

House Appropriations Committee  
Subcommittee on Defense

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Chairwoman McCollum, Ranking Member Calvert, and distinguished members of the Subcommittee: Thank you for the opportunity to discuss the Department of Defense environmental restoration program. 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.

**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 U.S. Environmental Protection Agency (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)<sup>1</sup> process, and Formerly Used Defense Sites (FUDS)<sup>2</sup> 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. For Munitions Response Sites (MRSs)<sup>3</sup>, DoD has completed cleanup at 65 percent out of a total of 5,521 sites. 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, such as Per- and Polyfluoroalkyl Substances (PFAS).

### **DoD Environmental Restoration Funding**

Since the Defense Environmental Restoration Account(s) (DERA) were established in the 1980's, the Department has invested approximately \$45B to clean up environmental sites on our active bases and FUDS, \$13B in the last 10 years alone. Of this amount over the last decade, approximately \$10B has gone to sites on active bases, and nearly \$3B has gone to sites on FUDS properties. Approximately 79% of this funding supported IRP, while 21% supported MMRP. 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, nearly \$18B on active installations and nearly \$12B on FUDS properties. These liability numbers may 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 table below includes the DERA FY2019 through FY2023 PB requests (total and breakdown for IRP, MMRP, and program management (PM)); FY2019 through FY2022 congressional adds; FY2019 through FY2022 appropriated funds; and FY2019 through FY2021 obligated funds (total and breakdown for IRP, MMRP, and PM).

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<sup>1</sup> BRAC locations were authorized for closure or realignment by Congress under one of the five BRAC rounds.

<sup>2</sup> 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.

<sup>3</sup> A discrete location within a munitions response area that is known to require a munitions response (32 CFR 179).

**Table: DoD Environmental Restoration Account Funding History from FY2019 – FY2023**

(\$M) <sup>1</sup>	PB	IRP	MMRP	PM <sup>2</sup>	Plus-up	Allocated	Obligated	IRP	MMRP	PM <sup>2</sup>
<b>FY2023<sup>3</sup></b>	1,106.3	725.1	197.8	183.3	-----	TBD	TBD	TBD	TBD	TBD
<b>FY2022<sup>4</sup></b>	1,028.0	640.1	215.7	172.3	486.5	1,514.7	TBD	TBD	TBD	TBD
<b>FY2021<sup>5</sup></b>	1,073.1	676.1	253.0	143.9	430.4	1,503.4	1,402.1	986.8	266.8	148.5
<b>FY2020</b>	1,071.8	623.1	256.6	192.2	344.0	1,415.7	1,423.2	961.1	294.3	167.7
<b>FY2019<sup>6</sup></b>	1,050.8	672.8	220.0	158.0	184.3	1,235.2	1,200.0	850.4	214.1	135.4

<sup>1</sup> Numbers may not add due to rounding.

<sup>2</sup> Includes PM and other support costs that cannot be allocated to individual sites, as well as funding for investigations (i.e., preliminary assessments and site inspections) of known or suspected releases of PFAS.

<sup>3</sup> FY2023 allocated and obligated amounts will be available during the FY2024 and FY2025 PB cycles, respectively.

<sup>4</sup> FY2022 allocated funds do not include \$84.6M in reprogrammed funds for active; and \$5M in reprogrammed funds for FUDS. FY2022 obligated amounts will be available during the FY2024 PB cycle.

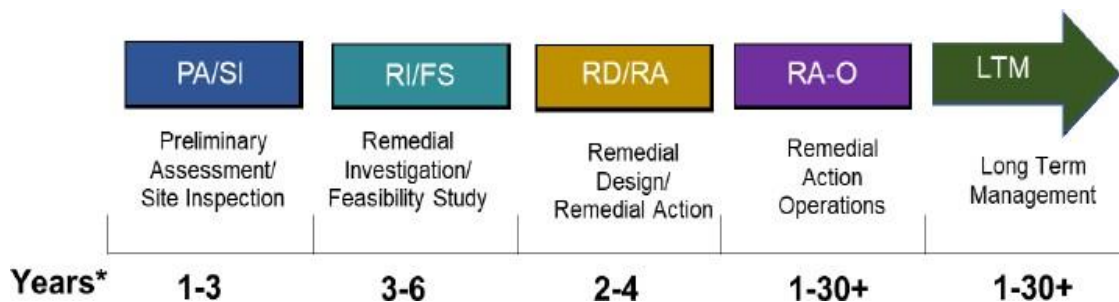
<sup>5</sup> FY2021 obligated amounts are less than the allocated amounts because Army did not obligate approximately \$5M; Navy did not obligate approximately \$43M; Air Force did not obligate approximately \$43M; Defense Logistics Agency (DLA) did not obligate approximately \$0.1M; and the Office of the Secretary of Defense (OSD) did not obligate approximately \$11M.

<sup>6</sup> FY2019 obligated amounts are less than the allocated amounts because Army did not obligate approximately \$21M; Navy did not obligate approximately \$0.4M; Air Force did not obligate approximately \$2M; DLA did not obligate approximately \$0.9M; and OSD did not obligate approximately \$10M.

### The CERCLA Cleanup Process

DoD follows the Comprehensive Environmental Response, Compensation, and Liability Act (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, and 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.

### *Risk-Based Prioritization throughout the Cleanup Process*

DoD follows the CERCLA process to fully investigate a release and determine the appropriate cleanup actions based on risk. DoD's cleanup program is premised on prioritizing sites for cleanup using a risk-based process—essentially worst first. Risk-based prioritization and cleanup occurs throughout DoD's cleanup process. DoD uses the most appropriate and relevant toxicity information when assessing risk to human health under CERCLA. Under the CERCLA process, risk-based toxicity information is used nationwide to determine if a response is required. The CERCLA regulations provide a federal blueprint for the CERCLA program and include a cancer risk range and hazard index for non-carcinogens; these, together with federal and state standards, are then used as part of the process for establishing remediation goals. DoD prioritizes its cleanup response at its IRP sites and Munition Response sites based on the highest risk to address worse sites first to efficiently and effectively use DERP funding.

Because munition response sites have the potential for acute explosives safety risk different from the typical chemical exposure risk assessments covered by EPA regulations and long-standing guidance, DoD developed the Munitions Response Site Prioritization Protocol (MRSP) to prioritize its munitions response sites. For munitions sites, risk is determined by the explosives hazard of the unexploded ordnance and discarded military munitions; the unique, acute physiological effects of any chemical warfare material; as well as chronic health and environmental hazards posed by munitions constituents and any incidental environmental contaminants. The Department developed the MRSP in consultation with regulators and stakeholders to provide a consistent approach to prioritize munitions response actions for cleanup.

DoD also uses risk-based prioritization to sequence the start of Remedial Investigations (RI) for all cleanup sites. DoD's RI sequencing framework is called the Relative Risk Site Evaluation (RRSE). The RRSE groups sites into high, medium, and low categories based on an evaluation of site information using three factors: the contaminant hazard or source (i.e., where the release occurred and in what environment media), the migration pathway (i.e., how the release traveled through the environment), and the possible receptor (i.e., human and ecological receptors that may be exposed). The Department developed the RRSE framework in consultation with regulators and stakeholders to provide a consistent approach to prioritize the start/sequencing of Remedial Investigations.

### *Community Engagement throughout the Cleanup Process*

Another 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.

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, which includes all the representatives here today, 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.

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 nearly 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, and communities throughout this process.

In total, DoD has obligated over \$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.

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. The most notable of the FY2022 cleanup-related National Defense Authorization Act (NDAA) requirements being:

- Completion of DoD CERCLA Preliminary Assessments/Site Inspections by the end of CY23 (section 341)
- Public disclosure of DoD drinking water testing results (section 345)
- Reporting on a schedule for completion of PFAS cleanups (section 348)
- Reporting on the cleanup status of fifty identified sites (section 349)

### **Issue of Concern: Military Munitions Response Program**

Implementing the Department's MMRP continues to be technically and legally complex. DERP includes a specific provision concerning munitions response at our closed military ranges and use of the CERCLA process remains our preferred process. EPA issued regulations under the Resource Conservation and Recovery Act (RCRA) addressing military munitions in the late 1990s. Issues remain with the integration of CERCLA and RCRA, and acceptance of the parity of results under CERCLA.

Cleanup at munition response sites may also take longer because of technical challenges. For example, the potential acute explosives safety hazards from unexploded ordnance creates a unique situation for assessing risk and determining future land use restrictions. This is especially difficult given the variety of munitions used, site-specific conditions including that sites with military munitions may have been transferred out of DoD control, and technological challenges in distinguishing unexploded ordnance from munition debris without explosives safety concerns. To meet this challenge, DoD developed the Advanced Geophysical Classification process to determine whether a buried metal object is a military munitions or harmless debris. This technology allows DoD to focus resources on areas with potential explosives risks and collect high-quality data in order to make risk-based decisions. DoD worked in collaboration with federal and state regulators to build confidence in the process and decisions.

Because full clearance of all ordnance, or suspected ordnance can be a lengthy process, the Department has focused on interim risk management activities to reduce the potential risk to human health and the environment where munition investigations are still ongoing or expected to occur in the future. These activities may include making explosives safety education materials available to stakeholders (e.g., property owners or users, representatives from communities surrounding the site). For example, at FUDS sites, DoD informs landowners at least every five years about the hazards that may remain on the property and actions to take if they come across potential munitions-related hazards.

## **Conclusion**

DoD is taking deliberative 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. Our commitment is seen by the fact that DoD has completed cleanup at 34,100 sites (85 percent). 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.