

# PROJECT SNAPSHOT

## Dioxin Treatment at Da Nang Airport - Phase 1

IPTD®

**Location:** Da Nang, Vietnam

**Goal:** 150 ppt for 2,3,7,8-TEQ

**Client:** USAID

**Number of Heaters:** 1,254

**Contamination:** Dioxins (2,3,7,8-TEQ)

**Duration:** 15 months of operation

**Volume:** 43,348 m<sup>3</sup>

**Pile Size:** 105m by 70m by 6m

## WHAT MAKES THIS PROJECT UNIQUE?

More than 49 years after the Vietnam War, during which Agent Orange was used for defoliation, a large area at the Da Nang airport remained heavily contaminated by residues of the chemicals, including dioxins such as 2,3,7,8-tetrachlorodibenzo-p- dioxin. U.S. Agency for International Development (USAID) funded and implemented this project in partnership with the Vietnam Ministry of National Defense. TerraTherm's role included design, construction, operation, and decommissioning of the in-pile thermal desorption (IPTD®) treatment system and treatment of the contaminated soil and sediments in two sequential phases.

## Important Project Details

- **Approach:** For Phase 1, Impacted soil was excavated and loaded into a pile the size of a football field and 6m tall. With a required target temperature of 335°C for effective treatment, thermal conduction heating (TCH) was the only available heating technology. The soil was heated, treated, cooled, and used as clean fill for airport expansion after confirmatory sampling.
- **Challenges:** Heating was observed to be slowest at the top and bottom of the pile. This prolonged the first phase, and led to improvements of the cover design, and a revised heating strategy for Phase 2, which was completed on schedule.
- **Results:** Contaminant concentrations were reduced from a range of 4,040 to 6,880 ppt to an average of 8.9 ppt. TerraTherm received the EBJ 2018 Business Achievement Award for Project Merit in Remediation.



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