

USACE Savannah District's Quick Response to Reported Petroleum at Buxton Beach

On Tuesday, September 10, 2024, the U.S. Army Corps of Engineers, Savannah District, deployed a four-person team to Buxton Beach to respond to a reported petroleum release at the former Buxton Naval Facility, a Formerly Used Defense Sites property located within the Cape Hatteras Seashore in Dare County, North Carolina. The team arrived on-site Wednesday morning and coordinated with National Park Service personnel, who had proactively increased the beach closure area to ensure public safety. The team stayed on-site until September 22, 2024.

The USACE team consisted of two professional geologists and two heavy equipment operators tasked with limiting petroleum releases into the Atlantic Ocean and conducting a limited test pit investigation to identify the extent of the petroleum. To conduct site operations, an excavator and backhoe were mobilized to the site. **Photo 1** is a picture of the equipment mobilized on Buxton Beach.

The team conducted visual inspections of the beach front, including along and around the exposed infrastructure for signs of an active or potential petroleum release (e.g. odors, stained soils, and/or sheens). A photoionization detector (PID) and field test kits were also used to detect petroleum. **Photo 2** shows the USACE team conducting a beach inspection. The team did not identify any ongoing petroleum releases due to recent sand accumulation along the beach.

The team conducted a limited test pit investigation to better define the extent of petroleum in the subsurface and to inform the follow-up response action. The response action is currently underway by a contractor which involves the removal of petroleum-impacted soil. The USACE team excavated 62 test pits along the beach and behind the dune area as shown in **Figure 1**. Test pits were excavated with hand tools and heavy equipment, with each pit generally excavated to the top of the water table. The test pits were then examined for evidence of petroleum, such as odors, staining, sheens, PID response, and/or screening with the field test kits. Petroleum-impacted soil was observed in the subsurface in two areas - an area around the northern footprint of building 19 and an area slightly south of the building 19 footprint. The petroleum-impacted soil was generally observed at the water table. **Photo 3** shows a test pit excavation using the compact excavator.

Site conditions remain extremely dynamic due to tidal fluctuations, changes in wave action, and frequent erosion and deposition.



Photo 1. Equipment Mobilized to Buxton Beach, September 12, 2024



Photo 2. USACE Team conducts a beach inspection, Buxton Beach, September 12, 2024



Photo 3. Test pit excavation on Buxton Beach, September 18, 2024.

