Department of the Air Force

Presentation

Before the House Appropriations
Subcommittee on Defense

Environmental Restoration

Witness Statement of

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Deputy Assistant Secretary of the Air
Force for Environment, Safety and
Infrastructure

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BIOGRAPHY

UNITED STATES AIR FORCE

MARK A. CORRELL

Mark A. Correll, a member of the Senior Executive Service, is the Deputy Assistant Secretary of the Air Force for Environment, Safety and Infrastructure, Headquarters U.S. Air Force, Arlington, Virginia. He provides executive leadership on all matters pertaining to formulation, review and execution of plans, policies, programs and budgets for Air Force built and natural infrastructure, environmental, installation energy, safety and occupational health programs. These include facility management, military construction, utilities privatization, energy security, contingency energy, environmental compliance and restoration, occupational safety and workplace health.

Mr. Correll was commissioned in the Air Force in 1981 as a graduate of the U.S. Air Force Academy, earning a degree in civil engineering. He commanded two civil engineer squadrons, a mission support group and an air base wing. He retired in 2010 in the rank of colonel. Prior to his current assignment, Mr. Correll served as the Air Force Deputy Civil Engineer. In that position he provided leadership, direction and technical knowledge to organize, train and equip a 60,000-person engineering force as well as development, construction, operation, maintenance, emergency response, readiness, housing and environmental quality of Air Force bases worldwide. He was appointed to the Senior Executive Service in 2010. Mr. Correll is registered as a licensed professional engineer in the state of Texas.

EDUCATION

1981 Bachelor of Science degree in civil engineering, U.S. Air Force Academy, Colorado Springs, Colo.
1984 Master of Science degree in engineering management, Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio
1987 Squadron Officer School, Maxwell AFB, Ala.
1993 Air Command and Staff College, Maxwell AFB, Ala.
2001 Air War College, Maxwell AFB, Ala.

CAREER CHRONOLOGY

1. June 1981 – May 1983, Chief, Readiness and Logistics, 375th Civil Engineer Squadron, Scott Air Force Base, Ill.
2. May 1983 – October 1984, Graduate Student, Air Force Institute of Technology, Wright-Patterson AFB, Ohio
3. October 1984 – July 1986, Chief, Resources and Requirements, 1606th Civil Engineering Squadron, Kirtland AFB, N.M.
4. July 1986 – March 1987, Commander, Civic Action team, Truk State, Federated States of Micronesia
5. March 1987 – October 1987, Chief, Operations, 1606th Civil Engineer Squadron, Kirtland AFB, N.M.
6. October 1987 – October 1988, Student, Air Staff Training Program, Headquarters U.S. Air Force, Arlington, Va.
7. October 1988 – August 1992, Action Officer, Civil Engineer Operations Division, Headquarters Military Airlift/Air Mobility Command, Scott AFB, Ill.
8. August 1992 – July 1993, Student, Air Command and Staff College, Maxwell AFB, Ala.
9. July 1993 – September 1996, Chief, Operations Flight, 305th Civil Engineer Squadron, McGuire AFB, N.J.
10. September 1996 – June 1998, Action Officer, Civil Engineer Environmental Division, Headquarters U.S. Air Force, Arlington, Va.

11. June 1998 – July 2000, Commander, 31st Civil Engineer Squadron, Aviano Air Base, Italy
12. July 2000 – June 2001, Student, Air War College, Maxwell AFB, Ala.
13. June 2001 – July 2002, Commander, 60th Civil Engineer Squadron, Travis AFB, Calif.
14. July 2002 – July 2004, Commander, 374th Mission Support Group, Yokota Air Base, Japan
15. July 2004 – July 2006, Vice Commander, 72nd Air Base Wing, Tinker AFB, Okla.
16. July 2006 – July 2008, Commander, 72nd Air Base Wing, Tinker AFB, Okla.
17. July 2008 – August 2010, Civil Engineer, Air Education and Training Command, Randolph AFB, Texas
18. November 2010 – June 2014, Deputy Air Force Civil Engineer, Headquarters U.S. Air Force, Arlington, Va.
19. June 2014 – present, Deputy Assistant Secretary of the Air Force for Environment, Safety and Infrastructure, Headquarters U.S. Air Force, Arlington, Va.

AWARDS AND HONORS
Air Force Meritorious Civilian Service Award
Meritorious Executive Presidential Rank Award
Air Force Meritorious Civilian Service Award
Legion of Merit with two oak leaf clusters
Bronze Star Medal
Meritorious Service Medal with silver oak leaf cluster
Air Force Commendation Medal with oak leaf cluster
Air Force Achievement Medal with two oak leaf clusters

Professional Memberships and Associations
Society of American Military Engineers

(Current as of January 2019)

Introduction

The Department of the Air Force (DAF) Environmental Restoration Program, also known as the DAF Environmental Cleanup Program, responds to releases of hazardous substances, pollutants, and contaminants resulting from our mission activities, including manufacturing, industrial, maintenance and other DAF operations.

The DAF Environmental Restoration program operates on a risk-based framework according to which sites posing the greatest environmental risk are prioritized first for cleanup 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 (10 U.S.C. § 2700-2711) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and its implementing regulations, and are guided by policy issued by DoD.

The DAF Environmental Restoration Program addresses two categories of cleanup sites: the Installation Restoration Program (IRP) and the Military Munitions Response Program (MMRP) at active, Air Force Reserve, Air National Guard (ANG), Base Realignment and Closure (BRAC) and now US Space Force (USSF) installations in the United States and US territories. The Defense Environmental Restoration Account (DERA) is authorized to fund cleanup at active, Reserve, and USSF installations, and to fund cleanup of perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) at certain ANG installations.

Environmental Restoration Program Objectives

The program's main priority is to protect our Airmen, Guardians, and civilian workforce and their families who live and work on our installations, as well as the surrounding communities by reducing risks to human health and the environment caused by our activities.

Our first objective is to identify, investigate and prevent human exposure to hazardous substances and pollutants or contaminants attributable to Air Force at active Air Force installations; off-site locations where contamination may have migrated; and sites that DAF formerly owned. Second, we work to complete the environmental restoration process for impacted soils, groundwater, or surface water, or sites known or suspected to contain unexploded

ordnance, discarded military munitions or munitions constituents. Third, maximizing transparency, public participation and collaboration through engagement with our regulatory partners and the local communities that surround and support our installations on our cleanup activities is a key element of DAF mission objectives that enhances the mutual understanding of our processes, improves cooperation, and informs them about potential solutions that mitigate impacts.

DAF Cleanup Progress to Date

Since inception of the DAF Environmental Restoration Program, we have been committed to meeting legal obligations to minimize threats to public health and restore natural resources for future use. Our progress to date reflects the program's maturity and overall good program health due to the consistent/straight-line funding Congress has provided. The DAF Environmental Restoration Program identified a total of 8338 sites (7305 IRP sites and 1,033 MMRP sites) that required some level of investigation and cleanup. By the end of FY2020, through aggressive efforts to achieve DoD goals to promptly clean up sites, DAF has achieved the Response Complete phase of CERCLA at 79% or 6,555 of those DERA eligible cleanup sites. That leaves 1,783 IRP or MMRP sites requiring further cleanup or investigation. We have made significant progress in DAF MMRP by returning over 87% of the total acreage to mission use, totaling 659K acres.

We engage with our regulatory partners throughout the cleanup process and ensure they are included early in the planning process so as to obtain mutual agreement on execution objectives and timelines. We also acknowledge the need to proactively consult with affected federally recognized tribes.

In alignment with our priority to protect the health and safety of our Airmen, Guardians, and civilian workforce and their families who live and work on our installations, as well as the surrounding communities, DAF is committed to addressing adverse human health impacts from emerging chemicals of concern, such as per- and polyfluoroalkyl substances (PFAS), attributable to the DAF.

DAF Environmental Restoration Funding

DAF Environmental Restoration Program funding has remained stable over the last three years. The table below summarizes DAF planned Environmental Restoration Account PB, Congressional plus-ups and obligated amounts for FY2019 through FY2020.

Table: DAF Environmental Restoration Account Funding History for FY2019 –FY2021

($M)[1]	**PB**	**IRP**	**MMRP**	**PM**[2]	**Plus-up**	**Allocated**	**Obligated**[3]	**IRP**	**MMRP**	**PM**[2]
FY2021[4]	303.9	249.4	38.7	15.9	205.3	509.2	TBD	TBD	TBD	TBD
FY2020[5]	302.7	200.9	73.9	27.9	182.0	485.0	485.0	428.7	27.0	29.3
FY2019	296.8	211.7	51.2	33.9	69.0	365.8	364.01	320.1	24.9	19.1

Steady funding DAF received over the last three fiscal years has enabled DAF to address additional PFOS/PFOA response actions and accelerate cleanup projects.

However, DAF is approaching the limit of our ability to execute additional funds above the next President's Budget request. Additional funding may not be effective in expediting investigation and cleanup of sites for a number of reasons. First, because DAF follows the step-wise CERCLA process to investigate releases and determine the necessary cleanup approach, each phase of CERCLA must be completed in order to inform the need for the next phase. The Site Inspection phase of CERCLA is currently under way for a number of sites. Second, the capacity of our state and federal regulatory partners and testing laboratories is approaching the limits of their bandwidth. Our regulatory partners are key stakeholders in the CERCLA process, and their ability to review and comment on decision documents to enable us to complete a phase in the CERCLA process is diminishing when all the Services are expediting processes to achieve faster cleanups. While DAF is a signatory of the Defense State Memorandum of Agreement (DSMOA), this supplementary state funding cannot overcome the staffing and budgetary limitations states are experiencing. And finally, the capacity of our contracting offices and

[1] Numbers may not add due to rounding.
[2] Includes Program Management (PM) and other support costs that cannot be allocated to individual sites, as well as funding for investigations (i.e. preliminary assessments (PAs) and site inspections (SIs) of known or suspected releases of PFAS.
[3] FY 2019 obligated amount is less than the allocated amounts because DAF did not obligate approximately $2M
[4] FY 2021 obligated amounts will be available during the FY 2023 President's Budget cycle.
[5] FY 2020 obligated amounts will be available during the FY 2022 President's Budget cycle.

technical staff, who perform the inherently governmental functions necessary to support CERCLA processes, is also approaching the limits of their bandwidth.

Funding Prioritization

DAF cleanup efforts are planned, programmed, budgeted and executed to effectively and efficiently achieve DoD and DAF cleanup program goals. The DAF IRP and MMRP are risk-based programs that apply funding to projects that pose the highest risks to human health, safety and the environment following the DoD Relative Risk Site Evaluation (RRSE) framework for IRP and the Munitions Response Site Prioritization Protocol (MRSPP) for MMRP. The RRSE is used to evaluate the relative risk posed by one site in relation to other sites. DERA funding is applied to projects based on the relative priority of all DAF cleanup requirements. Sites entering the Remedial Investigation phase of CERCLA are evaluated based on a program-wide analysis of site data that considers three main factors: the hazard or risk the contaminant poses; the risk of that contaminant migrating; and whether a human or ecological receptor exists either through groundwater (human), surface water (human and ecological), sediment (human and ecological) and surface soils (human and ecological). Sites are then grouped into high, medium and low risk categories based on that evaluation of relative risk, and then sequenced to receive funding. This iterative process ensures we have a science-based, reproducible approach to sequence the many sites in our portfolio and ensures we apply our funding to our worst sites first.

Community Engagement

DAF recognizes that consistent engagement and collaboration with impacted communities is necessary to ensure our communication is transparent. As stated before, the safety and health of our Airmen, Guardians, civilian workforce and their families who live and work on our installations, as well as the surrounding communities are priorities. To that end, we utilize our public affairs personnel to proactively build sustained public understanding, trust and input on the actions we take to address adverse environmental impacts resulting from DAF activities. Whenever necessary, we work to allay any local community concern about the safety of drinking water supplies that may have experienced environmental impacts from our mission. We do so by engaging with the local community during critical decision-making processes related to our

cleanup activities, obtaining their input, and addressing their specific issues as we gather data to develop informed cleanup solutions.

We realize the CERCLA process can be complicated, confusing and lengthy, and as such, DAF strives for transparency when communicating and collaborating with community and other stakeholders on the status of our cleanup investigations and planned response actions. We discuss and share validated data and plans with members of the regulatory community, and with elected officials and local community stakeholders.

Restoration Advisory Boards

One such engagement is achieved through the Restoration Advisory Board (RAB). The RAB is a community-based advisory body designed to be a focal point for the exchange of information between the Air Force and/or Space Force, and the community on our cleanup issues and activities. RAB meetings are open to the public, and typically include, but are not limited to reviewing and commenting on environmental documents and activities, providing information and status updates to the community, and receiving input from the community. DAF responds to RAB comments and questions, distributes the responses to RAB members, and includes them in meeting minutes that are made available in DAF's administrative record public website (http://afcec.publicadmin-record.us.af.mil/Search.aspx).

Due to COVID-19 restrictions during much of calendar year 2020, in-person RAB engagements had been limited—however, installations and Air Force entities used virtual engagements to reach stakeholders. Most notably, Air National Guard and Air Force Civil Engineer Center activities used web-based platforms to host virtual RABs.

Community Relations Plans

In addition to RABs, the DAF also utilizes Community Relations Plans that identify issues of possible community concern, providing a framework and structure for communication between the installation and the community. These plans outline how the public can participate in the decision-making process, and are part of the public record of community involvement during the investigation and remedial phases of CERCLA.

Challenges

Continuing Resolution

Executing environmental remediation contracts when the President's Budget is not locked until half-way through the fiscal year presents a challenge to the DAF cleanup program since funding must be received by the program ahead of contract negotiation and award. It puts the program behind the obligation curve, and creates a bow wave of work once funding is provided.

PFAS

In May 2016, the U.S. Environmental Protection Agency (EPA) issued a drinking water lifetime Health Advisory (HA) of 70 parts per trillion (ppt) for two PFAS, perfluorooctane sulfonate (PFOS) and perfluorooctanic acid (PFOA). Since that time, the DAF has proactively responded to PFOS/PFOA releases above the EPA HA attributable to DAF mission-related activities by following the CERCLA process to identify and investigate releases, determine the appropriate response actions based on risk, and prioritize responses and cleanup.

First and foremost, we are investigating and addressing PFOS/PFOA in drinking water on DAF installations, and reporting results in annual Consumer Confidence Reports (CCR), which are drinking water quality reports that community water systems are required by law to deliver to customers each year. DAF takes swift action to address drinking water and provides alternative water when PFOS or PFOA from our activities is found off-base in drinking water at levels above EPA's HA. DAF's actions are consistent with EPA's recommended actions, which include treatment of drinking water or providing alternative water supplies, such as bottled water or connecting residents served by private wells to public drinking water systems. No one is drinking water above EPA's HA level where DAF is the known source.

Similarly, DAF takes quick action to address off-base drinking water. If PFOS/PFOA releases attributable to DAF activities are demonstrated to have impacted off-base drinking water at concentrations above the EPA lifetime HA, DAF takes immediate action to provide alternative drinking water sources as soon as practicable. Such response actions include providing bottled water, point-of-use filtration, whole-house filtration, municipal water supply hookup, municipal water treatment, and new well drilling. Drinking water removal actions were conducted at 33

DAF installations, which included provision of bottled water, installation of treatment systems, and connections to municipal water supplies.

Through FY20, DAF completed Preliminary Assessments at 203 Active/Reserve, Air National Guard (ANG) and BRAC installations where aqueous film forming foam (AFFF), a known source of PFAS, may have been released to the environment, and we have completed 38 Site Inspections of the 190 required. Thus far the Remedial Investigation phase of CERCLA has been initiated at 47 installations. The remaining cleanup efforts are intended primarily to address PFAS in groundwater, efforts which can be technically complex and take a long time to complete.

To date, the DAF has expended $737.6 million to address PFAS releases. We obligated over $160.8 million in FY20 alone, and plan to obligate approximately $37 million in FY21.

DAF leadership actively participates in the DoD PFAS Task Force, established in July 2019 providing strategic leadership and direction to ensure a coordinated, aggressive, and holistic approach on DoD-wide efforts to address PFAS.

The DAF fully supports Strategic Environmental Research and Development Program (SERDP) /Environmental Security Technology Certification Program (ESTCP) investment in studies aimed at developing fluorine-free surfactant formulations for use in AFFF fire-suppression operations. The DAF aggressively works to minimize future AFFF releases, by limiting the use of AFFF to emergency responses by requiring Secretariat level approval for use in research and development (R&D) and training. Additionally, any uncontained AFFF release – such as during an emergency response to an aircraft crash – is immediately contained and treated as a hazardous spill.

Successes

DAF is investing in technology transfer to support the SERDP/ESTCP efforts by piloting small scale projects to bridge the gap between bench-top research and development success and full

scale technology implementation. Examples of DAF environmental remediation technology investments include the demonstration at Peterson AFB of an innovative multi-barrier treatment train to both remove and destroy PFAS in AFFF-impacted groundwater, combining nanofiltration and ultra violet (UV) treatment. At Cape Cod Air Force Station DAF is funding the evaluation of In-Situ Soil Stabilization as a remedy to reduce or eliminate leaching of PFAS to groundwater from source areas via chemical fixation. Other notable PFAS environmental restoration technology demonstrations include use of electrochemical treatment to destroy PFAS in ion exchange resins, and the use of supercritical water oxidation as a safer alternative to AFFF destruction than incineration.

Conclusion

The DAF's main priority is to protect our Airmen, Guardians, and civilian workforce and their families who live and work on our installations, as well as residents of the surrounding communities by reducing risks to human health and the environment caused by our activities. DAF Environmental Restoration programs operate on a risk-based framework where sites with the highest risk are prioritized first to ensure we address our worst sites first. We remain committed to fulfill our cleanup responsibilities and follow DoD cleanup policy and goals, and utilize the authorities provided by CERCLA and the DERP statute.