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Federal Republic of Germany  
Foreign Office

**13<sup>TH</sup> MEETING OF STATES PARTIES TO THE CONVENTION ON THE PROHIBITION OF  
THE USE, STOCKPILING, PRODUCTION AND TRANSFER OF ANTI-PERSONNEL MINES  
AND ON THEIR DESTRUCTION (“OTTAWA CONVENTION”)**

Geneva, 2–6 December 2013

**Presentation on the Surveys of the Former Military Training Ground “Wittstock”**

Mr. President,

ladies and gentlemen,

on 6 November 2013 Germany withdrew its request of 15 April 2013 for an extension of its article 5 deadline for completing the destruction of possible anti-personnel mines on an area of approximately 10,000 square meters suspected to contain anti-personnel mines on the former military training area of the Soviet armed forces in the locality of Wittstock in the Land of Brandenburg.

Following a search for available information about the area, a technical survey using geomagnetic methods, and the physical clearance of sample areas, undertaken by the Institute for Federal Real Estate in its capacity as the owner of the former military training area, the suspicion of there being anti-personnel mines present has not been substantiated. The area is no longer to be seen as a suspected APM area.

From 1949, the “Western Group of Forces” of the then Soviet armed forces developed the location into a training area. The site went into service officially in 1952. The

area was used intensively, until January 1993, as a ground-to-ground and air-to-ground training area by all the Soviet (and later Russian) forces in the former German Democratic Republic. In December 1993 the Bundeswehr took over the area officially. The area saw no regular Bundeswehr exercises prior to its return to the Institute for Federal Real Estate in October 2011.

Based on information received from Bundeswehr units, an area at Lutterower Berg on the site was categorised as potentially containing APM.

Further information, in particular concerning the exact location and boundaries of the suspected area and the inventory of explosive ordnance to be expected, was not available at that time. The Federal Coordination Authority for Explosive Ordnance Clearance drew up, for the purpose of investigating the suspected APM area, a technical concept based on Federal explosive ordnance clearance working aids that was implemented in 2012 and 2013.

The Federal Coordination Authority for Explosive Ordnance Clearance developed a flexible investigation concept whose individual phases would be geared to the findings of the preliminary work. This could guarantee maximum information reliability and, at the same time, occupational safety, while giving due consideration to cost-effectiveness.

The investigation concept was subdivided into three phases:

Phase 1: Search for available information about the area

The work during Phase 1 was to include a search for, and the analysis and assessment of, information possibly available from third parties about the suspected APM area.

A technical exploration would be planned on the basis of the new information gained from this. The aims of the technical exploration were, in particular to be able to make a qualified assessment of the risks emanating from the area, and to provide the data necessary for later possible explosive ordnance clearing operations.

### Phase 2: Technical exploration

On the basis of the findings from Phase 1 it would become possible to examine the area with the aid of geomagnetic techniques.

### Phase 3: Clearance of sample areas

The findings from Phase 2 would, in turn, provide an adequate basis to be able to carry out representative sample clearances within the suspected area in order to verify the suspicion of anti-personnel mines and make a final risk assessment.

### **Phase 1: Search for available information about the area**

File search: The file search revealed that the suspected APM area was “checked visually for explosive ordnance and cleared” as early as November 2004. A corresponding certificate confirming that explosive ordnance was no longer present at the surface was issued by the explosive ordnance clearance company performing the work at the time and accepted by the explosive ordnance disposal service of the Land of Brandenburg. During these clearance operations no anti-personnel mines or related fragments were found.

The size of the area cleared at the surface at that time was 15,294 square meters.

Research concerning former users: Inquiries were made with Russian authorities, through the German Federal Foreign Office, whether the military authorities and archives there had any information about the use of anti-personnel mines on the site. A list prepared by the Ministry of Defence of the Russian Federation that included the munitions types regularly used by Soviet troops was received. This list did not include any anti-personnel mines. Notification was received through the Ministry of Defence of the Russian Federation that, due to the time that had elapsed, the Russian military authorities no longer had complete information about the utilisation of the training area by Soviet and Russian troops.

Inquiries concerning contemporary witnesses: It was possible to interview Bundeswehr artificers who had worked on the site for many years, and staff of the explosive ordnance disposal service of the Land of Brandenburg. They had no information on any finds of anti-personnel mines within or in the surroundings of the suspected APM area.

The information elicited by the investigations failed to substantiate the suspicion of anti-personnel mines within the suspected area. Given the clearance of explosive ordnance from the site's surface and the confirmation of explosive ordnance not being present at the surface, it seemed justified to categorise the suspected area as passable. This opened up the possibility of conducting a geomagnetic survey to determine the exact position and extent of the suspected area and to explore its constitution and inner structure.

## **Phase 2: Technical exploration**

After appropriate preliminary planning and clearance of access routes leading to the suspected area, the geomagnetic survey was conducted in the summer of 2013, in the

course of which the suspected area was explored extensively. Bushes and trees were excluded from the geomagnetic survey so as to avoid ground interference.

An explosive ordnance clearance company which specialised in this kind of work and also possessed special skills in detecting and dealing with mines conducted the surveys. Gradiometers were used which were arranged in an array. With these it was possible to investigate large parts of the suspected area.

Displayed in the Figure are the results in the form of an anomaly map. It was found that within the suspected area there are larger sub-areas with a very high density of foreign bodies. Adjacent to them there are sub-areas with a lower density of foreign bodies. All in all, it was possible to narrow down and localise the suspected area easily on the basis of the distribution of foreign bodies and the findings made concerning the surface condition and vegetation structure. The areas not investigated due to vegetation are displayed in white. The red line marks the boundary of the suspected area.

### **Phase 3: Clearance of sample areas**

The results of the geomagnetic survey form the basis for the clearance of sample areas. Several paths, usually 3 meters in width, were representatively cut across the suspected area so that it was possible to investigate the sub-areas showing varying amounts of foreign bodies. The Figure shows the position of the paths within the geomagnetically surveyed suspected area. The numbers indicate the length of the various paths.

A special procedure and specially adapted clearance technology were used to ensure on-the-job safety for the persons participating in the sample area clearances. The reason for this was, in particular, that the procedure and technology usual in the case of

anti-personnel mines such as manual mine clearance and animal detection could not be used due to the large amount of scrap present. In detail, the following concept was implemented:

- Setting-up of site facilities, access routes and processing areas to ensure on-the-job safety, and permanent marking of those areas.
- Several profiling exploratory excavations were carried out right across the area to be investigated. The excavations ran in north-south and east-west direction. They were arranged so that the suspected area was investigated representatively with regard to sample size and the coverage of areas contaminated with higher or lesser amounts of foreign bodies.
- The exploratory excavations were done in such a way that earth moving equipment with ballistic protection for the operator was used for clearance work. The work was performed from the outside inward, and contaminated cubage was successively collected and brought to a processing area which had been previously cleared of potential explosive ordnance.
- Prior to collection by the protected earth moving equipment preferably a large wheel loader whose bucket offered additional protection for the operator, the pile was examined by an expert with a special knowledge of mines, and an iron detector was used to rule out that any large munitions such as bombs or large shells were contained in the volume of material to be collected. The expert was equipped with a fragmentation-protective suit. When the excavator picked up the material, the expert stayed in a safe location. The material volume to be picked up was each time dimensioned so as to reliably rule out that it contained any large munitions. If the examina-

tion yielded any clues as to possible large munitions, these were carefully exposed and removed before the soil was picked up mechanically.

- The transportation of the material from the place of excavation to the separation facility generally took place only along the paths already cleared. Driving on areas that had not been cleared was prohibited.
- The separation facility was located outside the suspected area. The work area required for this was examined for explosive ordnance beforehand. It was separated from the suspected APM area by a fragmentation-protective berm of earth.
- To examine the excavated soil for possible anti-personnel mines and other explosive ordnance without any risk to personnel, a remotely monitored multi-section conveyor belt system was used.

The removed material was deposited slowly on a 3 meters long conveyor belt that ran at a speed of 0.3 meters per second. The material was passed successively to two additional conveyor belts, which each ran at twice the speed of the previous one. This also achieved a thin-layered distribution of the material without the use of a scraper, which might have led to mechanical loads being exerted on possible anti-personnel mines. The layer thickness on the third belt was approximately 1.5 cm, so that it was readily possible to identify anti-personnel mines visually without any problems. The conveyor belts were monitored at four locations with the aid of HD high-speed video cameras. The operating and monitoring personnel stayed, while the facility was running, in a sheltered area safeguarded by fragmentation-protective berms. If a mine or other explosive ordnance that had not been removed by the first magnetic separator was identified on the monitors, the facility was stopped using the emergency power-off switch. Identification and removal from the belt was generally carried out by the

person from the munitions sorting area designated with such responsibility under Section 20 of Germany's Explosives Act. After the last screening for anti-personnel mines, the material was passed over a drum-type magnetic separator, where any remaining (small) iron parts were removed. Non-ferrous metal parts were removed manually. The personnel operating and monitoring the separation facility were located in the immediate vicinity in an office container that was equipped for video surveillance and protected by a berm.

- The suspected presence of anti-personnel mines made any clearance cut or mowing operation prior to the investigations impossible. If trees had to be removed, the exploratory excavation was conducted right up to the trunks. The immediate vicinity of the trunks was inspected for any concealed explosive ordnance and cleared to the extent necessary, so that the personnel were able to cut down the tree safely.

- All findings were rigorously documented. This was done section by section, every 5 meters. All relevant data were collected that, in the event of positive findings, would have been required for a risk assessment and for the planning and competitive tendering for the possibly necessary later clearance of the entire area.

All in all, paths with a length of approximately 790 meters have been cleared, amounting to an area of 2,370 square meters, which is equivalent to approximately 24 % of the overall area. A quantity of 1,009 cubic meters of soil has been moved and cleared of explosive ordnance.

During the clearance of the sample areas, it became apparent that the suspicion of the area containing anti-personnel mines came about as a result of indiscriminate dumping by the former users. This is demonstrated by:

- the mostly near-surface location of the foreign bodies found,



- the high percentage of military scrap,
- the low percentage of intact unexploded explosive ordnance,
- the very low occurrence of fuzed explosive ordnance,
- clearly visible traces of fire marks, this being proof of equipment and munitions being destroyed by burning, and
- two soil-covered dumping sites that obviously served to dispose of larger quantities of equipment and training ammunition.

A summary of the items found is given on the following slides:

All in all, the following items were found:

- 2,326 kg of military scrap
- 3,893 kg of fragments of explosive ordnance without explosive substances
- 167 items of explosive ordnance without explosive substances
- 6 items of explosive ordnance with explosive substances, but without fuzes
- and 4 items of explosive ordnance with explosive substances and with fuzes

To be highlighted are the finds of one lower half of an empty casing of an anti-personnel mine PMN-2 and of a dispenser for the training anti-personnel mines PFM-1. The lower half of the casing of the anti-personnel mine PMN-2 has been clearly

identified as such. It was found at a depth of 1.5 meters in a military scrap and munitions dump.

It was obvious that the dispenser for the PFM-1 anti-personnel mines had been crushed by a heavy vehicle and thus destroyed before being dumped. This find was made in an excavation at a depth of 1.0 meter. When the dispenser was recovered, those PFM-1 that were visible were identifiable as training mines. When they were assessed by the explosive ordnance disposal service of the Land of Brandenburg at a later point in time, this finding was confirmed. The dispenser did not, therefore, need to be destroyed with a demolition charge but was, instead, removed by the explosive ordnance disposal service.

On the basis of

- file search and contemporary witness interviews,
- geomagnetic survey, and
- sample area clearances,

it can be stated that:

- The suspected area served as a munitions dump for the former users.
- In particular, military goods and munitions remnants without explosive substances and without fuzes were disposed of.
- Only very few munitions with explosive substances and with or without fuzes were disposed of there.

- Neither now nor at any past point in time have mines emplaced in patterns been found.
- The anti-personnel mines found are training mines that were disposed of. The dispenser for the PFM-1 was obviously run over and flattened by a tank.

The suspicion of there being anti-personnel mines present has not been substantiated. The area is no longer to be seen as a suspected APM area.

Based on the inventory of the explosive ordnance found and the distances involved, there is no risk posed to the areas located outside the Wittstock site that are accessible to the public.

Thank you for your attention.