

Operating with UXO Containing White Phosphorus

This article provides a brief account of the unexploded ordnance problem in Azerbaijan and describes the particular hazards of dealing with UXO containing white phosphorus. Drawing from the experience of the Azerbaijan National Agency for Mine Action's work at Saloglu, guidelines for handling WP UXO are discussed.

by Ilham Azizov [Azerbaijan National Agency for Mine Action]

The efforts of the government of Azerbaijan and NATO to eliminate the country's UXO problem resulted in an agreement between the NATO Maintenance and Supply Agency and the Azerbaijan National Agency for Mine Action. The agreement launched a joint project on clearing UXO and explosive hazards in the former military base at Saloglu in the Agstafa district of Azerbaijan in January 2006. The Saloglu Project was the first result of cooperation between Azerbaijan and NATO within the Partnership for Peace program. The



Dedicated PPE for WP operations.

role of Turkey as a lead nation on the Saloglu Project should be particularly emphasized—its experts have largely contributed to the project's implementation through monitoring and technical supervision.

The military ammunition warehouse located in Agstafa region, consisting of 138 bunkers, was the largest of the Soviet warehouses in the South Caucasus region. In 1991, when Azerbaijan regained its independence, the Soviet Army destroyed the warehouse before departing. As the result of the explosion, thousands of pieces of UXO, including those



Destruction of WP UXO with explosives underneath.
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containing white phosphorous, were scattered over 4,400 hectares (17 square miles), posing a serious humanitarian, socioeconomic and environmental threat to the local population. Since the explosion, 152 UXO-related accidents have been reported, with 32 people killed.

The project covers checking, clearance and removal of stock-piled UXO located at the towns Agstafa and Poylu of Agstafa district. After the implementation of the project, it has become clear that the problem is more serious and more difficult to solve than was initially thought by the international experts during their assessment missions to Azerbaijan. Obtaining some experience from the on-site operations conducted in the frame of the project, the ANAMA UXO operations team implemented a few new techniques for handling fuze-free UXO and devices containing explosives of various types, including those with WP. The following paragraphs present ANAMA's experience garnered from operating with WP-containing devices.

Operating With UXO Containing WP (White Phosphorous)

There are few countries in the world affected by WP UXO stockpile contamination similar to what Azerbaijan encountered during operations;

therefore, the ANAMA team would like to share some critical safety guidelines obtained from its explosive ordnance disposal team's experience.

Up to the end of 2006 there were approximately 15,000 pieces of Russian-produced WP UXO found during ANAMA operations. The demolition of these UXO items entails filling the WP compound in vacuum conditions. Therefore, when it is exposed to oxygen, it instantaneously combusts and emits toxic smoke, and it is very difficult to stop the burning if appropriate measures are not taken beforehand. Because the WP compound left on subsurface fragments will cause serious burns if it comes into contact with human skin, it is important to be extremely careful while dealing with this type of UXO.

To prevent any negative effects to humans while handling the devices containing WP, personal protective equipment should include leather gloves of a special design, fireproof coveralls over body armor, hard hats, respirators and glasses. In case of an emergency, an on-site medical support team should have a compound solution of sodium carbonate and copper sulfate available to smear over affected areas.

Another innovation to protect the team consists of a water-filled, metal tub installed at the site. As soon as the subsurface fragments

with the WP are recovered, they are immediately placed into the tub to prevent burning. If the tub is too far from the operation point, then ordinary metal buckets of water may be utilized for collecting the fragments. A team of four or five people should be able to move the tubs to the demolition area safely.

During the demolition preparation the WP UXO projectiles can be mixed with the other types of munitions, because usually the thickness of their casing is greater and there are no other explosives inside. This process requires a larger donor charge to disrupt and vaporize these items—for example, TNT to destroy WP-free projectiles. Also, explosives used during the demolition operations of WP ammunition should be placed underneath the stockpile in order to provide the maximum possible height of explosion, as this will prevent scattering and provide full neutralization of the WP substance.

This article has provided an overview of the ANAMA team's operations in the field as part of the Saloglu Project. Hopefully, this account of the team's work has given the international demining community useful insights into dealing with the unique hazards of UXO containing white phosphorous. ♦

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News Brief

EOD Training Underway for Afghan Soldiers and Policemen

Nearly 40 soldiers and policemen from the Afghan National Army and Afghan National Police have completed the first of five phases in training to be explosive ordnance disposal technicians. The Explosive Ordnance Disposal School, ANA's first branch training facility outside Kabul, is located at Camp Shaheen.

The facility is adjacent to a 72 square kilometer (28 square mile) demolition range that will figure prominently in the remaining four training phases. The training is being conducted by 20 Afghan and international instructors from RONCO Consulting Corporation in the hopes of speeding the demining of Afghanistan, one of the world's most heavily mined countries. Demining efforts in the country are more than two decades old, but total clearance of the millions of mines could take decades.

RONCO based the training program on a successful endeavor in Az Zubair, Iraq, which trained Iraqis for three years in country-specific threats. The 22-week program, designed to be challenging, addresses issues specific to Afghan EOD efforts and safety.