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UKRAINE

Eighth Meeting of the States Parties of the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-personnel Mines on Their Destruction

PRESENTATION

on demining operations of the Ministry of extraordinary situations of Ukraine
and affairs concerning civil population protection from Chernobyl effects, the
Ministry of defense of Ukraine and State Company UKROBORONSERVICE

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In spite of the fact that 60 years have already passed since the biggest and the most severe war of the XXth century, the problem of Ukrainian territories clearance from a huge number of unexploded objects is still being topical.

A total clearance of the territories in Ukraine involving the engineering and demining units from the Ministry of Defence had been done until the middle of the seventies of the last century. Despite considerable work which was and is still conducted by the deminers on extraction, neutralization and destruction of the detected WWII unexploded objects, the accidents resulting in maims, injuries and death of the people among peaceful population still exist.

Nowadays, the problem-solving of territories clearance from unexploded objects is the obligation of the Ministry of Emergency and the Ministry of Defence of Ukraine as well as State Company UKROBORONSERVICE.

According to the order of the Government of Ukraine from August 2005 units of Armed Forces of Ukraine should take a responsibility for making work operation, main task of which is explosive ordnance disposal, destruction remnants of War, modern ammunition and explosive devices on territories given for constant military objects and activity, for military education buildings, organizations of Armed Forces and other military formations.

According to the joint order of the Ministry of extraordinary situations of Ukraine, the Ministry of Defense of Ukraine and Administration of border control service from February 2006 «About organization explosive ordnance disposal operation on the territory of Ukraine»

- Demining units of Armed Forces of Ukraine should act in detection, neutralization and destruction operations of explosive ordnance on consolidated territories of Ukraine.
- Improvement qualification of personnel of pyrotechnic units Ministry of extraordinary situations of Ukraine should accomplish on base of Demining Center of Kamenetz-Podolskyi corresponding levels of preparing specialists for the demining operations.

Main quantity in Forces of Ukraine consist of: 54 demining units

- Army – 47
- Navy – 3
- Air Force - 4

Demining group consists of:

- Group commander – officer of Engineering Force
- Too senior engineers
- Too driver- engineers

Preparing the personnel for the demining groups is conducted in Demining Center.

It is also preparing specialists in demining operations for Armed Forces of Ukraine and other Force structures of Ukraine as well as preparing specialists for Main Department of Reconnaissance, for Defense Service of Ukraine, special groups for Ministry of Internal Affairs and for Ministry of extraordinary situations of Ukraine, for peacekeeping missions and humanitarian demining operations.

Preparing specialists in demining operations is conducting at 3 levels:

- **First** – after - 5-weeks preparation, specialists are able to work in demining operations as engineers;
- **Second** - after - 5-weeks preparation, specialists are able to work on explosive ordnance disposal operations as a Group commanders;
- **Third** – after - 3-weeks preparation, specialists have experience in demining operations and are able to work in planning and organization of such operations and Quality Control Assurance operations;
- **Course «Mine Action»** is conducted during 1 week with the personnel which are not a specialists in demining operations.

Preparing for MDD (mine detection dog) operations:

- **First** – (basic) level, conducts preparation of MDD handlers - during 9-weeks;
- **Second** – instructors for MDD service, preparation during 5-weeks;

Not a permanent staff of demining groups conducts Demining operation on consolidated administrative areas with military objects of Ministry of Defense.

The most difficult tasks during liquidation blast effects on ammunition depots and checking firing range, territories of military cantonment, storages, foundations, arsenals intended for transfer for national economy are conducted by the Demining groups of Demining Center

Quality Assurance operations is conducted by specialists of quality control department of Demining Center

Engineering group is able to conduct operations during the (light period of day)

- To make reconnaissance square 0,2 – 0,3 km²
- Clearing the territory 0,1 – 0,15 km²

UKROBORONSERVICE State Company, namely its structural subunit – the Center of Humanitarian Demining, specialized in realization of commercial projects in Ukraine and abroad has played the leading role in establishing humanitarian demining in Ukraine.

To fulfill the humanitarian demining projects the enterprise involves more than 200 deminers. The Quality Assurance in humanitarian demining is certified to conformity to International Standards EN ISO 9001:2000 in the certification system Special Register (certificate No. 000123) and in the system TUV CERT (certificate No.78 100 7640).

UKROBORONSERVICE in the world market offers complex of services related to the projects on the humanitarian demining, namely:

- Humanitarian demining mine actions planning;
- Survey of the territories polluted by mines and explosives;
- Mine clearance of the territory and objects manually, with the use of mechanical facilities and mine-detecting dogs;
- Neutralization and destruction of explosives;
- Quality control of the executed mine action works;
- Providing the experts for consultations concerning organization of the mine action works;
- Arrangement of training of victim country citizens to the problems of the humanitarian mine actions.

The most complicated situation as for the territory contamination with unexploded objects takes place on the Crimea Peninsula, namely in the area of towns

Sevastopol and Kerch', where 30 people perished and been injured from WWII unexploded objects for the recent years.

In January 2001, the Government of Ukraine in order to lessen a stressful situation in this area adopted a State program on *Destruction of WWII Unexploded Objects in the Area of towns of Sevastopol and Kerch till 2010* based on the results of investigations done by the specialists of UKROBORONSERVICE State Company.

The Customer of demining is the Ministry of extraordinary situations of Ukraine.

Project financing is provided at the expenses of State budget of Ukraine.

The main executor of the work is UKROBORONSERVICE State Company.

Eliminate danger for Sevastopol and Kerch, create safety conditions for operation and ecologically friendly usage of the region water, land and other resources.

The Main Tasks of the Program are:

- Survey of obsolete ammunition locations;
- Creation of a 3D information and analytic system with a data base of sites having UXOs and its update;
- Determination of ammunition types and quantity, its condition for each site;
- Demining, ammunition neutralization or permanent preservation using the most optimum means with maximum environmental safety.

More then 130 hectares area was surveyed during the first stage of work in the Great Fortress in Kerch.

During the second stage 132 hectares was cleaned, more than 29000 UXO's with a weight more than 161 t were neutralization, removal and destruction in the special areas.

The main object which should be cleared from explosives within a framework of this State program is the destroyed Inkerman Adits located in 2km-distance from the own of Sevastopol.

The specialists of UKROBORONSERVICE proposed a problem solving strategy comprising several stages.

First stage - «Thorough Investigation», (2002 – 2004 years).

During this time the guarding of the object was organized to prevent the access of unauthorized persons; the ground surface was cleared from unexploded objects up to 0,25 cm in depth; speleological investigations, remote geophysical investigations by reconnaissance geophysics, impulse electromagnetic reconnaissance, geo-reconnaissance works and engineering and technical investigations have been done; a scheme of probable adits location before the explosion has been determined. Some problematic questions have been aroused dealing with the lack of true information on the adits layout before explosion and the ammunition, which was amassed there.

According to the results of this stage, the situation that took place underground has been determined, the unexploded objects concentration place, their nomenclature, approximate quantity, condition, possibility of access to them was found out and it was decided:

- to provide an access to the ammunition from the ground surface it is necessary to make five vertical excavations; to concrete them around with reinforced

concrete wall not less than 30 cm in width to fix the excavation against soil dislocation.

- to provide an access under the ground, move the ammunition, and in case of emergency evacuation make up to 100 running meters of underground horizontal passage, which can provide access to explosives in places of their maximum concentration under the ground;

- to fix the overhang layer that makes danger for deminers with wooden or concrete supports and protective constructions.

Second stage – «Access ensuring to unexploded objects» was done in 2004 – 2006.

During this stage the main preparations to start the extraction of unexploded objects were done: three vertical shafts (25-30m) and horizontal offshoots (30 m) towards the objects concentration place were made.

Taking into consideration a high security level, all mining works were done manually. To ensure the staff safety against possible layers dislocation and landslip, the additional fastening concrete supports were constructed.

Third stage – «Localization», has been lasting since the middle of 2006.

During the third stage of works the intensive extraction of unexploded objects from underground obstructions has started. Taking into consideration that during detonation of the object concentration of 20 ton weight in TNT equivalent, the camouflet explosion may happen, and during larger ones – a blowout. That's why in the works aimed to reduce the scales of possible unauthorized explosion are carried out and considered to be primarily important. With this purpose, the safety lines in huge concentration places are cleared, they will become an obstacle to transfer the detonation of charges concentration of more than 20 tons in TNT equivalent.

During this stage, the ammunition of different types and calibers (aviation bombs from 10 till 1,000 kg; shells from 37 till 180 mm, mortar mines from 50 till 122 mm), have been already extracted from underground, their total number counts more than 20 thousand pieces.

Also during this stage, the works on prohibition of possible unauthorized access of "the black diggers" into the adits through the passages and cracks in the rock massif have been conducted.

Fourth stage – «Maximum clearance», is planned for 2007-2010.

Two more vertical shafts are planned to construct, as well as the system of underground horizontal excavations, extraction of maximum number of unexploded object from the heaps, lifting the ammunition on the surface and their destruction, closing the access of unauthorized persons into the adits from outside.

In Conclusion: Altogether the State program of Sevastopol and Kerch clearance from WWII unexploded objects except the Inkerman adits assumes also the works on 6 objects (Makenzy mountains, territory of the battery Pyanzin, village of Geroiyvske, village of Bondarenkove, Adzhimushkay quarries, aqua territory of Kerch and Sevastopol).

We can believe that the realization of this program will contribute a lot into liquidation of grave consequences of World War II.

Thank you for your attention.