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United States Senate

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

WASHINGTON, DC 20510-6175

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May 13, 2019

The Honorable Gene L. Dodaro
Comptroller General of the United States
U.S. Government Accountability office
441 G Street NW
Washington, D.C. 20548

Dear Mr. Dodaro:

I request that the Government Accountability Office (GAO) undertake a study on international sites that store or are contaminated by nuclear waste from United States activity. I also ask that GAO examine any commitments the United States has made to clean up or maintain such sites, and any mechanisms the United States has in place to identify and address any risks these sites face from climate change.

The federal government's environmental liability for cleaning up contaminated sites in the United States has been growing for the past 20 years and is likely to continue to increase. For fiscal year 2018, the federal government's overall estimated environmental liability was \$577 billion. However, this estimate does not reflect all of the future cleanup responsibilities federal agencies may face in the United States because of a lack of complete information and often inconsistent and non-risk based approaches to making cleanup decisions. This estimate also does not likely include the costs for any potential cleanup responsibilities the United States government may face for contamination of sites abroad.

For example, in 1966, a B-52 bomber carrying four hydrogen bombs collided with a refueling aircraft near Palomares, Spain. Following the incident, the United States military removed contaminated top soil from the area, but part of the area remains fenced off, and the U.S. government has since funded ongoing monitoring of the area. In 2015, Secretary of State John Kerry signed a "Statement of Intent" with Spain's Foreign Minister, to assist Spain in completing the cleanup of Palomares.¹ However, it is unclear the extent to which this work has been conducted.

Another area of potential liability is legacy nuclear waste storage sites that are threatened by climate change. According to the U.S. Global Change Research Program's 2014 National Climate Assessment, under climate change, rising sea levels, extreme weather events, and melting ice are expected to become more frequent and intense.² The Runit Dome in the Marshall Islands is one such legacy nuclear waste storage site threatened by rising sea levels and extreme weather events. In 1962, after 12 years of nuclear weapons testing, 111,000 cubic yards of radioactive waste was mixed with topsoil, dumped into an unlined crater, and sealed under a concrete cap. As a result of rising sea levels, over time, the integrity of the concrete dome has become increasingly threatened by the

¹<https://abcnews.go.com/International/palomares-anniversary-time-us-dropped-nukes-spain/story?id=36322038>.

²Walsh, J., D. Wuebbles, and et al., 2014: Ch. 2: Our Changing Climate. *Climate Change Impacts in the United States: The Third National Climate Assessment*, J. M. Melillo, Terese (T.C.) Richmond, and G. W. Yohe, Eds., U.S. Global Change Research Program, 19-67. doi:10.7930/J0KW5CXT.

incursion of seawater. In 2013, the Department of Energy confirmed sea water is penetrating the dome and causing the concrete to crack and leach radioactive waste into the Pacific Ocean. Scientists are also concerned that extreme weather events could cause the dome to crack and spill radioactive waste into the ocean.³

Additionally, waste from Camp Century, a subterranean facility built by the U.S. Army under the Greenland Ice Sheet to house and launch nuclear weapons during the Cold War, is vulnerable to the impacts of melting ice.⁴ The base was decommissioned in 1967 and the Army left radioactive waste and other pollutants beneath the ice, assuming it would entomb the materials. However, scientists estimate that increased rates of melting ice from climate change could expose and carry 9,200 tons of physical materials and 53,000 gallons of diesel fuel to the ocean by 2090.⁵

To further assist in understanding the extent of the U.S. government's legacy cleanup commitments and the potential risk to legacy nuclear waste storage facilities from sea level rise, extreme weather, and melting ice, I would like GAO to examine the following questions:

- (1) What is known about sites outside the United States that are contaminated by or store nuclear waste from United States activity, including whether they are threatened by climate change?
- (2) What commitments, if any, has the U.S. made to cleaning up these sites?
- (3) What federal mechanisms, if any, are in place for federal agencies to identify and prioritize cleanup of contaminated sites outside the U.S.?

Thank you very much for your attention to this important issue. If you have any questions, please ask the appropriate members of your staff to contact Michal Freedhoff, a senior member of the minority staff of the Environment and Public Works Committee, at Michal_Freedhoff@epw.senate.gov.

With best personal regards, I am

Sincerely yours,



Tom Carper
Ranking Member
Committee on Environment
and Public Works

³<https://www.theguardian.com/world/2015/jul/03/runit-dome-pacific-radioactive-waste>

⁴<https://www.smithsonianmag.com/science-nature/radioactive-cold-war-military-base-will-soon-emerge-greenlands-melting-ice-180960036/> and <http://www.sciencealert.com/nuclear-waste-from-the-a-cold-war-base-will-leak-into-the-arctic-because-of-climate-change?perpetual=yes&limitstart=1>

⁵<http://onlinelibrary.wiley.com/doi/10.1002/2016GL069688/pdf>