#### **Technical Secretariat**



S/2370/2025 14 February 2025 ENGLISH only

#### NOTE BY THE TECHNICAL SECRETARIAT

# REPORT OF THE OPCW TECHNICAL ASSISTANCE VISIT ON THE ACTIVITIES CARRIED OUT IN SUPPORT OF A REQUEST BY UKRAINE (TECHNICAL ASSISTANCE VISIT TAV/05/24 AND TAV/01/25)

- 1. The OPCW Technical Secretariat (the Secretariat), within its framework to provide assistance under Article X of the Chemical Weapons Convention (the Convention), and under the provision of subparagraph 38(e) of Article VIII of the Convention, received a request from Ukraine for technical assistance, in relation to samples that it had in its custody as well as documentation and evidence related to their collection. Ukraine reported to the Secretariat that these samples had been collected following three separate incidents involving toxic chemicals, on 2 October 2024 near the village of Mariivka; and on 12 and 14 October 2024 near the village of Illinka, in the Dnipropetrovsk region.
- 2. Under the same subparagraph of Article VIII of the Convention, Ukraine requested the Secretariat to visit Ukraine and receive the aforementioned documentation and evidence, to interview witnesses, and to provide a technical evaluation of scheduled and unscheduled chemicals through its OPCW designated laboratories network. The Director-General dispatched an OPCW technical assistance visit team (TAV team) to provide the requested assistance to Ukraine.
- 3. The TAV team conducted two deployments and collected related documentation and digital files as well as testimonies from first-hand witnesses, and also received nine environmental samples collected by Ukraine: four shells of grenades, three soil samples, and two vegetation samples, collected from locations adjacent to dugouts at an observation post and a resting position, along the confrontation lines with the opposing troops.
- 4. After the first deployment, the OPCW Laboratory received the samples from the TAV team, unpacked and prepared them for off-site analysis by two OPCW designated laboratories selected by the Director-General, separately and independently from one another. This activity was carried out in strict compliance with OPCW procedures.
- 5. The TAV team analysed all the supporting material handed over by the Ukrainian authorities and assessed that the procedures followed by the Ukrainian experts were in line with international standards related to sample collection, evidence handling, and maintaining the chain of custody, as followed by the Secretariat.

- 6. Digital photos and videos that were considered by the Secretariat in the assessment and evaluation by the TAV team contain metadata that serves to identify the date, time, equipment, and location of their creation. The TAV team verified the authenticity of the digital files it had received. It assessed that the information contained in the documentation and records provided by Ukraine was consistent with the content of the digital files and was able to confirm that the chain of custody of the digital files had been maintained.
- 7. Taken together, the documentation and evidence handed over by Ukraine to the TAV team during the visit, the content of the digital files provided, as well as the information collected and the narrative described by first-hand witnesses, enabled the TAV team to corroborate that, as reported by Ukraine to the OPCW TAV team, the chain of custody of the nine samples, collected in Ukraine from locations adjacent to dugouts located along the confrontation lines with the opposing troops, had been maintained.
- 8. The results of the analyses of the samples conducted by two OPCW designated laboratories selected by the Director-General, separately and independently from one another, indicate that all the grenades collected from dugouts at the observation post and at the resting position contained the riot control agent CS, CS-related compounds, and/or their degradation products; and that the soil and vegetation samples collected from the locations where the grenades were initially found lying on the ground also contained CS and/or its degradation products.
- 9. Upon receipt of the TAV report on 14 February 2025, the Permanent Representation of Ukraine to the OPCW on the same day requested the Secretariat to declassify and share the full report (annexed hereto) with all States Parties to the Convention and to publish it on the OPCW official website.

Annex: Report of the OPCW Technical Assistance Visit on the Activities Carried out in Support of a Request by Ukraine (Technical Assistance Visit TAV/05/24 and TAV/01/25)

#### Annex

# REPORT OF THE OPCW TECHNICAL ASSISTANCE VISIT ON THE ACTIVITIES CARRIED OUT IN SUPPORT OF A REQUEST BY UKRAINE (TECHNICAL ASSISTANCE VISIT TAV/05/24 AND TAV/01/25)

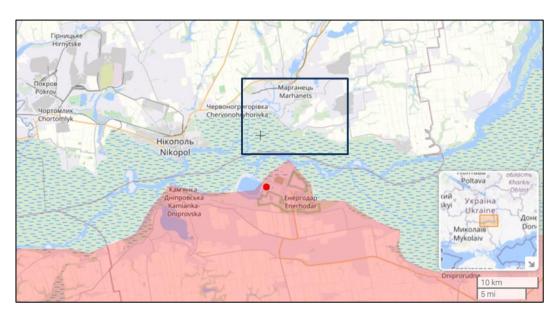
This document contains the report of the technical assistance visit conducted by the Technical Secretariat of the Organisation for the Prohibition of Chemical Weapons upon a request by Ukraine pursuant to subparagraph 38(e) of Article VIII of the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and Their Destruction.

- 1. Ukraine requested technical assistance from the OPCW Technical Secretariat (the Secretariat) under subparagraph 38(e) of Article VIII of the Chemical Weapons Convention (the Convention) in relation to samples that it had in its custody as well as documentation and evidence related to their collection. Ukraine reported to the Secretariat that these samples were collected following three separate incidents of "use of chemical riot agents ... during hostilities against the Defence Forces of Ukraine" on positions of the State Border Guard Service of Ukraine in Nikopol district, in the Dnipropetrovsk region: on 2 October 2024 near the village of Mariivka; and on 12 and 14 October 2024 near the village of Illinka. Under the same subparagraph of Article VIII of the Convention, Ukraine requested the Secretariat to visit Ukraine and receive the above-mentioned samples, documentation and digital files, to interview witnesses, and to provide a technical evaluation of the samples, including for scheduled and unscheduled chemicals, through OPCW designated laboratories. Director-General dispatched an OPCW technical assistance visit team (TAV team) to provide the requested assistance to Ukraine. A mandate was issued by the Director-General to guide its activities.
- 2. The TAV team conducted two deployments to carry out its activities as set out by the mandate. During the first deployment, and upon arrival to Ukraine, the TAV team held its first meeting with the Ukrainian authorities and agreed on the plan of the visit. This plan included the handover of samples and the receipt of related documentation and digital files.
- 3. During the initial meeting, the TAV team received documents related to the three above-mentioned incidents. These documents were provided both in Ukrainian and in official English translation, and included, inter alia, the chain of reporting of the incidents, the order issued for inspecting and investigating locations where the incidents occurred, the protocol for scene inspection, as well as information connected to the samples.
- 4. Following the handover of documents, and during the same meeting, the TAV team received digital files pertaining to each of the reported incidents.
- 5. The TAV team additionally received photographs and video recordings of activities carried out by the relevant Ukrainian services, which included inspection and sampling activities in the field as well as interviews of individuals who witnessed the reported incidents (Appendix 1 hereto).

- 6. The TAV team also received a total of nine environmental samples from the Ukrainian authorities. These samples consisted of soil samples, vegetation samples and four items referred to as "RG-Vo gas grenades" by the Ukrainian authorities. A description and additional information about the samples received for each of the above reported incidents are provided below in this report and in Appendix 2.
- 7. The TAV team packed the samples in line with the relevant Secretariat procedures, including for maintaining the chain of custody, and ensured that the handling of the samples was kept to the minimum. This was achieved first through the verification of the integrity of each sample in its original packaging and with the seals that had been applied by the Ukrainian investigative teams during the sample collection in the field. Subsequently, the TAV team overpacked and sealed each sample, prepared them for shipment, and arranged their transportation to the OPCW Laboratory to proceed with the preparation for off-site analysis by OPCW designated laboratories (Appendix 3).
- 8. During the inspection of the scenes at the reported incident locations and throughout the sampling process, the Ukrainian investigators simultaneously had used several video recording devices for each scene they had inspected. The TAV team was able to confirm that the chain of custody of the digital files had been maintained.
- 9. The TAV team examined the digital files it had received and verified the authenticity of the metadata of all files. All of the video recordings presented with correct date-time stamps as compared to the documents regarding the sampling activities, except for videos recorded using one specific type of device. The Ukrainian authorities clarified that a change of batteries in that type of equipment resulted in the resetting of the date and time, therefore yielding an incorrect date-time stamp. As the sampling activities were videos recorded with several cameras from different angles, the TAV team was able to cross-corroborate all of the video recorded information, and corroborate it with the information provided in the relevant documentation.
- 10. The following description is a summary of the information handed over by the Ukrainian authorities to the OPCW TAV team regarding the chain of events pertaining to the reported incidents:
  - (a) On 2 October 2024, at 18:07, the Border Guard Service Unit—stationed at the General Military Backup Post—reported to the Head of the 1st Department of the Border Guard Service that one RG-Vo item had been dropped from a drone at the backup post near the village of Mariivka.
  - (b) On 2 October 2024, at 20:52, the Head of the 1st Unit of the 3rd Pre-trial Investigation Directorate of the Main Investigation Department of the Security Service of Ukraine (SSU) gave the order to the investigators to inspect the scene and collect samples.
  - (c) On 4 October 2024, the investigation team inspected the scene at the General Military Backup Post, collected samples, and documented its sampling collection activities.

- (d) On 12 October 2024, at 18:12, the Border Guard Service Unit stationed at an observation post near the village of Illinka reported to the duty officer of the 4th Border Outpost of the 8th Border Guard Detachment of the State Border Guard Service of Ukraine that one RG-Vo item had been dropped from a drone at the observation post.
- (e) On 12 October 2024, at 20:18, the Head of the 3rd Pre-trial Investigation Directorate of the SSU Main Investigation Department gave the order to the investigators to inspect the scene and collect samples.
- (f) On 14 October 2024, at 13:03, the Border Guard Service Unit at the observation post near Illinka reported to the duty officer of the 4th Border Guard Post of the 8th Border Guard Detachment about two RG-Vo-type grenades attached together, that had been dropped from a drone at the observation post near the village of Illinka.
- (g) On 14 October 2024, at 15:44, the Head of the 1st Unit of the 3rd Pre-trial Investigation Directorate of the SSU Main Investigation Department gave the order to the investigators to inspect the scene and collect samples.
- (h) On 19 October 2024, the investigation team inspected the scene at the Border Guard post near Illinka, collected samples reportedly linked to the incidents on 12 and 14 October 2024, and documented its sampling collection activities.

FIGURE 1: MAP SHOWING THE AREA OF THE REPORTED INCIDENTS (IN THE BLUE RECTANGLE) IN UKRAINE AND THE AREAS UNDER THE CONTROL OF THE OPPOSING SIDE (IN RED) IN OCTOBER 2024<sup>1</sup>



- 11. The TAV team analysed the material handed over by the Ukrainian authorities and assessed that the procedures followed by the Ukrainian experts were in line with international standards related to sample collection, evidence handling, and maintaining the chain of custody, as followed by the OPCW Secretariat (Appendix 1 and Appendix 4).
- 12. From the documents it had received, the TAV team established that the location near the village of Illinka where two of the reported incidents had taken place (on 12 and 14 October 2024) is the same observation post subject of the technical assistance visit report S/2338/2024 (dated 18 November 2024).
- 13. The samples received during the first deployment were handed over to the OPCW Laboratory where they were unpacked and prepared for off-site analysis by OPCW designated laboratories. This was carried out following the relevant OPCW procedures and in the presence of observers from the Permanent Representation of Ukraine to the Organisation (Appendix 5 and Appendix 6).
- 14. Two sets of generated sample splits for each sample were subsequently dispatched for analysis by two OPCW designated laboratories selected by the Director-General, and separately and independently from one another.

https://liveuamap.com/en/time/02.10.2024; https://liveuamap.com/en/time/12.10.2024; and https://liveuamap.com/en/time/14.10.2024

- 15. The scope of analysis covered the identification of chemicals scheduled under the Convention, their precursors and degradation products, and unscheduled chemicals relevant to explosives and riot control agents. Relevant chemicals that were confidently identified at low concentrations (less than one part per million) were also to be reported.
- 16. The results of the analyses of the samples for the three reported incidents are provided below in the report in the corresponding paragraphs, and in Appendix 7.
- 17. The TAV team deployed a second time under the same mandate from the Director-General and conducted seven interviews with individuals who were either first-hand witnesses of the reported incidents, or who were involved in the chain of command or as experts in the collection of the samples in the field. The interviews were conducted in accordance with the OPCW standard operating procedures. Only the witnesses, the TAV team members, and one interpreter were present during the interviews to guarantee the independence and the impartiality of the interview process.
- 18. With reference to both the chain of reporting and the chain of command, one witness stated that all the military personnel in the field follow the same procedure in the event of an incident allegedly involving the use of chemicals. The witness explained that the leaders of the teams at any post had been instructed to give the agreed alert code to their team members whenever they heard something dropped at their positions and smelled an odour. The witness added that, depending on the situation, the personnel would either take shelter away from the "source" or they would use their protective masks. The witness also mentioned that the leader had to report by phone to the duty officer about the incident(s) and any other relevant details. According to the same witness, the information was then further relayed to the Head of the Chemical, Biological, Radiological, and Nuclear (CBRN) Service of the 8th Border Detachment in Zaporizhzhia City, who in turn further relayed the information received through the chain of command of the SSU Counterintelligence Department and the Department of Pre-Trial Investigation of the SSU Main Investigation Department. Subsequently, an order by the 1st Deputy Head of the SSU Main Investigation Department was issued to form an investigation team to inspect the scene where the incident(s) had occurred and to collect samples. The witness informed that this procedure had been similarly followed for the three reported incidents.
- 19. Through witnesses' accounts, the TAV team collected, inter alia, information regarding the chain of command in relation to instructions given following the reported incidents. The TAV team was able to visualise the transfer and exchange of messages regarding each reported incident through communication platforms on witnesses' mobile phones. The TAV team video recorded these messages and verified the date and time thereof. This information was also verified in comparison with the information enclosed in the chain of command documents provided by the relevant Ukrainian authorities.
- 20. In the following paragraphs of this report, a narrative from the witnesses' account for each incident is provided, as well as a description of the samples that were collected and handed over to the TAV team. The results of the chemical analysis by the OPCW designated laboratories and a description of the grenades reported to be linked to each of the three incidents are also provided for each case.

#### **Incident of 2 October 2024**

21. One first-hand witness reported that in the evening of 2 October 2024, several members of the team had been carrying out activities outside their backup and resting post near the village of Mariivka. At 18:05, they heard the sound of an approaching drone towards their location and they rushed to the closest dugout to take shelter. They heard the specific sound of a "clap" which, as they mentioned, is usually heard when an approaching drone is releasing objects it was carrying, followed by the sound of the drone flying away and leaving their area. They immediately went out from their shelter to check what had happened. They saw a grey, cylindrical-shaped item, similar to a gas grenade, with the markings "RG-Vo" and numbers; and a black stain on the ground and on the grass, next to the top side of the grenade. This grenade was lying on the ground approximately 5 metres away from the entrance of the second dugout which, according to the witness, was unoccupied at that time. The witness mentioned that he did not hear the sound of any object hitting the ground as the grenade fell in a location a little further from his shelter. The witness added that the grenade was not there before that event, the location being close to the improvised shower at the resting post. The witness stated that he did not smell any odour on that evening and that he reported the incident to the Senior Officer of the post and did not follow up on the matter any further.

FIGURE 2: THE GRENADE "RG-Vo" AS FOUND AT ITS ORIGINAL LOCATION BEFORE BEING COLLECTED ON 4 OCTOBER 2024



22. The same witness showed the TAV team a photograph of the grenade that he had taken on that evening using his mobile phone. The TAV team was not able to verify the metadata of that photo as it had been uploaded onto an electronic storage device. Although the automatically generated filename for the photo from the phone displays, inter alia, a series of numbers including 02102024, the TAV team cannot confirm with certainty that the photograph was indeed taken on 2 October 2024.

- 23. On 4 October 2024, an investigation team from the SSU services inspected the area where the grenade had been dropped and collected samples, following relevant OPCW standard procedures both in terms of sample collection and the documenting of such process. Based on the documentation and the video recordings received by the TAV team, the samples consisted of:
  - (a) one deployed grenade collected on the ground in a resting point near Mariivka village (sample code SDS03);
  - (b) one sample of blackened vegetation collected next to the grenade SDS03 (sample code SDS02); and
  - (c) one sample of vegetation collected 20 metres away from the grenade SDS03 (sample code SDS01).
- 24. The results of the analyses of the three samples SDS01, SDS02, and SDS03 conducted by the two OPCW designated laboratories indicate that:
  - (a) both the collected grenade (SDS03) and the blackened vegetation sample (SDS02) contained the chemical 2-Chlorobenzalmalononitrile,<sup>2</sup> a riot control agent known as CS. The CS degradation product 2-Chlorobenzaldehyde as well as other CS-related compounds (isomers, degradation products or precursors) were also identified in the two samples; and
  - (b) no chemicals relevant to the scope of analysis were reported in the vegetation sample collected 20 metres away from the grenade, collected as a vegetation control sample.

Registry Number (CASRN) 2698-41-1).

Other names for the riot control agent CS include (2-Chlorbenzyliden)malononitrile; (2-Chlorobenzylidene)malononitrile; (2-chlorobenzylidene)propanedinitrile; 2-(2-Chlorobenzylidene)malononitrile; 2-chlorobenzalmalononitrile; 2-Chlorobenzylidenemalononitrile; [(2-Chlorophenyl)methylene]propanedinitrile; [(2-chlorophenyl)methylidene]propanedinitrile; and β,β-Dicyano-o-chlorostyrene (Chemical Abstracts Service

#### **Incident of 12 October 2024**

- 25. One first-hand witness reported that on 12 October 2024, the situation at the observation post near the village of Illinka was difficult given the intensive shelling that had started in the early morning. Various types of munitions, including mortar and artillery shells, were being used by the opposing troops positioned on the other side of the river. The witness mentioned that the personnel had been manning the observation post; one group had been positioned in one dugout at the post. They were all monitoring the general situation and observing the activities of the opposing troops on the other side of the river, near the nuclear plant. Around 18:00, they heard the sound of an approaching drone. Then, they heard the sound of the drone coming down, close to the ground, followed by the specific "clap" sound, similar to the sound they usually heard when incendiary items were dropped from a drone on their positions. The witness added that he had heard a specific sound of an object hitting the ground and some sort of whistling sound directly after.
- 26. Immediately, the witness went outside to check whether an intervention was required in case of fire near the dugout. Outside, he smelled a strong pepper-like odour and he experienced burning sensations in his nose and eyes. He immediately gave the agreed alert code to his colleagues and they all wore their protective masks. The witness mentioned that he could still hear the whistling sound when he went outside to check what had happened. All members of the group left the dugout from another exit point, and headed via an outside passage to the other dugout where they stayed for the remaining time of the shift.
- 27. The same witness informed that he did not take any photograph or video recording of the fallen grenade. The TAV team had received a photograph with verified metadata, showing one grenade lying down next to a concrete wall along with some blackened vegetation in the proximity of the top side of the grenade. This photograph was taken on 12 October 2024 at 18:32 by means of a mobile phone belonging to one member of the group present at the observation post on that day. A nine-second video recording of the same grenade, at the same location, on the same day, was shared on a communications platform through the chain of reporting as explained in paragraph 18 of this report.
- 28. The day after, when leaving the dugout, the witness mentioned that the strong pepper-like odour was still present and perceptible when they unintentionally shook the camouflage net that had been covering the passage between the two dugouts. The witness added that no one from the team had to seek medical intervention or treatment.
- 29. Up until their shift ended, the witness stated that the grenade had not been touched or moved from its original location, near the walls of a cylindrical well in the water pumping station at the observation post. He had verbally informed the leader of the subsequent team taking over the shift about the grenade and its whereabouts.
- 30. The difficult situation at the observation post had continued over the days following the incident on 12 October 2024. One witness mentioned that another incident involving the dropping of two taped-together grenades of the same type had occurred on 14 October 2024 at the same observation post (further details about this incident are

provided below). Given the intensive shelling, and contrary to the instructions they had received, the personnel at the post was forced to move both the grenade observed on 12 October 2024 and the two taped-together grenades observed on 14 October 2024 to a safer location, to prevent them from sustaining any damage during the heavy shelling. One witness stated that when they took over the shift duty on 17 October 2024 at the observation post, the three grenades had been lying on the ground, under a pine tree, a few metres away from their original locations, and remained there until an investigation team came to collect them.

31. The TAV team examined the videos recorded during the sampling process on 19 October 2024 (subparagraph 10(h) above), and also collected authentic photographs, with verified metadata, of the three aforementioned grenades in their original locations. Through analysis, the TAV team was able to verify that these were indeed the same grenades collected on 19 October 2024 and to corroborate this information with the testimonies of witnesses who observed the grenades respectively on 12 and 14 October 2024.

FIGURE 3: THE GRENADE "RG-Vo" AT ITS INITIAL LOCATION AS FOUND AND PHOTOGRAPHED ON 12 OCTOBER 2024



- 32. On 19 October 2024, when the security situation allowed safe movement to the area, an investigation team from the SSU services inspected the area where the grenade had been dropped on 12 October 2024 and collected samples, following relevant OPCW standard procedures both in terms of sample collection and the documenting of such process. Based on the documentation and the video recordings received by the TAV team, the samples consisted of:
  - (a) one deployed grenade collected on the ground at the observation post near Illinka village (sample code SDS07);
  - (b) one soil sample collected next to the wall of the well where the grenade SDS07 was originally found (sample code SLS05); and

- (c) one soil sample collected approximately 5 metres away from the soil sample SLS05 (sample code SLS04<sup>3</sup>).
- 33. The results of the analysis conducted by the two OPCW designated laboratories of the three samples SDS07, SLS05, and SLS04 indicate that:
  - (a) both the collected grenade (SDS07) and the soil sample (SLS05) contained CS, the CS degradation product 2-Chlorobenzaldehyde, as well as other CS-related compounds (isomers, degradation products or precursors);
  - (b) one designated laboratory reported the presence of HMX<sup>4</sup> and RDX<sup>5</sup>-related explosive compounds in the grenade extract SDS07 and in the soil sample SLS05; and
  - (c) no chemicals relevant to the scope of analysis were reported in the soil sample SLS04 that was collected 5 metres away from the grenade, collected as a soil control sample.

#### **Incident of 14 October 2024**

- 34. One first-hand witness reported that, on 14 October 2024, at 13:00, while he was on duty manning two dugouts at the observation post near the village of Illinka, he heard the sound of an approaching drone, followed by the sound of a metallic object that had fallen on the ground. The witness described the sound as if an empty jar had hit the ground.
- 35. As leader of the group, the witness gave the agreed alert code to the members of his team who were sheltering in the dugout, and all of them had worn their protective masks. The witness stated that all the members in the shelter smelled a strong pungent odour; they first had a burning sensation in the nose, then they felt a kind of bitter taste in the mouth and could not move their tongue. They felt discomfort in the eyes and an itching sensation, and mentioned that it was difficult for them to breathe even with their protective masks on. The witness stated that no one required medical support.
- 36. About 20 minutes later, they all removed their masks and the witness mentioned that the odour had dissipated. The witness went outside to check and he observed a black stain on the ground, and then noticed the presence of two grenades attached to each other with black tape, lying on the ground in the proximity of the entrance of the second dugout. He instructed one of the team members to take photographs of the grenades and he sent a report to the duty officer according to their procedure.

Since incidents on 12 and 14 October 2024 occurred in the same location, sample SLS04 serves as a blank soil sample for both cases.

<sup>4</sup> HMX (High Melting eXplosive): 1,3,5,7-tetranitro-1,3,5,7-tetrazocane.

<sup>5</sup> RDX (Royal Demolition eXplosive): 1,3,5-trinitro-1,3,5-triazinane.

## FIGURE 4: THE TWO TAPED GRENADES "RG-Vo" AT THEIR INITIAL LOCATION, AS FOUND AND PHOTOGRAPHED ON 14 OCTOBER 2024



- 37. After the information had been relayed through the usual chain of reporting, the witness added that he had been instructed not to move the grenades. Until he handed over the shift to the following group, the witness informed that the grenades remained untouched at their initial location.
- 38. After the incident, the witness mentioned that all of the team members had to change the filters of their respirators and also change their clothes.
- 39. With reference to paragraphs 30 and 31, and as reported by witnesses and verified and corroborated by the TAV team, the two taped-together grenades had been moved, along with the grenade related to the incident on 12 October 2024, from their location close to the entrance of the second dugout to a safer location, to prevent them from being damaged during the intensive shelling that took place over that period of time. Both incidents on 12 and 14 October 2024 were reported to have taken place at the same observation post near Illinka, at two separate locations about 5 metres apart from one another.
- 40. On 19 October 2024, the SSU investigation team dispatched to the observation post and collected samples reported to be linked to the incident on 14 October 2024, following relevant OPCW standard procedures both in terms of sample collection and of documenting such sample collection. Based on the documentation and the video recordings received by the TAV team, the samples consisted of:
  - (a) two deployed grenades, reportedly taped together, and collected on the ground at the observation post near Illinka village (sample code SDS08 and SDS09); and
  - (b) one soil sample collected from the location where the grenades SDS08 and SDS09 had originally been found (sample code SLS06).

- 41. The results of the analysis conducted by the two OPCW designated laboratories of the three samples SLS06, SDS08 and SDS09 indicate that:
  - (a) both collected grenades (SDS08) and (SDS09) contained CS, the CS degradation product 2-Chlorobenzaldehyde, as well as other CS-related compounds (isomers, degradation products or precursors); and
  - (b) one designated laboratory reported the presence of the CS degradation product 2-Chlorobenzaldehyde as well as HMX and RDX-related compounds in the soil sample SLS06.

#### Description of collected grenades from all reported incidents

- 42. The collected grenades are all silver-coloured metallic cylindrical canisters, approximately 10 centimetres long with a diameter of 5 centimetres. A groove circles around the upper part of each canister. Each grenade shows on its curved face visible black markings on two lines; on the top line, markings in Cyrillic: "PΓ- Bo" ("RG-Vo" in Latin script); and on the bottom line, either of the following numbers: "862-2-24" or "862-1-24" (see Table 1).
- 43. The top circular face of the three items (SDS07, SDS08, and SDS09) consists of a green lid with a central cylindrical part with a diameter of about one centimetre, both made from a non-metallic material such as plastic. The cylindrical part presents with two symmetrical holes on the side, and a structure protruding from the lower side. Furthermore, a small punched hole at the bottom of the part can be observed from the top. The top faces of the three grenades had been partially deformed and discoloured by heat and combustion.
- 44. The grenade SDS03 presents with a green lid on its top face but, unlike the grenades SDS07, SDS08, and SDS09, the central cylindrical part is missing and a hole in the middle of the green lid is visible.
- 45. All of the collected grenades have the green lid slightly lifted upwards, which is likely due to pressure from inside the canisters after being deployed.
- 46. On the top face of all of the items, an imprinted rectangular mark and a half O-ring shaped opening are observed. The edge along the opening had melted with some black agglomeration around it, while the imprinted mark remained intact. This opening served as the access point when the solvent extracts were prepared by the OPCW Laboratory.
- 47. The bottom face of all canisters is convex-shaped; the degree of convexity varies from one item to the other. This convex bottom face makes it impossible for the canisters to stand straight on a flat surface.

TABLE 1: DESCRIPTION OF THE COLLECTED GRENADES

	SDS03	SDS07	SDS08	SDS09
Date of the reported incident	02/10/2024	12/10/2024	14/10/2024	14/10/2024
	PF-130 362-2-24	BF-(30) 862-1-24	BF-130 852-1-24	HO HO
Inscription	РГ-Во 862-2-24	РГ-Во 862-1-24	РГ-Во 862-1-24	РГ-Во 862-1-24
Length (from top to bottom)	10.75 cm (no plug, cone-shaped bottom)	11 cm (with plug, convex bottom)	11 cm (with plug, convex bottom)	11 cm (with plug, convex bottom)
Specific details observed	<ul> <li>Cone-shaped bottom</li> <li>No plug</li> <li>Thread in place of plug visible</li> <li>Soot on the top and green lid</li> <li>Scratches on body</li> </ul>	<ul> <li>Convex bottom</li> <li>Two holes in plug visible</li> <li>Soot on the top and green lid</li> <li>Dents, patches, and scratches on body</li> </ul>	<ul> <li>Convex bottom</li> <li>Two holes in plug visible</li> <li>Soot on the top and green lid</li> <li>Dents, patches, and scratches on body</li> <li>Attached:</li> <li>Black tape</li> <li>White/transparent tape</li> <li>Pixelated multi-scale camouflage tape</li> </ul>	<ul> <li>Convex bottom</li> <li>Two holes in plug visible</li> <li>Soot on the top and green disk</li> <li>Dents, patches, and scratches on body</li> <li>Attached:</li> <li>Black tape</li> <li>White/transparent tape</li> </ul>

#### Reconstructed model of the grenades

48. Although all four grenades received showed damaged parts or were missing some of the components such as the fuse system, the TAV team was able to reconstruct a model of these grenades. This model was based on detailed measurements of each item and its parts, as well as on the study of publicly available data relevant to this type of grenade (Figure 5).

FIGURE 5: RECONSTRUCTED MODELS OF THE GRENADES



(1) A full non-deployed grenade with fully visible markings. (2) A top-side view of a full non-deployed grenade with partially visible markings. (3) A top-side view of a full non-deployed grenade showing visible imprinted marks on the green lid. (4) A top-side view of a deployed grenade with its central plug. (5) A top-side view of a deployed grenade with fully visible markings and without its central plug.

#### **Conclusions**

- 49. As instructed by the Director-General of the OPCW, the TAV team was able to:
  - (a) receive samples in the possession of the Ukrainian authorities according to the requirements of the relevant procedures followed by the OPCW;
  - (b) collect and examine copies of relevant documents and records;
  - (c) collect testimonies from relevant individuals;
  - (d) collect video recordings and examine the transfer of relevant information from telephone correspondence;
  - (e) ensure maintenance of the chain of custody for all material received and gathered; and
  - (f) assess and analyse all the above information received and collected during the visit.
- 50. Based on the information and documents received from the Ukrainian authorities and the data collected through the interviews of first-hand witnesses of the reported incidents, the TAV team was able to establish the following:
  - (a) The items received by the TAV team came from the location of the incidents that took place as previously reported by the Ukrainian authorities on 12 and 14 October 2024 at the observation post of the Border Guard Service of Ukraine near the village of Illinka. Both locations where the respective grenades had hit the ground were close to the entrance of a dugout.
  - (b) The items received by the TAV team came from the location of the incident that took place as previously reported by the Ukrainian authorities on 2 October 2024 at a backup and resting position near the village of Mariivka, which was approximately 1,400 metres away from the observation post near Illinka.
  - (c) The results of the analyses of the samples by two OPCW designated laboratories, conducted separately and independently from one another, indicate that all the grenades collected from the observation post and the resting position contained the riot control agent CS, CS-related compounds, and/or their degradation products.
  - (d) The soil and vegetation samples collected from the locations where the grenades were initially found lying on the ground also contained CS and/or its degradation products.

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Appendices:

Appendix 1: Documents and Digital Material Handed over by the Ukrainian Authorities

Appendix 2: Samples Received from the Ukrainian Authorities

Appendix 3: Information Generated by the Technical Assistance Visit Team

Appendix 4: Information Gathered by the Technical Assistance Visit Team

Appendix 5: Information Handed over to the Technical Assistance Visit Team by the OPCW

Laboratory

Appendix 6: Measurements for the Grenades

Appendix 7: Sample Analysis Results

# DOCUMENTS AND DIGITAL MATERIAL HANDED OVER BY THE UKRANIAN AUTHORITIES

The tables below summarise the list of physical evidence collected from the National Authority of Ukraine.

TABLE A1.1: DOCUMENTS RECEIVED FROM THE NATIONAL AUTHORITY OF UKRAINE BY THE TAV TEAM

			1	
Entry No.		Assigned Code		
1		U006		
01	Protocol	Scene inspection, Ukrainian	5 pages	
02	Protocol	Scene inspection, English	4 pages	
03	Transcript	Video files S5360001, S5360002, and S5360003	14 pages	
04	Transcript	Video file 00000	6 pages	
05	Chain of custody for sample	Sample info SDS01, Ukrainian	2 pages	
06	Chain of custody for sample	Sample info SDS01, English	2 pages	
07	Chain of custody for sample	Sample info SDS02, Ukrainian	2 pages	
08	Chain of custody for sample	Sample info SDS02, English	2 pages	
09	Chain of custody for sample	Sample info SDS03, Ukrainian	2 pages	
10	Chain of custody for sample	Sample info SDS03, English	2 pages	
11	Chain of custody for sample	Sample info SLS04, Ukrainian	2 pages	
12	Chain of custody for sample	Sample info SLS04, English	2 pages	
13	Chain of custody for sample	Sample info SLS05, Ukrainian	2 pages	
14	Chain of custody for sample	Sample info SLS05, English	2 pages	
15	Chain of custody for sample	Sample info SLS06, Ukrainian	2 pages	
16	Chain of custody for sample	Sample info SLS06, English	2 pages	
17	Chain of custody for sample	Sample info SDS07, Ukrainian	2 pages	

Entry No.	o. Assigned Code			
1		U006		
	1		T-	
18	Chain of custody for sample	Sample info SDS07, English	2 pages	
19	Chain of custody for Sample	Sample info SDS08, Ukrainian	2 pages	
20	Chain of custody for Sample	Sample info SDS08, English	2 pages	
21	Chain of custody for Sample	Sample info SDS09, Ukrainian	2 pages	
22	Chain of custody for Sample	Sample info SDS09, English	2 pages	
23	Chain of custody for electronic storage device	SD-card 01, Ukrainian	1 page	
24	Chain of custody for electronic storage device	SD-card 01, English	1 page	
25	Chain of custody for electronic storage device	SD-card 02, Ukrainian	1 page	
26	Chain of custody for electronic storage device	SD-card 02, English	1 page	
27	Chain of custody for electronic storage device	SD-card 03, Ukrainian	1 page	
28	Chain of custody for electronic storage device	SD-card 03, English	1 page	
29	Chain of custody for electronic storage device	SD-card 04, Ukrainian	1 page	
30	Chain of custody for electronic storage device	SD-card 04, English	1 page	
31	Chain of custody for electronic storage device	SD-card 05, Ukrainian	1 page	
32	Chain of custody for electronic storage device	SD-card 05, English	1 page	
33	Hash values	SD-card 01, Ukrainian	2 pages	
34	Hash values	SD-card 01, English	2 pages	
35	Hash values	SD-card 02, Ukrainian	1 page	
36	Hash values	SD-card 02, English	1 page	
37	Hash values	SD-card 03, Ukrainian	1 page	
38	Hash values	SD-card 03, English	1 page	
39	Hash values	SD-card 04, Ukrainian	3 pages	
40	Hash values	SD-card 04, English	3 pages	
41	Hash values	SD-card 05, Ukrainian	3 pages	
42	Hash values	SD-card 05, English	3 pages	

Entry No. Assigned Code				
1		U006		
43	Chain of custody for digital information	Protocol on processing video files, Ukrainian	4 pages	
44	Chain of custody for digital information	Protocol on processing video files, English	4 pages	
45	Transcript	Video files S5390001, S5390002, S5390003, and S5390004	5 pages	
46	Letter	Order for investigation, Ukrainian	3 pages	
47	Letter	Order for investigation, English	5 pages	
48	Protocol	Scene inspection, Ukrainian	9 pages	
49	Protocol	Scene inspection, English	9 pages	
50	Transcript	Video files MAH00231, and MAH00232	14 pages	
51	Transcript	Video files GH010182, GH020182, GH030182, GH040182, GH050182, GH060182, GH070182, GH080182, GH090182, and GH100182	16 pages	
52	Transcript	Video files GH010586, GH010587, GH020587, GH030587, GH040587, GH050587, GH060587, GH070587, and GH080587	12 pages	
53	Chain of custody for digital information	Protocol on processing video files, Ukrainian	5 pages	
54	Chain of custody for digital information	Protocol on processing video files, English	5 pages	
55	Transcript	Video file MAH00234	7 pages	
56	Interview protocol	Report witness 1 with attachment, Ukrainian	5 pages	
57	Interview protocol	Report witness 1, English	2 pages	
58	Transcript	Video file MAH00233	2 pages	
59	Interview protocol	Report witness 2, Ukrainian	5 pages	
60	Interview protocol	Report witness 2, English	5 pages	
61	Transcript	Video file S5410001	9 pages	
62	Interview protocol	Report witness 3, Ukrainian	5 pages	
63	Interview protocol	Report witness 3, English	5 pages	
64	Transcript	Video file S5420001	8 pages	
65	Protocol	Chain of report, Ukrainian	2 pages	
66	Protocol	Chain of report, English	3 pages	
67	Protocol	Chain of report, Ukrainian	2 pages	
68	Protocol	Chain of report, English	2 pages	

Entry No.		Assigned Code		
1		U006		
			<u> </u>	
69	Protocol	Chain of report, Ukrainian	2 pages	
70	Protocol	Chain of report, English	3 pages	
71	Letter	Request for information, with attachment, Ukrainian	8 pages	
72	Letter	Request for information, English	1 page	
73	Letter	Response to request for information, Ukrainian	1 page	
74	Letter	Response to request for information, English	1 page	
75	Diploma	Interpreter credentials	4 pages	

Entry No.		Assigned Code			
2		U007			
01	Chain of custody	Transfer records, Ukrainian	1 page		
02	Chain of custody	Transfer records, English	1 page		
03	Chain of custody	Transfer records, Ukrainian	1 page		
04	Chain of custody	Transfer records, English	1 page		
05	Chain of custody	Transfer records, Ukrainian	1 page		
06	Chain of custody	Transfer records, English	1 page		
07	Chain of custody for electronic storage device	SD-card 01, Ukrainian	1 page		
08	Chain of custody for electronic storage device	SD-card 01, English	1 page		
09	Chain of custody for electronic storage device	SD-card 02, Ukrainian	1 page		
10	Chain of custody for electronic storage device	SD-card 02, English	1 page		
11	Chain of custody for electronic storage device	SD-card 03, Ukrainian	1 page		
12	Chain of custody for electronic storage device	SD-card 03, English	1 page		
13	Chain of custody for electronic storage device	SD-card 04, Ukrainian	1 page		

Entry No. Assigned Code			
2		U007	
14	Chain of custody for electronic storage device	SD-card 04, English	1 page
15	Chain of custody for electronic storage device	SD-card 05, Ukrainian	1 page
16	Chain of custody for electronic storage device	SD-card 05, English	1 page
17	Chain of custody for electronic storage device	SD-card 06, Ukrainian	1 page
18	Chain of custody for electronic storage device	SD-card 06, English	1 page
19	Hash values	SD-card 01, Ukrainian	2 pages
20	Hash values	SD-card 01, English	2 pages
21	Hash values	SD-card 02, Ukrainian	1 page
22	Hash values	SD-card 02, English	1 page
23	Hash values	SD-card 03, Ukrainian	1 page
24	Hash values	SD-card 03, English	1 page
25	Hash values	SD-card 04, Ukrainian	1 page
26	Hash values	SD-card 04, English	1 page
27	Hash values	SD-card 05, Ukrainian	2 pages
28	Hash values	SD-card 05, English	2 pages
29	Hash values	SD-card 06, Ukrainian	1 page
30	Hash values	SD-card 06, English	1 page
31	Chain of custody for digital information	Protocol on processing video files, Ukrainian	6 pages
32	Chain of custody for digital information	Protocol on processing video files, English	6 pages
33	Transcript	Video file Video 1 (00000), English	4 pages
34	Transcript	Video file Video 2 (00000), English	4 pages
35	Chain of custody	List of Evidence	2 pages
36	Chain of custody for digital information	Protocol on processing video files, Ukrainian	6 pages

Entry No.		Assigned Code		
2		U007		
37	Chain of custody for digital information	Protocol on processing video files, English	6 pages	
38	Transcript	Video file Video 1 (00000), English	4 pages	
39	Transcript	Video file Video 2 (00000), English	4 pages	
40	Chain of custody	Transfer records, Ukrainian	1 page	
41	Chain of custody	Transfer records, English	1 page	
42	Interview protocol	Report witness 4, Ukrainian	7 pages	
43	Interview protocol	Report witness 4, English	4 pages	
44	Transcript	Video file S10300001, English	3 pages	
45	Chain of custody for digital information	Protocol on processing video files, Ukrainian	10 pages	
46	Chain of custody for digital information	Protocol on processing video files, English	10 pages	
47	Transcript	Video file S1040001, English	3 pages	

TABLE A1.2: ELECTRONIC DATA RECEIVED FROM THE NATIONAL AUTHORITY OF UKRAINE BY THE TAV TEAM

Entry No.	Assigned Code				
3	U006				
S5360001.mp4	MAH00232.mp4	GH090182.mp4	GH070587.mp4		
S5360002.mp4	GH010182.mp4	GH100182.mp4	GH080587.mp4		
S5360003.mp4	GH 020182.mp4	GH010586.mp4	MAH00233.mp4		
00000.mts	GH030182.mp4	GH010587.mp4	MAH00234.mp4		
S5390001.mp4	GH040182.mp4	GH020587.mp4	S5410001.mp4		
S5390002.mp4	GH050182.mp4	GH030587.mp4	S5420001.mp4		
S5390003.mp4	GH060182.mp4	GH040587.mp4	hash-11-12-2024.csv		
S5390004.mp4	GH070182.mp4	GH050587.mp4	* indexervolumeguid		
MAH00231.mp4	GH080182.mp4	GH060587.mp4	* wpsettings.dat		
To 4 No					
Entry No.		Assigned Code			
4	U007				
s5360001.mp4	00000.mts	20241014_132625.jpg	g s1040001.mp4		
s5360002.mp4	20241012_183216.jpg	s1030001.mp4	00000.mts		
s5360003.mp4	20241014_132522.jpg				

<sup>\*</sup> Files marked with an asterisk (\*) represent system files of the recording device(s)

#### SAMPLES RECEIVED FROM THE UKRAINIAN AUTHORITIES

The table below summarises the list of samples that the TAV team had received from the National Authority of Ukraine.

TABLE A2.1: SAMPLES RECEIVED BY THE TAV TEAM FROM THE NATIONAL AUTHORITY OF UKRAINE

Entry No.	Sample Code	Date of Reported Incident	Description	
01	CDC01	02/10/2024	Control commits of acceptation 20 as acceptance SDS02	
01	SDS01	02/10/2024	Control sample of vegetation 20 m away from SDS03	
02	SDS02	02/10/2024	Blackened vegetation next to grenade SDS03	
03	SDS03	02/10/2024	Grenade	
04	SLS04	12/10/2024, 14/10/2024	Soil control sample, 5 m away from sample SDS07	
0.7	ar ao r			
05	SLS05	12/10/2024	Soil under grenade SDS07	
06	SLS06	14/10/2024	Soil under SDS08 and SDS09	
07	SDS07	12/10/2024	Grenade	
08	SDS08	14/10/2024	Grenade, taped together with SDS09	
09	SDS09	14/10/2024	Grenade, taped together with SDS08	

#### INFORMATION GENERATED BY THE TECHNICAL ASSISTANCE VISIT TEAM

The tables below summarise the electronic files created by the TAV during meetings and sample handling.

TABLE A3.1: AUDIO AND VIDEO RECORDINGS TAKEN BY THE TAV TEAM DURING MEETINGS AND SAMPLE HANDOVER FROM THE NATIONAL AUTHORITY OF UKRAINE

Entry No.	Assigned Code				
1		U006			
DR0000_1621.wav	DR0000_1623.wav	00001.mts	00002.mts		
DR0000_1622.wav	00000.mts				
Entry No.		Assigned Code			
2	U007				
DR0004_0140.wav	DR0004_0141.wav	DR0004_0142.wav	DR0004_0143.wav		

TABLE A3.2: PHOTOGRAPHS TAKEN BY THE TAV TEAM DURING SAMPLE HANDOVER FROM THE NATIONAL AUTHORITY OF UKRAINE

Entry No.	Assigned Code				
3		U	006		
DSCN0413.jpg	DSCN0442.jpg	DSCN0471.jpg	DSCN0500.jpg	DSCN0528.jpg	
DSCN0414.jpg	DSCN0443.jpg	DSCN0472.jpg	DSCN0501.jpg	DSCN0529.jpg	
DSCN0415.jpg	DSCN0444.jpg	DSCN0473.jpg	DSCN0502.jpg	DSCN0530.jpg	
DSCN0416.jpg	DSCN0445.jpg	DSCN0474.jpg	DSCN0503.jpg	DSCN0531.jpg	
DSCN0417.jpg	DSCN0446.jpg	DSCN0475.jpg	DSCN0504.jpg	DSCN0532.jpg	
DSCN0418.jpg	DSCN0447.jpg	DSCN0476.jpg	DSCN0505.jpg	DSCN0533.jpg	
DSCN0419.jpg	DSCN0448.jpg	DSCN0477.jpg	DSCN0506.jpg	DSCN0534.jpg	
DSCN0420.jpg	DSCN0449.jpg	DSCN0478.jpg	DSCN0507.jpg	DSCN0535.jpg	
DSCN0421.jpg	DSCN0450.jpg	DSCN0479.jpg	DSCN0508.jpg	DSCN0536.jpg	
DSCN0422.jpg	DSCN0451.jpg	DSCN0480.jpg	DSCN0509.jpg	DSCN0537.jpg	
DSCN0423.jpg	DSCN0452.jpg	DSCN0481.jpg	DSCN0510.jpg	DSCN0538.jpg	
DSCN0424.jpg	DSCN0453.jpg	DSCN0482.jpg	DSCN0511.jpg	DSCN0539.jpg	
DSCN0425.jpg	DSCN0454.jpg	DSCN0483.jpg	DSCN0512.jpg	DSCN0540.jpg	
DSCN0426.jpg	DSCN0455.jpg	DSCN0484.jpg	DSCN0513.jpg	DSCN0541.jpg	
DSCN0427.jpg	DSCN0456.jpg	DSCN0485.jpg	DSCN0514.jpg	DSCN0542.jpg	
DSCN0428.jpg	DSCN0457.jpg	DSCN0486.jpg	DSCN0515.jpg	DSCN0543.jpg	
DSCN0429.jpg	DSCN0458.jpg	DSCN0487.jpg	DSCN0516.jpg	DSCN0544.jpg	
DSCN0430.jpg	DSCN0459.jpg	DSCN0488.jpg	DSCN0517.jpg	DSCN0545.jpg	

Entry No.	Assigned Code				
3		U	)06		
DSCN0431.jpg	DSCN0460.jpg	DSCN0489.jpg	DSCN0518.jpg	DSCN0546.jpg	
DSCN0432.jpg	DSCN0461.jpg	DSCN0490.jpg	DSCN0519.jpg	DSCN0547.jpg	
DSCN0433.jpg	DSCN0462.jpg	DSCN0491.jpg	DSCN0520.jpg	DSCN0548.jpg	
DSCN0434.jpg	DSCN0463.jpg	DSCN0492.jpg	DSCN0521.jpg	DSCN0549.jpg	
DSCN0435.jpg	DSCN0464.jpg	DSCN0493.jpg	DSCN0522.jpg	DSCN0550.jpg	
DSCN0436.jpg	DSCN0465.jpg	DSCN0494.jpg	DSCN0523.jpg	DSCN0551.jpg	
DSCN0437.jpg	DSCN0466.jpg	DSCN0495.jpg	DSCN0524.jpg	DSCN0552.jpg	
DSCN0438.jpg	DSCN0467.jpg	DSCN0496.jpg	DSCN0525.jpg	DSCN0553.jpg	
DSCN0439.jpg	DSCN0468.jpg	DSCN0497.jpg	DSCN0526.jpg	DSCN0554.jpg	
DSCN0440.jpg	DSCN0469.jpg	DSCN0498.jpg	DSCN0527.jpg	DSCN0555.jpg	
DSCN0441.jpg	DSCN0470.jpg	DSCN0499.jpg			

TABLE A3.3: PHOTOGRAPHS TAKEN BY THE TAV TEAM DURING SAMPLE SPLITTING AT THE OPCW LABORATORY

Entry No.	Assigned Code				
4		U	006		
	•				
DSCN0556.jpg	DSCN0571.jpg	DSCN0586.jpg	DSCN0600.jpg	DSCN0614.jpg	
DSCN0557.jpg	DSCN0572.jpg	DSCN0587.jpg	DSCN0601.jpg	DSCN0615.jpg	
DSCN0558.jpg	DSCN0573.jpg	DSCN0588.jpg	DSCN0602.jpg	DSCN0616.jpg	
DSCN0559.jpg	DSCN0574.jpg	DSCN0589.jpg	DSCN0603.jpg	DSCN0617.jpg	
DSCN0560.jpg	DSCN0575.jpg	DSCN0590.jpg	DSCN0604.jpg	DSCN0618.jpg	
DSCN0561.jpg	DSCN0576.jpg	DSCN0591.jpg	DSCN0605.jpg	DSCN0619.jpg	
DSCN0562.jpg	DSCN0577.jpg	DSCN0592.jpg	DSCN0606.jpg	DSCN0620.jpg	
DSCN0563.jpg	DSCN0578.jpg	DSCN0593.jpg	DSCN0607.jpg	DSCN0621.jpg	
DSCN0564.jpg	DSCN0579.jpg	DSCN0594.jpg	DSCN0608.jpg	DSCN0622.jpg	
DSCN0565.jpg	DSCN0580.jpg	DSCN0595.jpg	DSCN0609.jpg	DSCN0623.jpg	
DSCN0566.jpg	DSCN0581.jpg	DSCN0596.jpg	DSCN0610.jpg	DSCN0624.jpg	
DSCN0567.jpg	DSCN0582.jpg	DSCN0597.jpg	DSCN0611.jpg	DSCN0625.jpg	
DSCN0568.jpg	DSCN0583.jpg	DSCN0598.jpg	DSCN0612.jpg	DSCN0626.jpg	
DSCN0569.jpg	DSCN0584.jpg	DSCN0599.jpg	DSCN0613.jpg	DSCN0627.jpg	
DSCN0570.jpg	DSCN0585.jpg				

TABLE A3.4: VIDEO RECORDINGS TAKEN BY THE TAV TEAM DURING DEVICE EXPLOITATION AT THE OPCW LABORATORY

Entry No.		Assigned Code				
5		U006				
00000.mts	00003.mts	00006.mts	00008.mts	00000.mts		
00001.mts	00004.mts	00007.mts	00009.mts	00001.mts		
00002.mts	00005.mts					

TABLE A3.5: PHOTOGRAPHS TAKEN BY THE TAV TEAM DURING DEVICE EXPLOITATION AT THE OPCW LABORATORY

Entry No.	Assigned Code				
6		U00	6		
IMG_2425.jpg	IMG_2491.jpg	IMG_2557.jpg	IMG_2623.jpg	IMG_2688.jpg	
IMG_2426.jpg	IMG_2492.jpg	IMG_2558.jpg	IMG_2624.jpg	IMG_2689.jpg	
IMG_2427.jpg	IMG_2493.jpg	IMG_2559.jpg	IMG_2625.jpg	IMG_2690.jpg	
IMG_2428.jpg	IMG_2494.jpg	IMG_2560.jpg	IMG_2626.jpg	IMG_2691.jpg	
IMG_2429.jpg	IMG_2495.jpg	IMG_2561.jpg	IMG_2627.jpg	IMG_2692.jpg	
IMG_2430.jpg	IMG_2496.jpg	IMG_2562.jpg	IMG_2628.jpg	IMG_2693.jpg	
IMG_2431.jpg	IMG_2497.jpg	IMG_2563.jpg	IMG_2629.jpg	IMG_2694.jpg	
IMG_2432.jpg	IMG_2498.jpg	IMG_2564.jpg	IMG_2630.jpg	IMG_2695.jpg	
IMG_2433.jpg	IMG_2499.jpg	IMG_2565.jpg	IMG_2631.jpg	IMG_2696.jpg	
IMG_2434.jpg	IMG_2500.jpg	IMG_2566.jpg	IMG_2632.jpg	IMG_2697.jpg	
IMG_2435.jpg	IMG_2501.jpg	IMG_2567.jpg	IMG_2633.jpg	IMG_2698.jpg	
IMG_2436.jpg	IMG_2502.jpg	IMG_2568.jpg	IMG_2634.jpg	IMG_2699.jpg	
IMG_2437.jpg	IMG_2503.jpg	IMG_2569.jpg	IMG_2635.jpg	IMG_2700.jpg	
IMG_2438.jpg	IMG_2504.jpg	IMG_2570.jpg	IMG_2636.jpg	IMG_2701.jpg	
IMG_2439.jpg	IMG_2505.jpg	IMG_2571.jpg	IMG_2637.jpg	IMG_2702.jpg	
IMG_2440.jpg	IMG_2506.jpg	IMG_2572.jpg	IMG_2638.jpg	IMG_2703.jpg	
IMG_2441.jpg	IMG_2507.jpg	IMG_2573.jpg	IMG_2639.jpg	IMG_2704.jpg	
IMG_2442.jpg	IMG_2508.jpg	IMG_2574.jpg	IMG_2640.jpg	IMG_2705.jpg	
IMG_2443.jpg	IMG_2509.jpg	IMG_2575.jpg	IMG_2641.jpg	IMG_2706.jpg	
IMG_2444.jpg	IMG_2510.jpg	IMG_2576.jpg	IMG_2642.jpg	IMG_2707.jpg	
IMG_2445.jpg	IMG_2511.jpg	IMG_2577.jpg	IMG_2643.jpg	IMG_2708.jpg	
IMG_2446.jpg	IMG_2512.jpg	IMG_2578.jpg	IMG_2644.jpg	IMG_2709.jpg	
IMG_2447.jpg	IMG_2513.jpg	IMG_2579.jpg	IMG_2645.jpg	IMG_2710.jpg	
IMG_2448.jpg	IMG_2514.jpg	IMG_2580.jpg	IMG_2646.jpg	IMG_2711.jpg	
IMG_2449.jpg	IMG_2515.jpg	IMG_2581.jpg	IMG_2647.jpg	IMG_2712.jpg	
IMG_2450.jpg	IMG_2516.jpg	IMG_2582.jpg	IMG_2648.jpg	IMG_2713.jpg	
IMG_2451.jpg	IMG_2517.jpg	IMG_2583.jpg	IMG_2649.jpg	IMG_2714.jpg	
IMG_2452.jpg	IMG_2518.jpg	IMG_2584.jpg	IMG_2650.jpg	IMG_2715.jpg	
IMG_2453.jpg	IMG_2519.jpg	IMG_2585.jpg	IMG_2651.jpg	IMG_2716.jpg	
IMG_2454.jpg	IMG_2520.jpg	IMG_2586.jpg	IMG_2652.jpg	IMG_2717.jpg	
IMG_2455.jpg	IMG_2521.jpg	IMG_2587.jpg	IMG_2653.jpg	IMG_2718.jpg	

Entry No.	Assigned Code					
6	U006					
IMG_2456.jpg	IMG_2522.jpg	IMG_2588.jpg	IMG_2654.jpg	IMG_2719.jpg		
IMG_2457.jpg	IMG_2523.jpg	IMG_2589.jpg	IMG_2655.jpg	IMG_2720.jpg		
IMG_2458.jpg	IMG_2524.jpg	IMG_2590.jpg	IMG_2656.jpg	IMG_2721.jpg		
IMG_2459.jpg	IMG_2525.jpg	IMG_2591.jpg	IMG_2657.jpg	IMG_2722.jpg		
IMG_2460.jpg	IMG_2526.jpg	IMG_2592.jpg	IMG_2658.jpg	IMG_2723.jpg		
IMG_2461.jpg	IMG_2527.jpg	IMG_2593.jpg	IMG_2659.jpg	IMG_2724.jpg		
IMG_2462.jpg	IMG_2528.jpg	IMG_2594.jpg	IMG_2660.jpg	IMG_2725.jpg		
IMG_2463.jpg	IMG_2529.jpg	IMG_2595.jpg	IMG_2661.jpg	IMG_2726.jpg		
IMG_2464.jpg	IMG_2530.jpg	IMG_2596.jpg	IMG_2662.jpg	IMG_2727.jpg		
IMG_2465.jpg	IMG_2531.jpg	IMG_2597.jpg	IMG_2663.jpg	IMG_2728.jpg		
IMG_2466.jpg	IMG_2532.jpg	IMG_2598.jpg	IMG_2664.jpg	IMG_2729.jpg		
IMG_2467.jpg	IMG_2533.jpg	IMG_2599.jpg	IMG_2665.jpg	IMG_2730.jpg		
IMG_2468.jpg	IMG_2534.jpg	IMG_2600.jpg	IMG_2666.jpg	IMG_2731.jpg		
IMG_2469.jpg	IMG_2535.jpg	IMG_2601.jpg	IMG_2667.jpg	IMG_2732.jpg		
IMG_2470.jpg	IMG_2536.jpg	IMG_2602.jpg	IMG_2668.jpg	IMG_2733.jpg		
IMG_2471.jpg	IMG_2537.jpg	IMG_2603.jpg	IMG_2669.jpg	IMG_2734.jpg		
IMG_2472.jpg	IMG_2538.jpg	IMG_2604.jpg	IMG_2670.jpg	IMG_2735.jpg		
IMG_2473.jpg	IMG_2539.jpg	IMG_2605.jpg	IMG_2671.jpg	IMG_2736.jpg		
IMG_2474.jpg	IMG_2540.jpg	IMG_2606.jpg	IMG_2672.jpg	IMG_2737.jpg		
IMG_2475.jpg	IMG_2541.jpg	IMG_2607.jpg	IMG_2673.jpg	IMG_2738.jpg		
IMG_2476.jpg	IMG_2542.jpg	IMG_2608.jpg	IMG_2674.jpg	IMG_2739.jpg		
IMG_2477.jpg	IMG_2543.jpg	IMG_2609.jpg	IMG_2675.jpg	IMG_2740.jpg		
IMG_2478.jpg	IMG_2544.jpg	IMG_2610.jpg	IMG_2676.jpg	IMG_2741.jpg		
IMG_2479.jpg	IMG_2545.jpg	IMG_2611.jpg	IMG_2677.jpg	IMG_2742.jpg		
IMG_2480.jpg	IMG_2546.jpg	IMG_2612.jpg	IMG_2678.jpg	IMG_2743.jpg		
IMG_2481.jpg	IMG_2547.jpg	IMG_2613.jpg	IMG_2679.jpg	IMG_2744.jpg		
IMG_2482.jpg	IMG_2548.jpg	IMG_2614.jpg	IMG_2680.jpg	IMG_2745.jpg		
IMG_2483.jpg	IMG_2549.jpg	IMG_2615.jpg	IMG_2681.jpg	IMG_2746.jpg		
IMG_2484.jpg	IMG_2550.jpg	IMG_2616.jpg	IMG_2682.jpg	IMG_2747.jpg		
IMG_2485.jpg	IMG_2551.jpg	IMG_2617.jpg	IMG_2683.jpg	IMG_2748.jpg		
IMG_2486.jpg	IMG_2552.jpg	IMG_2618.jpg	IMG_2684.jpg	IMG_2749.jpg		
IMG_2487.jpg	IMG_2553.jpg	IMG_2619.jpg	IMG_2685.jpg	IMG_2750.jpg		
IMG_2488.jpg	IMG_2554.jpg	IMG_2620.jpg	IMG_2686.jpg	IMG_2751.jpg		
IMG_2489.jpg	IMG_2555.jpg	IMG_2621.jpg	IMG_2687.jpg	m2100.ctg		
IMG_2490.jpg	IMG_2556.jpg	IMG_2622.jpg				

TABLE A3.6: RECORDINGS TAKEN BY THE TAV DURING INTERVIEWS

Entry No.	Assigned Code				
7		U008			
DR0000_1621.wav	00002.mts	DSC00826.jpg			
DR0000_1622.wav	00003.mts	DSC00827.jpg			
00000.mts	DSC00824.jpg	DSC00828.jpg			
00001.mts	DSC00825.jpg	DSC00829.jpg			
Entry No.	Assig	gned Code			
8		U009			
DR0000_1623.wav	00002.mts	DSC00845.jpg			
DR0000_1630.wav	00003.mts	DSC00846.jpg			
00000.mts	00004.mts	DSC00847.jpg			
00001.mts					
Entry No.	Assig	gned Code			
9		U010			
DR0000_1624.wav	00000.mts	00001.mts			
Entry No.	Assi	gned Code			
10		U011			
DR0000_1625.wav	DSC00830.jpg	DSC00835.jpg			
DR0000_1626.wav	DSC00831.jpg	DSC00836.jpg			
00000.mts	DSC00832.jpg	DSC00837.jpg			
00001.mts	DSC00833.jpg DSC00838.jpg				
00002.mts	DSC00834.jpg	DSC00839.jpg			

#### TABLE A3.6: RECORDINGS TAKEN BY THE TAV DURING INTERVIEWS (cont.)

Entry No.	Assigned Code				
11		U012			
DR0000_1627.wav	00001.mts	DSC00841.jpg			
00000.mts	DSC00840.jpg				
Entry No.	Assig	ned Code			
12	l	U <b>013</b>			
DR0000_1628.wav	00002.mts	DSC00843.jpg			
00000.mts	00003.mts	DSC00844.jpg			
00001.mts	DSC00842.jpg				
Entry No.	Assig	ned Code			
13	U014				
DR0000_1628.wav	00000.mts	00002.mts			
DR0000_1629.wav	00001.mts				

#### INFORMATION GATHERED BY THE TECHNICAL ASSISTANCE VISIT TEAM

The table below summarises the evidence collected by the TAV team during interviews.

TABLE A4.1: EVIDENCE COLLECTED BY THE TAV TEAM DURING INTERVIEWS

Entry No.	Assigned Code				
1	U011				
22af2051-ac41-4b27	-8723-2d9b8506d61f.jpg				
444d7c93-ed7c-4d22	2-8780-35cdb24ac96b.jpg				
WhatsApp Video 20	25-01-17 at 10.37.28.mp4				
Entry No.	Assigned Code				
2	U012				
ERN 20250117U012	203 - Drawing				

### INFORMATION HANDED OVER TO THE TECHNICAL ASSISTANCE VISIT TEAM BY THE OPCW LABORATORY

The tables below summarise the electronic files that were generated by the OPCW Laboratory during the sample splitting and handed over to the TAV team.

TABLE A5.1: VIDEO RECORDINGS AND PHOTOGRAPHS TAKEN BY THE LABORATORY TEAM DURING SAMPLE SPLITTING AT THE OPCW LABORATORY

Entry No.	Assigned Code						
1		1	U <b>006</b>				
dsc00124.jpg	mah00128.mp4	00003.mts	00008.mts	00013.mts			
dsc00126.jpg	mah00129.mp4	00004.mts	00009.mts	00014.mts			
dsc00127.jpg	00000.mts	00005.mts	00010.mts	00015.mts			
mah00122.mp4	00001.mts	00006.mts	00011.mts	00016.mts			
mah00123.mp4	00002.mts	00002.mts					
mah00125.mp4							

<sup>\*</sup> Files marked with an asterisk (\*) represent system files of the recording device(s)

TABLE A5.2: PHOTOGRAPHS TAKEN BY THE LABORATORY TEAM DURING SAMPLE SPLITTING AT THE OPCW LABORATORY

Entry No.	Assigned Code				
2		U	006		
IMG_1308.jpg	IMG_1364.jpg	IMG_1420.jpg	IMG_1477.jpg	IMG_1533.jpg	
IMG_1309.jpg	IMG_1365.jpg	IMG_1421.jpg	IMG_1478.jpg	IMG_1534.jpg	
IMG_1310.jpg	IMG_1366.jpg	IMG_1422.jpg	IMG_1479.jpg	IMG_1535.jpg	
IMG_1311.jpg	IMG_1367.jpg	IMG_1423.jpg	IMG_1480.jpg	IMG_1536.jpg	
IMG_1312.jpg	IMG_1368.jpg	IMG_1424.jpg	IMG_1481.jpg	IMG_1537.jpg	
IMG_1313.jpg	IMG_1369.jpg	IMG_1425.jpg	IMG_1482.jpg	IMG_1538.jpg	
IMG_1314.jpg	IMG_1370.jpg	IMG_1426.jpg	IMG_1483.jpg	IMG_1539.jpg	
IMG_1315.jpg	IMG_1371.jpg	IMG_1427.jpg	IMG_1484.jpg	IMG_1540.jpg	
IMG_1316.jpg	IMG_1372.jpg	IMG_1428.jpg	IMG_1485.jpg	IMG_1541.jpg	
IMG_1317.jpg	IMG_1373.jpg	IMG_1429.jpg	IMG_1486.jpg	IMG_1542.jpg	
IMG_1318.jpg	IMG_1374.jpg	IMG_1430.jpg	IMG_1487.jpg	IMG_1543.jpg	
IMG_1319.jpg	IMG_1375.jpg	IMG_1431.jpg	IMG_1488.jpg	IMG_1544.jpg	
IMG_1320.jpg	IMG_1376.jpg	IMG_1432.jpg	IMG_1489.jpg	IMG_1545.jpg	
IMG_1321.jpg	IMG_1377.jpg	IMG_1433.jpg	IMG_1490.jpg	IMG_1546.jpg	
IMG_1322.jpg	IMG_1378.jpg	IMG_1434.jpg	IMG_1491.jpg	IMG_1547.jpg	
IMG_1323.jpg	IMG_1379.jpg	IMG_1435.jpg	IMG_1492.jpg	IMG_1548.jpg	
IMG_1324.jpg	IMG_1380.jpg	IMG_1436.jpg	IMG_1493.jpg	IMG_1549.jpg	

Entry No.	Assigned Code				
2	U006				
IMG_1325.jpg	IMG_1381.jpg	IMG_1437.jpg	IMG_1494.jpg	IMG_1550.jpg	
IMG_1326.jpg	IMG_1382.jpg	IMG_1438.jpg	IMG_1495.jpg	IMG_1551.jpg	
IMG_1327.jpg	IMG_1383.jpg	IMG_1439.jpg	IMG_1496.jpg	IMG_1552.jpg	
IMG_1328.jpg	IMG_1384.jpg	IMG_1440.jpg	IMG_1497.jpg	IMG_1553.jpg	
IMG_1329.jpg	IMG_1385.jpg	IMG_1441.jpg	IMG_1498.jpg	IMG_1554.jpg	
IMG_1330.jpg	IMG_1386.jpg	IMG_1443.jpg	IMG_1499.jpg	IMG_1555.jpg	
IMG_1331.jpg	IMG_1387.jpg	IMG_1444.jpg	IMG_1500.jpg	IMG_1556.jpg	
IMG_1332.jpg	IMG_1388.jpg	IMG_1445.jpg	IMG_1501.jpg	IMG_1557.jpg	
IMG_1333.jpg	IMG_1389.jpg	IMG_1446.jpg	IMG_1502.jpg	IMG_1558.jpg	
IMG_1334.jpg	IMG_1390.jpg	IMG_1447.jpg	IMG_1503.jpg	IMG_1559.jpg	
IMG_1335.jpg	IMG_1391.jpg	IMG_1448.jpg	IMG_1504.jpg	IMG_1560.jpg	
IMG_1336.jpg	IMG_1392.jpg	IMG_1449.jpg	IMG_1505.jpg	IMG_1561.jpg	
IMG_1337.jpg	IMG_1393.jpg	IMG_1450.jpg	IMG_1506.jpg	IMG_1562.jpg	
IMG_1338.jpg	IMG_1394.jpg	IMG_1451.jpg	IMG_1507.jpg	IMG_1563.jpg	
IMG_1339.jpg	IMG_1395.jpg	IMG_1452.jpg	IMG_1508.jpg	IMG_1564.jpg	
IMG_1340.jpg	IMG_1396.jpg	IMG_1453.jpg	IMG_1509.jpg	IMG_1565.jpg	
IMG_1341.jpg	IMG_1397.jpg	IMG_1454.jpg	IMG_1510.jpg	IMG_1566.jpg	
IMG_1342.jpg	IMG_1398.jpg	IMG_1455.jpg	IMG_1511.jpg	IMG_1567.jpg	
IMG_1343.jpg	IMG_1399.jpg	IMG_1456.jpg	IMG_1512.jpg	IMG_1568.jpg	
IMG_1344.jpg	IMG_1400.jpg	IMG_1457.jpg	IMG_1513.jpg	IMG_1569.jpg	
IMG_1345.jpg	IMG_1401.jpg	IMG_1458.jpg	IMG_1514.jpg	IMG_1570.jpg	
IMG_1346.jpg	IMG_1402.jpg	IMG_1459.jpg	IMG_1515.jpg	IMG_1571.jpg	
IMG_1347.jpg	IMG_1403.jpg	IMG_1460.jpg	IMG_1516.jpg	IMG_1572.jpg	
IMG_1348.jpg	IMG_1404.jpg	IMG_1461.jpg	IMG_1517.jpg	IMG_1573.jpg	
IMG_1349.jpg	IMG_1405.jpg	IMG_1462.jpg	IMG_1518.jpg	IMG_1574.jpg	
IMG_1350.jpg	IMG_1406.jpg	IMG_1463.jpg	IMG_1519.jpg	IMG_1575.jpg	
IMG_1351.jpg	IMG_1407.jpg	IMG_1464.jpg	IMG_1520.jpg	IMG_1576.jpg	
IMG_1352.jpg	IMG_1408.jpg	IMG_1465.jpg	IMG_1521.jpg	IMG_1577.jpg	
IMG_1353.jpg	IMG_1409.jpg	IMG_1466.jpg	IMG_1522.jpg	IMG_1578.jpg	
IMG_1354.jpg	IMG_1410.jpg	IMG_1467.jpg	IMG_1523.jpg	IMG_1579.jpg	
IMG_1355.jpg	IMG_1411.jpg	IMG_1468.jpg	IMG_1524.jpg	IMG_1580.jpg	
IMG_1356.jpg	IMG_1412.jpg	IMG_1469.jpg	IMG_1525.jpg	IMG_1581.jpg	
IMG_1357.jpg	IMG_1413.jpg	IMG_1470.jpg	IMG_1526.jpg	IMG_1582.jpg	
IMG_1358.jpg	IMG_1414.jpg	IMG_1471.jpg	IMG_1527.jpg	IMG_1583.jpg	
IMG_1359.jpg	IMG_1415.jpg	IMG_1472.jpg	IMG_1528.jpg	IMG_1584.jpg	
IMG_1360.jpg	IMG_1416.jpg	IMG_1473.jpg	IMG_1529.jpg	IMG_1585.jpg	
IMG_1361.jpg	IMG_1417.jpg	IMG_1474.jpg	IMG_1530.jpg	IMG_1586.jpg	
IMG_1362.jpg	IMG_1418.jpg	IMG_1475.jpg	IMG_1531.jpg	IMG_1587.jpg	
IMG_1363.jpg	IMG_1419.jpg	IMG_1476.jpg	IMG_1532.jpg	IMG_1588.jpg	
	Indexervolume	wpsettings.dat			
m3100.ctg*	guid*	*			

<sup>\*</sup> Files marked with an asterisk (\*) represent system files of the recording device(s)

#### MEASUREMENTS FOR THE GRENADES

TABLE A6.1: SUMMARY OF MEASUREMENTS FOR THE DEVICES HANDED OVER BY THE NATIONAL AUTHORITY OF UKRAINE TO THE TAV TEAM

	1	1	1	1
	SDS03	SDS07	SDS08	SDS09
Date of the incident	02/10/2024	12/10/2024	14/10/2024	14/10/2024
	PF-130 862-2-24	₽F-130 862-1+24	PF-130 162-1-2	
Inscription	РГ-Во 862-2-24	РГ-Во 862-1-24	РГ-Во 862-1-24	РГ-Во 862-1-24
Length (whole, top to bottom)	10.75 cm (no plug, coneshaped bottom	11 cm (with plug, convex bottom)	11 cm (with plug, convex bottom)	11 cm (with plug, convex bottom)
Diameter/calibre body (whole)	5.5 cm	5.45 cm	5.5 cm	5.5 cm
		Lengths		
Length (body side, with bottom cone and without top part)	~10.6 cm	~10.1 cm	~10.1 cm	~10.1 cm
Length (body side, no bottom cone and no top part)	9.6 cm	~9.5-9.6 cm	~9.2 cm	~9.45 cm
Length top part of body (from top to beginning of groove)	~1.0 cm	~1.1 cm	~1.05 cm	~1.05 cm
Length top part of body (from top to middle of groove)	1.25 cm	~1.25 cm	1.2 cm	1.25 cm

	SDS03	SDS07	SDS08	SDS09
Date of the incident	02/10/2024	12/10/2024	14/10/2024	14/10/2024
Length groove (from start of groove indent to end of indent)	0.45 cm	0.35 cm	0.4 cm	0.4 cm
Bottom to beginning of groove	~8.15 cm	7.9 cm	7.9 cm	7.8 cm
		Outside of de	vice	
Diameters ton		Green disk		
Diameters top		• Plug disk		
		Plug		
Whole top	5.5 cm	5.5 cm	5.5 cm	5.5 cm
<b>→</b>				
At groove in body	Not measured	5.3 cm	5.35 cm	5.25 cm
Outer diameter of green disk	~4.3 cm	4.4 cm	~4.5 cm	~4.5 cm
Inner diameter of green disk (hole)	1.5 cm	Not measurable since closed with plug	Not measurable since closed with plug	Not measurable since closed with plug
Green disk thickness ("rim width")	~1.5 cm	~1.5 cm	~1.4 cm	~1.4 cm

	SDS03	SDS07	SDS08	SDS09
Date of the incident	02/10/2024	12/10/2024	14/10/2024	14/10/2024
Inside green disk to outside of device	~2.1 cm (from inside hole in green disk)	~2.0 cm	~1.9 cm	~1.9 cm
Plug disk	No plug	~1.8 cm	~1.6 cm/ 1.7 cm	~1.55 cm
Plug width				
-without protrusion	No plug	1.0 cm	0.9 cm	0.9 cm
-with protrusion		1.5 cm	1.3 cm	~1.4 cm
Plug, hole diameter inside	No plug	~0.7 cm	~0.7 cm	~0.7 cm
Plug material thickness	No plug	~0.15 cm	~0.15 cm	~0.15 cm
Top rim thickness	0.5 cm	0.5 cm	~0.5 cm	0.5 cm
Letter sizes	'o' = ~0.8 cm '2' = ~1.0 cm	'4' = ~1.0 cm	'o' = ~0.8 cm 'B' = ~1.05 cm	'o' = ~0.8 cm '4' = ~1.05 cm

# SAMPLE ANALYSIS RESULTS

The table below summarises the results of sample analyses reported by the two OPCW designated laboratories selected by the Director-General.

SUMMARY OF ANALYSES RESULTS OF THE SAMPLES RECEIVED FROM THE NATIONAL AUTHORITY OF UKRAINE BY THE TAV TEAM **TABLE A7.1:** 

Entry No.	Sample Code	Date of the Reported Incident	Description	Laboratory 1	Laboratory 2
01	SDS01	02/10/2024	Control sample of vegetation 20 m away from SDS03	No chemicals relevant to the scope of analysis reported	No chemicals relevant to the scope of analysis reported
02	SDS02	02/10/2024	Blackened vegetation sample collected next to the grenade SDS03	2-Chlorobenzalmalononitrile (CS) 2-Chlorobenzaldehyde 2-Chlorobenzalmalononitrile Isomer	2-Chlorobenzalmalononitrile (CS) 2-Chlorobenzaldehyde 2-Chlorobenzylmalononitrile Benzylidenemalononitrile 2-Chlorobenzyl cyanide
03	SDS03	02/10/2024	Grenade	2-Chlorobenzalmalononitrile (CS) 2-Chlorobenzaldehyde 2-Chlorobenzalmalononitrile Isomer	2-Chlorobenzalmalononitrile (CS) 2-Chlorobenzaldehyde 2-Chlorobenzylmalononitrile 2-Chlorohydrocinnamonitrile Benzylidenemalononitrile 2-Chlorobenzyl cyanide
04	SLS04	12/10/2024, 14/10/2024	Soil control sample, 5 m away from sample SDS07 and from samples SDS08 and SDS09	No chemicals relevant to the scope of analysis reported	No chemicals relevant to the scope of analysis reported

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Entry No.	Sample Code	Date of the Reported Incident	Description	Laboratory 1	Laboratory 2
05	SLS05	12/10/2024	Soil sample under SDS07 in its original location	2-Chlorobenzalmalononitrile (CS) 2-Chlorobenzaldehyde 1,3,5-trinitro-1,3,5-triazine (RDX)	2-Chlorobenzalmalononitrile (CS) 2-Chlorobenzaldehyde 2-Chlorobenzylmalononitrile 2-Chlorohydrocinnamonitrile Benzylidenemalononitrile HMX (RDX-related)
90	SLS06	14/10/2024	Soil sample under SDS08 and SDS09 in their original location	No chemicals relevant to the scope of analysis reported	2-Chlorobenzaldehyde HMX (RDX-related)
07	SDS07	12/10/2024	Grenade	2-Chlorobenzalmalononitrile (CS) 2-Chlorobenzaldehyde 2-Chlorobenzalmalononitrile Isomer	2-Chlorobenzalmalononitrile (CS) 2-Chlorobenzaldehyde 2-Chlorobenzylmalononitrile 2-Chlorohydrocinnamonitrile Benzylidenemalononitrile 2-Chlorobenzyl cyanide HMX (RDX-related)
80	SDS08	14/10/2024	Grenade taped together with SDS09	2-Chlorobenzalmalononitrile (CS) 2-Chlorobenzaldehyde 2-Chlorobenzalmalononitrile Isomer	2-Chlorobenzalmalononitrile (CS) 2-Chlorobenzaldehyde 2-Chlorobenzylmalononitrile 2-Chlorohydrocinnamonitrile Benzylidenemalononitrile 2-Chlorobenzyl cyanide
60	SDS09	14/10/2024	Grenade taped together with SDS08	2-Chlorobenzalmalononitrile (CS) 2-Chlorobenzaldehyde 2-Chlorobenzalmalononitrile Isomer	2-Chlorobenzalmalononitrile (CS) 2-Chlorobenzaldehyde 2-Chlorobenzylmalononitrile 2-Chlorohydrocinnamonitrile Benzylidenemalononitrile 2-Chlorobenzyl cyanide