

# Disposal of Contaminated Soil Winklepeck Burning Grounds Ravenna Army Ammunition Plant

## PROJECT HIGHLIGHTS

- *Loaded and Transported 4,786 cy of Contaminated Soil*
- *Performed MI-Soil Sampling to Verify that the Contaminants and ACM Debris had been Removed*
- *Received Follow-on Contract for MEC Demolition and Disposal*
- *Completed with Zero OSHA Accidents or Incidents*

## RAVENNA ARMY AMMUNITION PLANT (RVAAP)

RVAAP encompasses approximately 21,000 acres located in Ravenna, Ohio, and was constructed during World War II. Past Department of Defense (DoD) activities at the RVAAP date back to 1940. RVAAP was constructed primarily as a site for loading medium and major caliber artillery ammunition, bombs, mines, fuze and boosters, primers, and percussion elements as well as storing finished ammunition and ammunition components. These industrial operations were conducted within 12 munitions assembly facilities referred to as "load lines" (LLs). The Winklepeck Burning Grounds (WBG) area is located at the approximate center of the facility. Historical operations at WBG included decontaminating heavy artillery projectiles of explosive residue by using an open burning technique. Prior to 1980, wastes disposed by burning included RDX, antimony sulfide, Composition B, lead oxide, lead thiocyanate, 2,4,6-TNT, propellant, black powder, sludge and sawdust from LLs, in addition to domestic wastes. Explosives contaminated materials, such as crates and bags, were also burned. Small amounts of laboratory chemicals were routinely disposed, as well, during production periods. Waste oil was disposed in the northeast corner of WBG until 1983. This project was performed to enable the Ohio Army National Guard to use the property for constructing and operating a MARK 19 Range.

## SERVICES PROVIDED

In preparation for construction of the Range, a Phase II Munitions and Explosives of Concern (MEC) Clearance and Munitions Response was conducted from March to August 2005 to ensure surface MEC and site related chemicals of concern were removed from the areas of WBG needed for construction. During the Phase II clearance operations, MEC was removed from soils excavated from select burn pad locations. Two soil berms identified as being within the line of sight of the planned down-range targets were also excavated and processed for MEC removal. Based upon previous Remedial Investigation data, the processed soil from the berms was stockpiled onsite for reuse as backfill material during subsequent range construction operations. However, during excavation, the stockpile was found to contain asbestos containing material (ACM). As such, the soils could not be reused and required disposal at an approved off-site facility. PIKA arranged for and oversaw this process.

The Scope of Work (SOW) for this project provided for the transportation and disposal of the entire WBG soil stockpile as well as other miscellaneous debris that was containerized and staged at LL4 during the Phase II MEC clearance operations. The miscellaneous debris items at LL4 included two 1-cubic yard (cy) Gaylord boxes, one 55-gallon drum of tar roofing material, and one 1-cy Gaylord box of broken transite panels. In accordance with the SOW, confirmatory samples were collected within the footprint of the stockpile following removal to verify removal of ACM debris.

## BENEFITS OF MULTI-INCREMENTAL SAMPLING

Multi-incremental sampling improved data reliability and better represented site characteristics, enabled fewer samples for risk analysis, and reduced the number of samples for lab analysis. Multi-incremental sampling also reduced the chance for missed contaminants; reduced sampling and processing induced errors; and produced high quality data at a much lower cost.

