

LESSONS LEARNED FROM LIVE SITES DEMONSTRATIONS IN CHALLENGING ENVIRONMENTS

Matthew Barner, Tetra Tech EC, Inc.; Elise Goggin, Tetra Tech

The Live Sites Demonstration program was an effective program by which emerging advanced electromagnetic induction (EMI) sensor technology was challenged by a broad spectrum of site conditions and targets of interest (TOIs). The program benefits munitions response practitioners and stakeholders through sharing of successes and failures and the resulting lessons learned. Tetra Tech EC, Inc. (TtEC) took part in Live Site Demonstrations at Southwest Proving Ground (SWPG) in 2015, and Joliet Army Ammunition Plant (JOAAP) in 2016. Unforeseen conditions at each of these sites resulted in the need for data analysis procedures to be modified to account for these unexpected challenges. The challenges included performing classification in high density clutter areas, resolving positioning gaps in robotic total station (RTS) data in dense woods, and utilizing inertial measurement unit (IMU) data with abrupt changes in sensor pitch and roll during dynamic collection due to rough terrain. Each of these instances had yielded valuable lessons learned in applying data corrections and maintaining stakeholder confidence in delivered results.