

MAKING IT WORK. OVERCOMING THE BARRIERS OF DEPLOYING AGC TECHNOLOGIES IN CHALLENGING ENVIRONMENTS

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A remedial action is being conducted to cleanup munitions and explosives of concern over more than 1,000 acres of Croft State Park, South Carolina. Located near Spartanburg, former Camp Croft served as a World War II basic training center and is now a Formerly Used Defense Site (FUDS) ranked on the FUDS priority list. The rolling, densely forested terrain within Croft State Park is a coveted natural resource to the local community and a popular destination for recreational enthusiasts. In the not-so-distant past, analog geophysical methods would be the preferential approach for remediation to limit disruption to park operations and maintain a natural landscape. Park use and natural balance will always be contributing factors to remedial design at FUDS of this type. However, effectively executing the remedy is exponentially more complicated with increased emphasis of deploying advanced geophysical classification (AGC) technologies no matter the site conditions. Planning for Camp Croft required flexibility and the ability to adapt to challenges while incorporating the needs of land managers and contractually driven preferences for technology selection. Currently, dynamic AGC is being performed with six APEX units at Camp Croft. Extraordinary site preparation and startup activities were required leading into initial vegetation reduction around closely spaced mature growth trees. Because tree removal in the park is to be avoided, obstruction density was found to negate any effectiveness of robotic total station (RTS) positioning and impaired planned production rates of APEX. Because of plan flexibility and project delivery team willingness, work quickly pivoted to simultaneous localization and mapping (SLAM) demonstrations and integration with APEX. Daily operations have now completely transitioned from RTS to KAARTA Stencil for all APEX units. This presentation provides unique aspects of the project and an update on delivering dynamic AGC and SLAM at a challenging site on an unprecedented scale.