2022, as required by Section 335(d) of the NDAA for FY 2021 (Public Law 116-283). In accordance with the FY 2021 NDAA, DoD consulted with the U.S. Department of Agriculture for the names and locations of agricultural operations located within one mile down gradient of a Military Installation or National Guard facility. The report includes the approximate locations of the notified agricultural operations, associated Military Installation or National Guard facility, covered PFAS and levels detected in groundwater, and status of notifications to the agricultural operations.

- On August 1, 2022, Ms. Nancy Balkus, Deputy Assistant Secretary of the Air Force for Environment, Safety and Infrastructure, testified before the Senate Homeland

Security and Governmental Affairs Committee field hearing in East Lansing, Michigan. The hearing titled, "Improving Interagency and Intergovernmental Coordination on PFAS for Michigan Communities," assessed federal efforts and coordination with state and local governments to remediate and prevent contamination from PFAS, and impacts exposure to PFAS has had on servicemembers, individuals, and local communities. Ms. Balkus and Mr. Richard Kidd, DASD(E&ER), answered questions for the record.

- DoD regularly answered Congressional inquiries as well as discussed DoD's PFAS efforts with House Armed Services Committee and Senate Armed Services Committee staffers.

- ***PFAS Website.*** As part of an effort to improve communication, transparency, and public outreach, the Department released a new comprehensive and user-friendly PFAS website on August 25, 2022. The website analyzes PFAS data and presents the results in a useful and clear format, and includes PFAS-related information, a searchable database of PFAS sampling data, and PFAS cleanup status by installation as part of an interactive map. The PFAS website can be accessed at: https://www.defense.gov/pfas.

- ***Public Disclosure of Results of Department of Defense (DoD) Testing of Off-Base Drinking Water in a Covered Area for PFAS.*** DoD conducts sampling of drinking water off-base to ensure the Department identifies potential impacts of PFAS resulting from DoD activities. Off-base drinking water includes non-DoD drinking water systems and private wells located outside the installation boundary. In accordance with Section 345 of the NDAA for FY 2022, DoD is providing the final testing results for off-base drinking water located in "covered areas." Covered areas are locations in the United States that are adjacent to and down gradient from a military installation, FUDS, or National Guard facility. DoD's final testing results are posted at: https://www.acq.osd.mil/eie/eer/ecc/pfas/map/pfasmap.html. As of the end of FY 2022, DoD has posted 122 final drinking water reports. These reports included over 4,000 sampling results.