



Orlando, Florida

# FORMERLY USED DEFENSE SITES PINECASTLE JEEP RANGE

Investigation & Removal Actions

March 2008

## Background

On behalf of the Department of Defense (DoD), the U.S. Army Corps of Engineers manages the Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP-FUDS), to conduct studies and remediate sites formerly used by the DoD such as the Pinecastle Jeep Range. Pinecastle was leased by the government for military demonstrations of weapons and warfare capabilities from 1943 until 1946. In the late 1940s when the property was no longer needed, it was cleaned up according to the standards at that time and returned to the original property owners.

Under the requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the law that governs these cleanup activities, the Corps conducts investigations to determine potential risks to human health and the environment from contamination such as unexploded ordnance, discarded military munitions and munitions constituents (material inside the munitions).

The U.S. Army Corps of Engineers partners with stakeholders throughout the remedial process, including congressional representatives, state and local regulatory and environmental agencies and affected property owners. Public involvement is an important component of the process.

## Site Inspections

A Site Inspection (SI) is the first step in the process. The SI is not intended as a full-scale study of the nature and extent of contamination or explosives hazards, but to determine if the site poses a significant threat, if a detailed investigation is needed and/or if an immediate response is needed. Data is collected that will later be used to prioritize the site for future cleanup action, if required.

During this step in the process, the Corps reviews historical documents, conducts site visits and interviews, and, in some cases, collects limited samples and conducts limited geophysical surveys.

It was during the SI phase at the Pinecastle Jeep Range that the Corps was informed by a private property owner (Mockingbird, LLC) of military munitions on the surface of the ground. The Corps advised the property owner to notify local law enforcement, and the munitions items were disposed of safely. The Corps determined that the presence of the surface munitions and their proximity on property adjacent to Odyssey Middle School posed an immediate threat to human safety, prompting a Time Critical Removal Action (TCRA).

## Time Critical Removal Action (TCRA)

A site is categorized as requiring a TCRA when there is an immediate danger to public safety or the environment. A removal or other action must begin within six months. Once the immediate threat at a site is addressed, a Remedial Investigation/Feasibility Study (RI/FS) is conducted to determine the need for additional work.

The Corps began a TCRA at the former PJR site in August 2007, primarily focused on the Odyssey Middle School property. A temporary fence was installed to create a barrier between Odyssey Middle School and the Mockingbird property, a surface sweep was conducted and soil samples were taken on the school grounds to verify that the school was safe prior to opening for the academic year. A geophysical survey of all open, unpaved areas revealed that anomalies, or irregularities, existed on the school property, requiring further investigation. These investigations were



*This 5" mortar shell was discovered during removal operations at Odyssey Middle School.*

conducted during holiday breaks while school was not in session, resulting in the excavation and removal of 14 tons of cultural (building, construction) and munitions debris and more than 125 munitions. Additional TCRA work was initiated on the northern portion of the Mockingbird property to create a safety buffer zone for the school; in the Tivoli Gardens subdivision, the only residential area within the 1953 restricted area; and in the Warwick subdivision, following a private contractor's discovery of two inert munitions in that area.

### What does the Corps mean by "removal action?"

The term "removal action" may not necessarily refer to physically removing anything. It refers to the action determined to be appropriate by the stakeholders involved, for the protection of the public and the environment from hazards discovered at a FUDS property. Actions taken by the Corps may include physical removal of a potential hazard, installing fences, putting up warning signs in an area and/or providing safety education information.

A removal action reduces the risk to the public and the environment, but cannot eliminate all risk. As a safety precaution, the public is reminded to practice the "3Rs" of explosives safety: Recognize that any suspicious objects found in the area may be munitions and should not be touched under any circumstances; Retreat, or carefully leave the area and; Report what was found and its approximate location to local law enforcement officials.

### Remedial Investigation/Feasibility Study (RI/FS)

Once the immediate threat is removed under a TCRA, a Remedial Investigation (RI) is conducted to determine the extent and type of any remaining hazards. The RI also assesses the risks at the site.

The Feasibility Study (FS) determines the appropriate action needed, based on the findings of the remedial investigation. Its

primary objective is to ensure appropriate remedial alternatives are developed and evaluated, and an appropriate remedy selected. The RI/FS results in a Proposed Plan, which is published for public review and comment for at least 30 days prior to finalization.

RI/FS and TCRA applied to Pinecastle Jeep Range

In most cases, under CERCLA, a FUDS project would move from the Site Inspection phase to the Remedial Investigation/Feasibility Study phase to a Proposed Plan and then to remediation, if needed. This deliberate, methodical process, although it may be lengthy, is necessary to ensure that the FUDS is appropriately characterized. In other words, following this careful process ensures better understanding of how the site was used, the types of contamination that may be present and where the potential hazards exist, so that appropriate remedial action is planned and taken.

TCRAs on munitions-contaminated sites are rare, since typically, munitions are buried on FUDS properties. For munitions to be dangerous, they must first be present and accessible, and energy must be applied to them (touching, moving, kicking, scraping, dropping, rolling). Buried munitions do not provide the presence and accessibility for energy to be applied and therefore do not pose an immediate risk. At the former Pinecastle Jeep Range FUDS, the discovery of munitions on the surface of the ground, and its proximity to a school, posed an immediate risk to public safety and justified immediate action in the form of a TCRA.

Because of concern for public safety, the TCRA was quickly begun without the benefit of the normal, thorough process typically used. This means that new information may be discovered as the TCRA is in process, causing the Corps and its contractors to reevaluate and incorporate that information simultaneously with implementation of the removal action. All lessons learned during the TCRA are valuable and will be applied during the RI/FS to plan future efforts as needed.

### For More Information

#### Documents are located in the Information Repository:

**Orlando Public Library Southeast Branch**  
5575 S. Semoran Blvd.  
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