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Agent Orange: Recent Developments in Remediation

**Before the Subcommittee on Asia, The Pacific, and
The Global Environment Committee on Foreign Affairs
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Chairman Faleomavaega, Ranking Member Manzullo, and Members of the Subcommittee, thank you for inviting me to testify before you today on recent developments in remediation of Agent Orange in Vietnam. I am pleased that your committee convened this hearing on such an important issue.

Dioxin contamination, associated with the use of Agent Orange, is one of the last vestiges of the Vietnam War and remains an obstacle to further strengthening relations between the United States and Vietnam. As you may know, the U.S. Agency for International Development (USAID) is the lead implementer for dioxin remediation in Vietnam. We work collaboratively with our colleagues at the Department of State, the Environmental Protection Agency, the Department of Health and Human Services, and the Department of Defense. In my testimony, I will describe the situation on the ground, and current and planned U.S. contributions to the remediation efforts.

Before getting into details on USAID's remediation efforts in Vietnam, I would like to share briefly with the committee an overview of how the U.S. government – particularly USAID – assists the people of Vietnam as they transition to a more open and prosperous society. Mr. Chairman, I understand that you had an opportunity to visit Vietnam in January, so you have seen first hand the tremendous progress that has been made. Vietnam is playing a greater role in East Asia's growth and development. Its efforts to become more globally integrated have contributed to economic growth rates in Vietnam of 6 percent annually since 2000. This growth, in turn, has enabled the country to reduce poverty by one-third. Despite such progress, Vietnam still faces significant environmental and development challenges, including dioxin contamination "hotspots" at various locations around the country.

CURRENT ASSISTANCE

Since the year 2000, USAID assistance in Vietnam has reached nearly \$330 million. We operated initially under the auspices of the Leahy War Victims Fund, providing services for people with disabilities in Vietnam. Since then, USAID assistance has expanded to support economic governance, judicial reform, the rule of law, and establishing international labor standards in the country.

USAID programs, in concert with other USG partners, also increase access to social services for vulnerable populations, prevent and treat HIV/AIDS, and improve the quality and relevancy of Vietnam's higher education system. These programs – and their success – have been instrumental in putting the U.S. relationship with the Government of Vietnam (GVN) on a solid, cooperative footing. In January 2009, that cooperation resulted in the elevation of the USAID office in Hanoi to a full mission.

USAID's new status in Vietnam is especially timely as we recognize the 15th anniversary of U.S.-Vietnam relations this month. While we celebrate the progress that we have made, we also recognize that the U.S. can do more, including with respect to dioxin remediation, which will have a significant benefit to our bilateral relations.

BACKGROUND

As my colleague from the State Department has noted, the United States recognizes the importance of dioxin remediation in Vietnam. Dioxin soil contamination at Danang, Bien Hoa, and Phu Cat exceeds international standards and may pose health and environmental risks. In response to the situation, the U.S. Government (USG) assistance supports remediation of dioxin-contaminated soil and sediments, and health activities in Danang. These activities are carried out in close coordination with the GVN and other donors.

The USAID-supported dioxin remediation project is part of a broader multinational effort to address the Agent Orange legacy and to assist Vietnam in complying with its obligations under the Stockholm Convention on Persistent Organic Pollutants.

USAID's remediation work in Danang builds upon previous work by the State Department and the U.S. Environmental Protection Agency (US EPA) to eliminate the potential for dioxin exposure at Danang airport, and draws upon the collaborative research coordinated by the bilateral Joint Advisory Committee (JAC) on Agent Orange/dioxin remediation. Additionally, U.S. government activities complement the efforts of a broad coalition: the Government of Vietnam, the United Nations Development Program, the Ford Foundation, and others have committed substantial resources to dioxin remediation throughout the country. As my colleague from the State Department has noted, the GVN has requested our assistance specifically at Danang.

In December 2009, USAID and Vietnam's Ministry of Natural Resources and the Environment (MONRE) signed a memorandum of understanding that laid the framework for implementing environmental health and remediation programs. This was an important step forward in our working relationship on Agent Orange because the memorandum of understanding outlines the coordination framework between the implementing agencies - MONRE's Office of the National Steering Committee 33 and USAID.

Mr. Chairman, Danang is the third largest city in Vietnam and it is rapidly growing. Its domestic and international airport is expanding and located in a densely populated urban area, where discrete dioxin hotspot sites have been identified. Some of the sites are located within meters of residential areas, and until late 2008, the public had access to the airport premises to fish, harvest plants and carry out other agricultural activities. Public access to these sites is now controlled and, with USG and Ford Foundation support, the area with the highest level of contamination has been covered to prevent any further exposure. These measures are only temporary due to the planned airport expansion and economic pressures to develop the valuable land where some of the contaminated soils are located. USAID is keenly aware of the need to begin the remediation as soon as possible.

ENVIRONMENTAL ASSESSMENT

Last fall, I had the opportunity to lead the USAID team as they initiated an environmental assessment for dioxin remediation at Danang airport. The team surveyed the airport to determine the best approach to eliminate or minimize the ongoing risk of dioxin exposure to local residents. It was an eye-opening experience for me to examine the site and grasp the large amount of contaminated soil and sediment that will need to be treated through the remediation efforts. As access to the site is difficult to control and it is located in such close proximity to residential areas, the environmental assessment team determined that a permanent solution is required to protect the public living near to and working on the airport from possible harm.

The environmental assessment was carried out over the last nine months, in close consultation with Vietnamese stakeholders, including the GVN, provincial and district officials and airport authorities. USAID conducted 14 formal meetings both in Hanoi and Danang to obtain stakeholder input and to inform our Vietnamese counterparts of technical findings as the assessment evolved. USAID kept our USG partners and other donors involved, and sought their input into technical developments of the assessment and its findings and conclusions.

The environmental assessment, which I recently approved, evaluated alternatives for addressing dioxin remediation at Danang and determined the relative environmental impacts of each alternative. Because of anticipated funding limitations, the Government of Vietnam initially proposed to remove dioxin-contaminated

soil and sediment from hotspots and contain it in a secure landfill on the base. This approach, however, would not destroy the dioxin. Eventually, either a new landfill would be required or dioxin contained in the landfill would need to be destroyed. Furthermore, there are substantial environmental risks associated with transporting the large volumes of contaminated material along a haul road near residential areas to a landfill on the airport. Consequently, two dioxin destruction alternatives were also included for evaluation: bioremediation, and in-situ/in pile thermal desorption destruction.

Findings of the recently completed environmental assessment showed that the thermal desorption destruction alternative was feasible at the Danang site, was associated with the lowest environmental impacts, and had the greatest possibility of success in removing dioxin. The costs of in-situ/in-pile thermal desorption and destruction is estimated to be in the same range as the other alternatives. In-Situ/In-Pile thermal desorption destruction is an innovative, proven technology to destroy dioxin and other contaminants. It has been used to destroy dioxin at similarly sized sites in the United States, and can reduce dioxin to the desired level on the scale required to accommodate the airport expansion. The thermal option would also require the least exposure to residential areas, and could provide a permanent remedy to dioxin within a two-year time frame. Furthermore, it would not require as large an area of land as a landfill would require (four to six football fields in area, and one and a half stories high). The thermal option could also result in unrestricted land use of the affected areas after treatment.

NEXT STEPS

The Urgency in Moving Forward

The GVN is currently expanding the Danang airport. Construction is taking place close to areas with the highest levels of contamination. In fact, Sen Lake, a dioxin hotspot, has already been partially affected by airport expansion work which may risk airport workers' exposure to dioxin. Given the extent of the contamination, imminent airport construction plans of the GVN, and the potential threat to the local population, the USG and the GVN should act now to remediate the dioxin at Danang to ensure that airport construction work does not increase exposure to dioxin contamination.

Remediation Timeline and Costs

In December 2009, USAID signed a memorandum of understanding with the Government of Vietnam to proceed with the remediation project at Danang airport. The Environmental Assessment, which I approved on July 7, 2010, selected thermal desorption as the remedial technology for dioxin remediation at Danang airport. USAID will complete the engineering design – the first phase of the remediation program - over the next several months. This phase was fully funded under the USAID/Vietnam budget. Subject to the availability of funds, subsequent phases – the thermal desorption activity - may be implemented in future years. We estimate that the project cost will be approximately \$34 million.

BENEFITS OF ENGAGEMENT

USAID's environmental remediation work will help close a difficult chapter in U.S.-Vietnam relations. The complete elimination of dioxin in the soils and sediment at Danang would represent the most significant action we could take to alleviate environmental concerns and protect vulnerable populations. It would permanently resolve one of the Government of Vietnam's lingering concerns about dioxin contamination associated with Agent Orange, and tangibly demonstrate the United States commitment to the continued improvement of U.S.-Vietnam relations.

CONCLUSION

Mr. Chairman, I'd like to close by thanking Congress for its support and continuous commitment to dioxin remediation in Vietnam. The U.S. government can make a big difference. We can be a leader on this issue and make a significant impact in the lives of many Vietnamese.

Thank you again for the opportunity to testify before you today. I look forward to responding to your questions.