



Some modest blue remarks on the chapter Khan Sheikhoun

compiled by
Michael Kobs, Petri Kohn, Adam Larson, Qoppa and others

(original text on white by HRW)

<https://www.hrw.org/report/2017/05/01/death-chemicals/syrian-governments-widespread-and-systematic-use-chemical-weapons>

Khan Sheikhoun, April 4

All evidence reviewed by Human Rights Watch suggests that a Syrian government warplane dropped a bomb with sarin on Khan Sheikhoun around 6:45 a.m. on April 4, 2017, killing at least 92 people and injuring hundreds. Human Rights Watch interviewed 32 witnesses of the Khan Sheikhoun attack, eight in person in Turkey, and the rest by telephone. Human Rights Watch also reviewed satellite imagery; photos and videos of the victims, the impact site, weapon remnants, and the immediate aftermath of the attack; and information about aircraft movements.

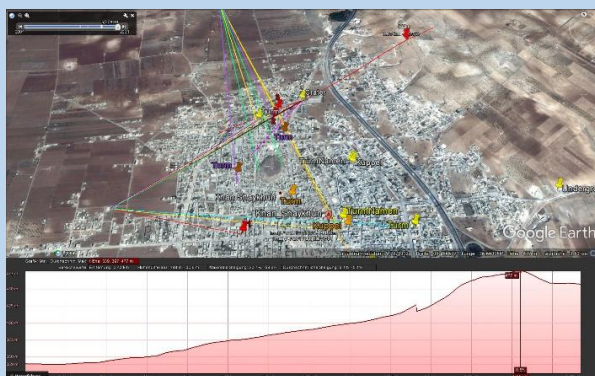
Khan Sheikhoun, a town in southern Idlib, has been under the control of armed groups fighting the government since 2012. Local residents estimated that there were about 60,000 people in the town at the time of the attack, many of them displaced from other places due to the war.

The Khan Sheikhoun attack and chemical attacks on and near al-Lataminah took place in the context of heavy fighting near Hama city, about 20 kilometers south of al-Lataminah and 35 kilometers south of Khan Sheikhoun. On March 21, armed groups led by Hay'at Tahrir al-Sham launched an offensive against government positions near Hama. Over the next several days, the anti-government forces made significant advances, coming within three kilometers of the city and threatening the Hama Military Airport. By the time of the Khan Sheikhoun attack, the battle was still raging back and forth.

Local residents told Human Rights Watch that they heard or saw a warplane fly over Khan Sheikhoun early in the morning on April 4. Several witnesses said that the warplane flew over the town twice, dropping a chemical bomb the first time and explosive bombs the second time.

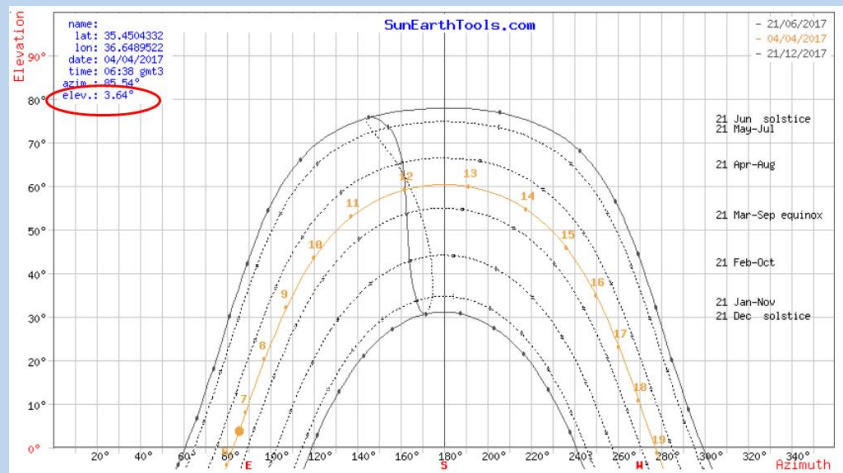
Ahmad al-Helou, who was tending the fields that morning, told Human Rights Watch that **he looked up when he saw a shadow on the ground** and saw a plane fly **towards Khan Sheikhoun from the east**. Al-Helou said that because of his **high vantage point** he saw the plane drop a bomb and the bomb falling until it hit the ground. The bomb fell **in front of the bakery**, he said. Al-Helou said that he **did not hear an explosion**, but that he saw the bomb kick up **yellowish smoke that spread in the prevailing wind**.^[29]

Ahmad al-Helou is the only witness who has observed the drop of the first bomb. His description of the circumstances, however, arouses doubts. According to his statement, he saw the shadow of the plane (about 6:38 clock) on the ground and the plane flew towards the city in the West of him. So, he should have been located on a higher field in the east of the city.



The problem with this description, however, lies in the fact that the sun had just entered the horizon and reached a height of 3.6 ° at 6:40 o'clock. The shadow of a Su-22 is not only small and

very fast, it could not even meet the ground anywhere near. Not only because this shadow was casted in front of the plane at an angle of just less than 4°, but also because the western side of the hill was still in the shadow of this hill at that time.



Seen from his vantage point the bomb must have been hit the ground behind the bakery and not in front of it. His description likely indicates what he has seen on photos or has been told by anyone.

The most important part of his statement, however, is the yellow cloud that rises there. As this part of the city was still in the shadows, the hue can hardly be traced back to the early morning sun. The yellow hue would have to speak for chlorine. However, none of the accounts described or even confirmed the use of chlorine, so the hue would probably speak for what al-Helou had heard and learned in the media about previous attacks.

Remains the question of whether there had ever been a visible cloud. This question can be answered with the help of other HRW witnesses.

Other witnesses gave similar accounts. Ismail Raslan, a Syria Civil Defense member who lived about 100 meters from the bakery, told Human Rights Watch that he heard a warplane fly over some time after 6:30 a.m. He told Human Rights Watch: "I heard the wind and the roar from a bomb falling, but there was no explosion, just a thump. I thought that it either fell far away or failed to explode. I looked out from the balcony and was surprised to see white dust in the air."^[30]

Raslan speaks about white dust, which seems to confirm al-Helous account, on the other hand, the impact in the asphalt has barely flung huge amounts of white dust. So was it a cloud of vaporized sarin, as the report seems to suggest?



The noise could have been relatively quiet just because the first explosion (supposedly the second flyover) took place 1.2km away. Surprisingly, the witness Abdulhamid al-Yousef, who also lives

very close to bakery, told the media that he woke up from the sound of the first air strike. And he describes two more airstrikes. One cannot rule out that al-Yousef is talking about a bomb in the south of Khan Sheikhoun and two more bombs in the north.



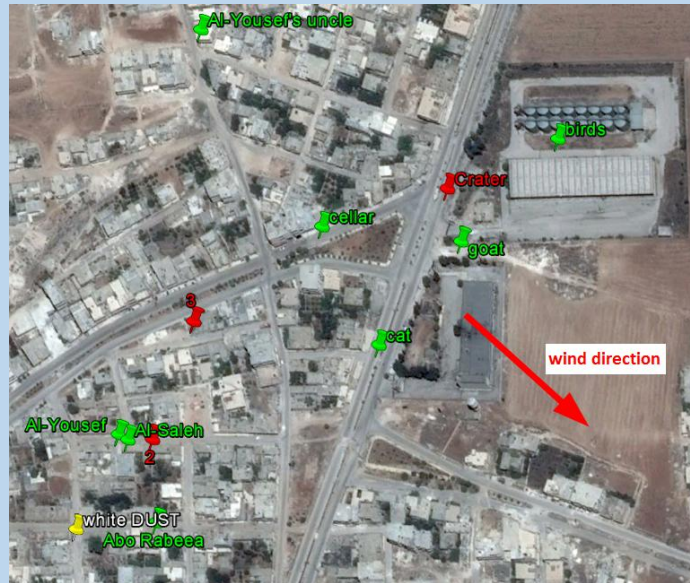
However, one has to consider that Abdulhamid al-Yousef is under the influence of traumatic experiences. So it does not have to be surprising that in different interviews he described the same details very differently.



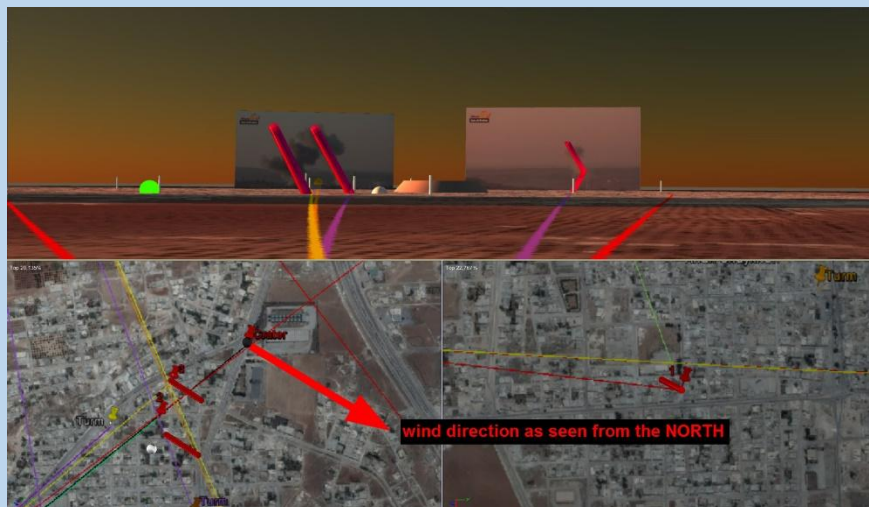
It must be surprising, however, that the witness al-Yousef with no word mentions the massive dust that was described by witness Ismail Raslan. That dust wrapped al-Yousefs neighborhood completely within seconds because of the conventional bomb explosions 2 and 3. This is all the more surprising as Al-Yousefs house was right next to the impact of bomb 2 as victim Abo Rabeaa has shown to the BBC.

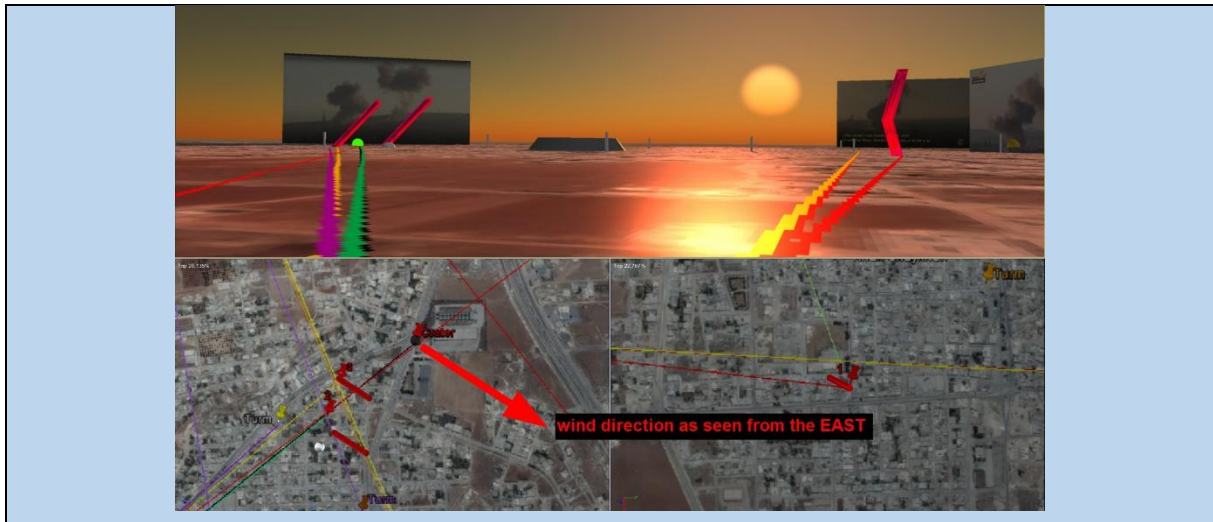


Source: <http://www.bbc.com/news/av/world-middle-east-39800714/syria-chemical-attack-the-man-who-survived>



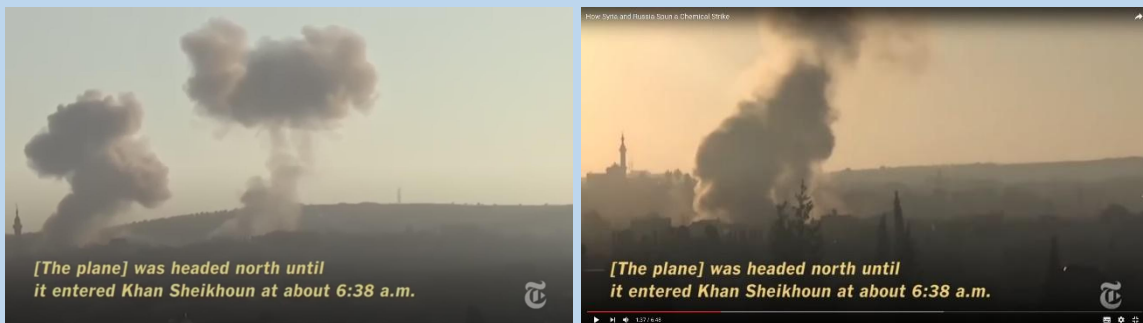
Human Rights Watch and the London-based Syrian Network for Human Right published victim lists of about 90 casualties but without indication of the cause of death. Thus, these lists suggest that all victims have died because of a sarin poisoning. The media reported it this way. Nevertheless, it seems very unlikely that sarin from the crater near the silos can be responsible for the death of all these victims, while no injuries due to blast and dust effects were reported and the wind blew from NW to SE and therefore any gas away from the victim's homes as proven by two well-known cameras at an angle of about 100°:



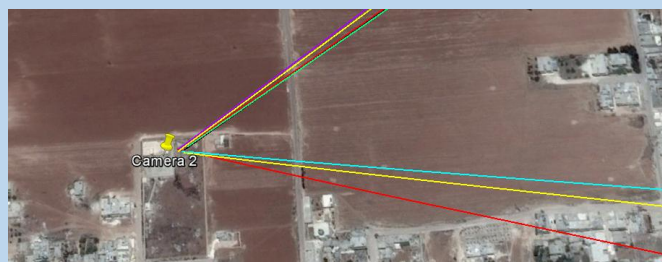


Adham al-Hussein, a local journalist, told Human Rights Watch that he woke up when sentries and the Syria Civil Defense reported over the radio network that a warplane was heading north from the Shayrat airbase in Homs. At 6:37 a.m., he said, he heard the warplane fly over Khan Sheikhoun. He went to the roof of his building where he saw the plane fly away towards the north. Over the radio, one of the sentries said that the warplane had not attacked because there was no explosion, but al-Hussein could see white smoke over the northern neighborhood. From his roof, al-Hussein filmed the smoke, which he showed to Human Rights Watch.^[31]

If this statement is correct then it is a miracle that this special video has not been published yet. The story of Al-Hussein, however, coincides with an anonymous "local activist" whose images were shown by the New York Times. To the NYT, however, this activist gave a different information as one can read in the subtitles.



These pictures indeed were taken from a roof west of Khan Sheikhoun (35.439222° 36.632507°).

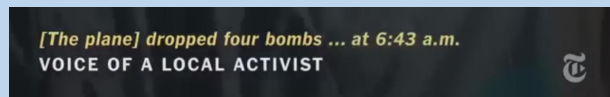


The viewing direction is best suited to distinguish the direction of flight of the aircraft between East-West or South-North. According to the activist, the aircraft headed north and his images show

three mushroom clouds that match the known bombs strikes. The NYT mapped the known impacts and the resulting map seems to confirm a South-North heading.



The witness and cameraman continued to tell the NYT:



The second time indeed speaks for two passes of fighter jet(s), and then at least the second pass (about 5 minutes later) had to be directed from south to north.

The NYT also shows another portion of his video, which indicates that this activist observed the development of smoke several minutes while filming.



The crater in the street is right below the red arrow. Is it possible that HRW has seen the later part of the video and assumed that the visible dust must be the sarin vapor prior to the conventional air strike? This is not the case, even if the sky in the later video snippet looks a little darker.

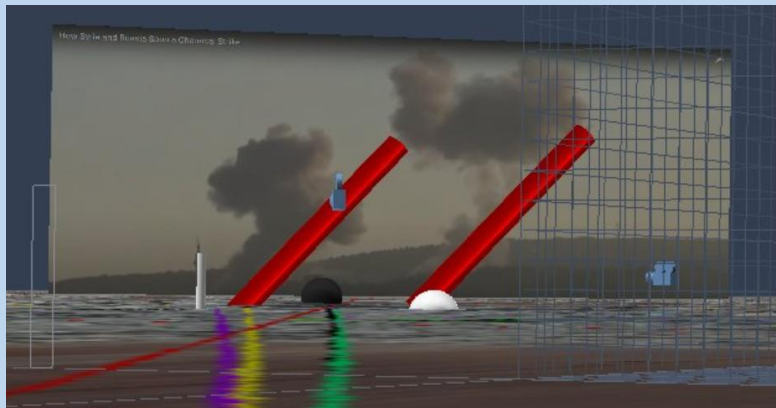
In the picture of the dust, you can see clearly how not only the dust on the ground, but also the mushroom clouds have spread far already. It's hard to assume that at least the dust on the ground completely disappeared after 5 minutes. However, in the two famous videos the air on the ground, as well as the sky is perfectly clear, while the mushrooming clouds of the alleged second pass still rising. In addition, in the second video the sun proves the order in which the video snippets were taken. I'll discuss that later.

At this point, however, it should be mentioned that some white fog rises exactly where the sarin cloud should be.

In the second video already mentioned, however, it can easily be seen that this white fog rises in the foreground of the mushroom cloud. Likewise, neither on the ground nor in the sky traces of a previous air strike can be seen.



The position of an earlier plume of white smoke from the crater is marked by the black ball in the 3D model. The flat white dust right above the black ball appears connected to the mushroom cloud as a result of the conventional strike.

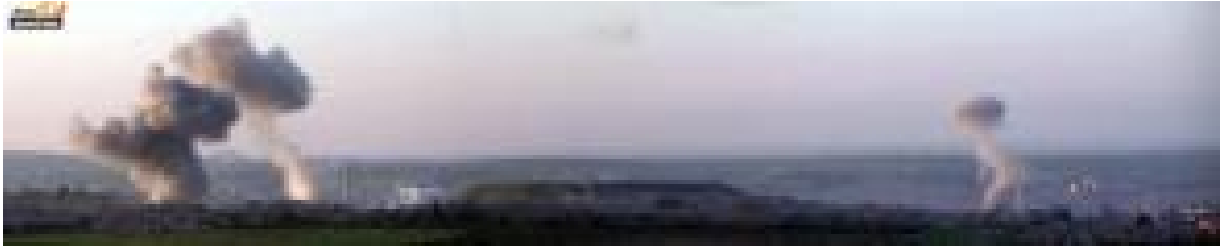


Raslan, the Syria Civil Defense member, said that he was reporting that there had been no explosion to the civil defense center when he saw a child in the street. “He ran ten meters, then collapsed. He got up, trying to run, but collapsed again,” said Raslan, who then asked the civil defense center to send an ambulance.[\[32\]](#)

A Syria Civil Defense member at the base confirmed that they heard no explosions during the first fly-over, but that a colleague had called for an ambulance: “We got a call from one of our colleagues living in the northern neighborhood who asked us to send ambulances because there were unconscious people on the ground. We were surprised because we had not heard any explosions.” He said that they immediately sent a team to the area.[\[33\]](#)

Mohammad Juneid, a Syria Civil Defense member who was on the team, confirmed that they were dispatched to the northern neighborhood immediately after the first fly-over.[\[34\]](#) Al-Hussein also said there were radio reports of injured after the first fly-over.[\[35\]](#)

A few minutes after the first attack, and while the Syria Civil Defense team was on its way to the northern neighborhood, a plane flew over Khan Sheikhoun in the same direction, from east to west, witnesses said. It is not clear whether it was the same plane. This time, the plane dropped three or four high explosive bombs on the town.



© 2017 Mohammad Saloum/Bellingcat

Composite of screenshots from video of the immediate aftermath of the attack during the second fly-over showing four smoke columns. Bellingcat, a group specializing in analyzing information posted online, including videos and photographs, has concluded that the video was filmed from a location to the north of Khan Sheikhoun.

Al-Hussein said that the plane dropped two bombs in the northern neighborhood, both to the west of the bakery. These two bombs created loud explosions. The plane then dropped another bomb about one kilometer from the others, near the market area. He filmed plumes of smoke from the three strikes during the second fly-over, which he showed to Human Rights Watch.^[36]

His description suggests a flyover from North to South. However, the Saloum-video starts shortly after the detonation of the third bomb left (east) in the image below as well as in the Bellingcat composite above. The sound of this third explosion can still be heard in the video.



https://www.youtube.com/watch?v=MYOMEDK_uVs

The smoke of the previous explosion to the West (right) of it has already risen significantly higher. Then the video pans back to the mushroom cloud of the first explosion, which has also risen considerably higher.

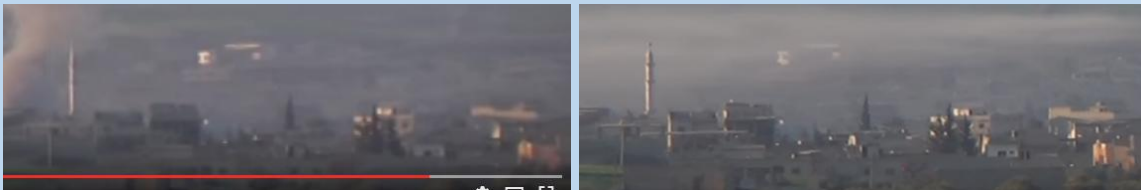


The videos cannot prove whether this is a second pass or not because none of the videos shows the city prior to the impact of the conventional bombs and the only one witness who claims to have seen the plane and the drop of the “silent” bomb also claims to have seen a shadow on the ground, which is impossible.

Saloum has also put a second video online:

<https://www.youtube.com/watch?v=DWvDisOxJiQ>

There is no doubt that the second video (below right) was recorded a few minutes later, as more buildings are being illuminated by the flat sunlight.



It is also evident that in the meantime the dust appears to have spread over a wide area of the city. So, it is the same effect as in the second snippet of the Al-Hussein video shown by the NYT. The wide distribution even in the south of the city strongly suggests natural fog unrelated to the bombing that might have started to develop prior to the actual bombing.

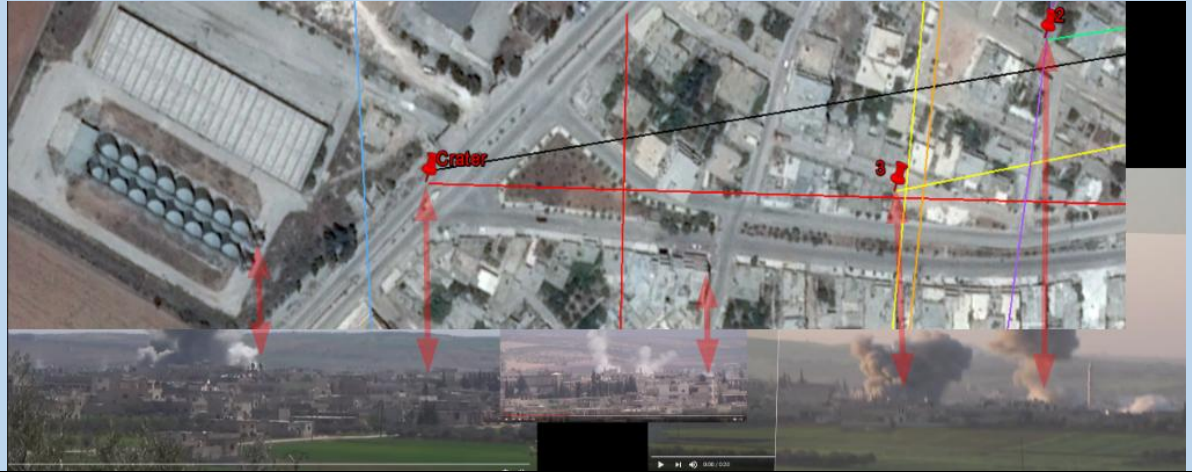


Interesting on both Saloum-videos is the fact that he with best view of the city has observed the process for several minutes. However, neither in the first nor in the second video he pans far enough to the left (east) to show the area in which the poison gas tragedy occurs in exactly these minutes.

Since Saloum does not pan to the left in both videos, but shows the development of the remaining three mushroom clouds, one has to assume that even from his perspective at that time nothing conspicuous was visible near the silos and the bakery.

This assumption is supported by the fact that Saloum is seemingly a permanent observer for the activists in the region. In a series of videos, he captured even small clouds of smoke, while reporting the event on the radio.

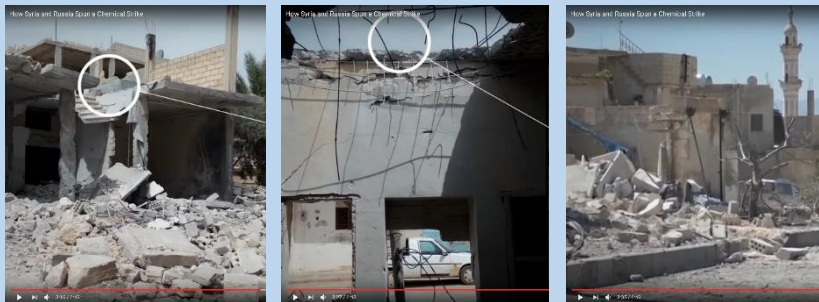
By the help of his other videos it is possible to complete his field of view, which proves that Saloum had the best view of bakery and silos.



The Syria Civil Defense member said: “The second attack was with **three or four vacuum bombs**, which we can tell because the explosions were so strong. We’re not sure [if it was three or four bombs] because **they fell almost at the same time**. They could be heard all over, and shook the city.” Mohammad Saloum, a local journalist, filmed the immediate aftermath of the second fly-over and posted a video on YouTube showing **four smoke** columns rising from Khan Sheikhoun.[\[37\]](#)

As seen above, Saloum did not film four, but three ascending smoke clouds. However, it should be noted that the third and last looks more powerful than the two preceding. This could be because the third explosion was actually caused by two bombs at the same time, or just because it destroyed a whole house, while the other two explosions apparently caused much less damage.

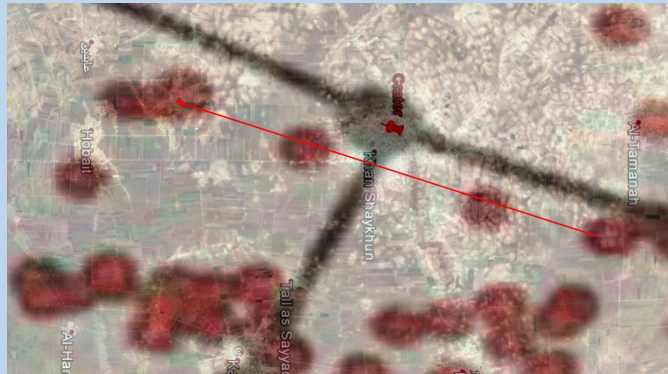
In the apparent order of the explosions:



Many witnesses reported two passes or two separate attacks, while most of these witnesses heard no explosion during the first pass. The alleged tracking data released by the White House also confirm two passes at 6:37am (0337Z) and 6:46am (0346Z).



While videos and bomb craters and the cameraman Al-Hussein suggest a flight direction from south to north, many witnesses speak of an east-west direction as shown in the map published by the White House. The irregular distances between the dots and suddenly terminated lines do not appear like radar records. Rather, these dotted lines might be the gathered data from a network of plane spotters who have already reported the launch of a jet from the airport heading north. However, neither the reported two flyovers from east to west nor any flyover in the northern half of the city can be confirmed by these data.



At least one witness of the White Helmets reported 4 rockets. Another White Helmet reported vacuum bombs hitting at almost the same time while witness Al-Yousef reported 3 strikes separated by about 5 minutes each. Adham al-Hussein reported one flyover from south to north while the White Helmets reported two jets both from East to West.



Translation - "On 4th April 2017, Khan Al Shekhoun was targeted with 4 rockets by two airstrikes from Sukhoi 22. The civil defense

<https://www.bellingcat.com/news/mena/2017/04/05/khan-sheikhoun-chemical-attack-evidence-far/>



If the dropped munition were either unguided bombs or S-8 rockets, then at least parts of the narrative do not seem to fit together. Bombs and S-8 rockets are dropped or shot ahead and thus follow the flight direction of the aircraft. In other words, one jet flying from East to West cannot account for bomb impacts 1,2 and 3 or even 4 explosions at almost the same time.



The contradiction in these statements is amplified by the fact that the mushroom clouds 1 and 2 must have been risen before explosion 3 occurred. Whichever way you look at it, the two passes and the four craters do not fit the narrative. The contradiction will be even greater if only the inaudible sarin bomb was dropped during the first pass. In this case, the second pass of a jet would have to drop the bombs 1, 2 and 3 on a north-facing course, while between bombs 2 and 3 a few seconds would have to pass, so that the mushroom cloud 2 can rise enough before bomb 3 explodes. The little white plume west (right in the image below) of bomb 2 is just the result of dust and pressure wave.



Nevertheless, the mention of vacuum bombs is actually interesting. While vacuum bombs create a huge fireball, a fireball wasn't mention by any witness. Vacuum bombs are also designed to cause immense damage to buildings by the blast wave. You can see in the NYT video (image below) that the second bomb fell through the roof into a house while the walls are still standing. At least this bomb seems to have been no vacuum bomb.



The only remnants of a bomb surprisingly were found in the fourth crater close to the bakery allegedly caused by the sarin bomb. This bomb, however, was not exploded or exploded just "little" almost without noise. Nevertheless, only a narrow sheet of metal and a filling nozzle of 105mm diameter remained of some tall bomb.



While the rest of the bomb and about 1 m³ of pavement were apparently blown away, the identifiable filling nozzle ended up on the top of the loose rubble in the crater but wasn't secured before around 3 pm and dozens of visitors taking photos and videos and samples of the rubble.

These metal remnants were promptly identified by HRW as a Russian sarin bomb including the green bands.

The photos and videos of the crater show two remnants from the chemical weapon used: a twisted thin metal fragment with green paint and a smaller circular metal object. Green coloring is widely used on factory-produced weapons to signify that they are chemical weapons. The KhAB-250, for example, one of two Soviet-produced bombs specifically designed to deploy sarin from a warplane, has two green bands. The circular object seen in photos of the crater appears similar to the cap covering the filling hole on the KhAB-250.



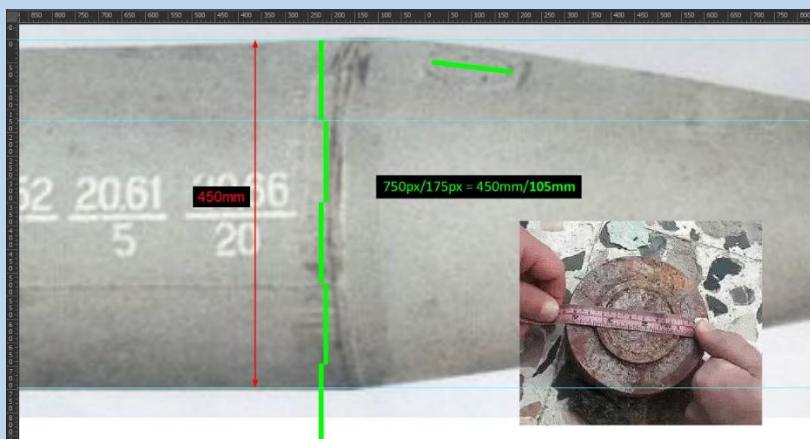
A closer look reveals that there are no green bands. The outer side is entirely painted green.



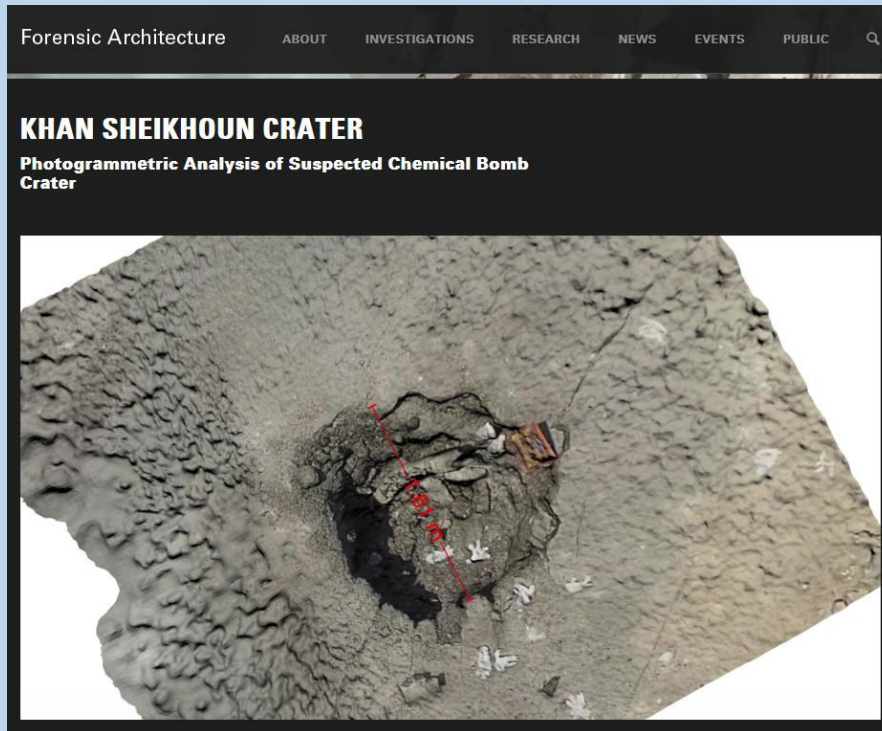
While the outer side of the filling cap still has residues of the green color, two characteristic holes are also visible. These holes are used to open the cap by means of a simple fork-like tool. None of the Russian bombs for the use of chemical weapons could be opened so easily. At least the cap had a completely different design without holes and therefore required a special tool for opening.

Meanwhile, Russia has enlightened the world that the KhAB-250 sarin bomb isn't in the arsenal of the Russian army since the 1960s, has never been exported and the HRW photo was taken in Moscow in the museum. Furthermore, the KhAB type was designed to explode 30 meters above the ground and therefore leaves no crater.

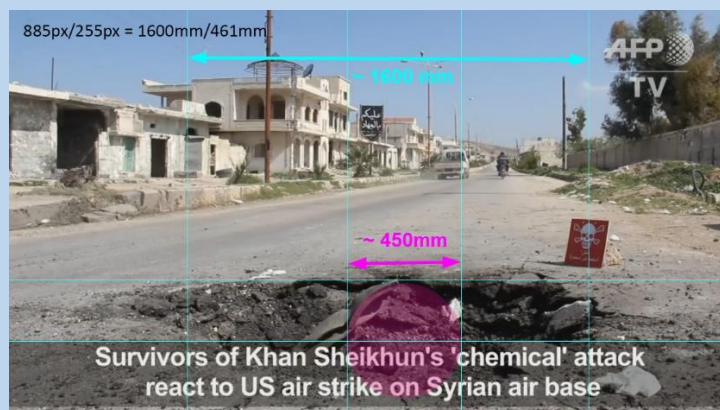
In fact, the metal remnants in the sarin crater especially the filler cap seem to be the remnants of either an ODAB-500 vacuum bomb or an OFZAB-500 high explosives bomb. Both bomb types have filler caps with holes but of different size. At least, the size of the filler nozzle of a OFZAB-500 bomb equals the size of the filler nozzle found in the crater hole (105mm).



It is also possible to draw conclusions from the diameter of the crater to the diameter of the bomb. According to the measurement of Forensic Architecture the diameter of the crater is about 1.6m.



In some photos of the alleged sarin crater, one recognizes that a part of a ring is still attached to the long remnant of the bomb shell. With the help of the diameter of the crater measured by Forensic Architecture, a diameter of the bomb of circa 450mm can be calculated. This diameter would also correspond to a OFZAB-500 bomb. However, it is questionable whether this type or even a ODAB-500 bomb can be used for the deployment of chemical warfare agents.



Neither bomb type has green bands as a hallmark of a "chemical weapon". Both types are in the arsenal of the Syrian Army sometimes in green color and remnants can be found all over Syria.



#MIDDLEEAST 09.11.2016
Syrian Su-24MKs Use 500-kg Incendiary Air Bombs Against Terrorists (Photos)
 The Syrian Air Force has started to use OFZAB-500 high-explosive fragmenting incendiary aerial bombs against terrorists on the territory of...

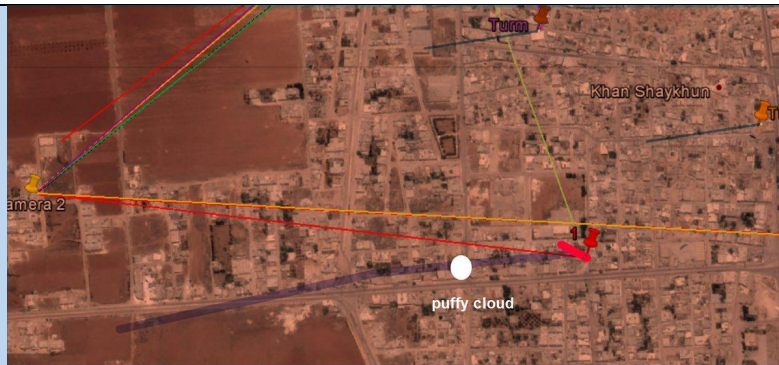
Very unusual, however, must appear that in or around the small crater no more remnants of this huge bomb were found. Usually the remnants look as follows:



It should be mentioned at this point that a third video by Mohammad Abo Zied shows the smoke mushroom in the south of Khan Sheikhoun much closer. His video, however, shows another smoke cloud (right in the image below) apparently in the shadow of the southern smoke mushroom. This cloud could be from a faulty fourth bomb.



Source: <https://www.youtube.com/watch?v=vTx0kmQnZLw>



The line of sight and the shadow angle at about 6:40am places this puffy smoke cloud about 200m in the west of the tall mushroom cloud.

Overall, this results in a plausible image that contradicts the portrayal of HRW. It seems likely that two bombs were dropped in the southern part of the city during a first flyover from East to West, while a second flyover from East to West a short time later also dropped two bombs in the North of the town. The alleged sarin crater and therefore the drop of a silent bomb doesn't fit into that scenario but witnesses in the North of the town might have heard the "silent" explosion in the South without seeing it.

It might be interesting that that all three cameramen of the incident are friends via facebook and obviously connected to the White Helmets and the fighting forces.



While Adham al-Hussein told HRW that the civil defense warned via radio of a fighter jet just started from Al Shayrat airbase heading north, Mohammad Abo Zied was seen on Al Nusra's own TV talking about plane spotting.



He might be the first one who mentioned "toxic gas" and "vacuum bombs" only minutes after the airstrike. At 3:57am (UTC) he wrote "# Urgent || Khan-Shikhon Several aerial air raids on the city were carried out by warplanes" and changed the text at 4:17am (UTC) into "# Urgent || #Betrayed _ Shikhon Several air strikes with vacuum bombs, believed to carry poisonous gases to the city, were carried out by warplanes. God Peace"

Certainly Abo-Zied received this message via the radio and then spread it himself via the radio and Social Media. The spread of this message may have affected many later witness reports, especially by witnesses who have little knowledge of weapons and symptoms. For example Ahmad al-Helou might associate "yellow smoke" with toxic gas and reported it this way.



Through interviews with local residents, and analysis of photographs and video footage posted on the internet and provided by local residents and satellite imagery, **Human Rights Watch identified three impact sites** in the northern neighborhood: **in the middle of a paved road close to the central bakery (“Impact Site 1”)**; the house of the al-Omar family (“Impact Site 2”), about 240 meters southwest; and near Mustafa al-Youssef’s house (“Impact Site 3”), another 100 meters southwest. All three sites are visible on satellite imagery from April 6.

This analysis sounds like a huge amount of work. A closer look, however, reveals that Bellingcat simply used a satellite image dated February 21 to match the current destruction with a satellite image taken on 6 April. This analysis doesn’t mention two more crater North of the grain silos, which first appeared at some point in time during the same timeframe and are aligned with the crater in the street and of approximately the same size.



Some sources seem to be cut off this area.



In the drone images taken on April 4, these craters are nevertheless clearly visible.



No one can say when these craters have been created and if there is a connection to the crater in the asphalt, because no report or analysis recognized or mentioned the existence of these craters so far.

Information about aircraft movements **corroborate claims** that a warplane flew over Khan Sheikhoun twice. Human Rights Watch reviewed an audio recording of a sentry message, **which said a warplane took off from the Shayrat airbase at 6:26 a.m.**[38] In addition, the US government released a map that it says plots the flight path of a Syrian warplane that took off from the Shayrat airbase and flew over Khan Sheikhoun at two different times, 6:37 and 6:46 a.m.[39]

In other words, the rebels/Al-Qaeda had a spotter at the Shayrat military airport. This spotter informed at least one decision maker who could use this information for good and bad.

Many local residents said that they **woke up or became aware of the attacks only when they heard the loud explosions** after the second fly-over. Many said they immediately felt sick. A young teacher who lived about 300 meters from the bakery told Human Rights Watch that she woke up from the sound of a loud explosion that blew the windows in her house open:

It felt like the air had weight. It got harder to breath; tears were running down our faces, and our eyes were burning. My son, who is one year and ten months, was running around. I couldn't see because of the tears. He was screaming "mom, dad!"[40]

Even with the knowledge that a nerve agent has been used, burning eyes and heavy air must not be a compelling indication of a nerve agent in this area. If a vacuum bomb has actually been used, it sprays an aerosol. The explosion creates large amounts of concrete dust by the pressure wave, which makes breathing difficult and makes the eyes burn.

The following statement by Ake Sellström describes the problem:

GW: Do some of these 'mistaken' claims make it more difficult to assess the more likely ones? That they are either 'crying wolf' because they have been asked to, or because chlorine or some kind of obscurant has been released. Does this make it harder to pick out the likely ones?

AS: Yes, and we realised in this investigation that we needed to invest in some science and technology. You can get many symptoms from other items in a war: phosphorous smoke, tear gas, many of these devices in a battlefield scenario will affect the lungs, eyes and give you respiratory problems. Also, in any theatre of war, people will claim that they are intoxicated – we saw it in Palestine, Afghanistan and everywhere else. No-one knows what happened, but we need to be better at differential diagnostics on the intoxication, better medical markers. The people who made the allegations had poor background material to give to the Secretary General;

http://www.cbrneworld.com/uploads/download_magazines/Sellstrom_Feb_2014_v2.pdf

Fatima Abdel-Latif al-Youssef, who lived about 100 meters west of bakery, said:

My cousin went to the balcony. She is 16, and she was choking. I tried to help her. We poured water on her but she passed out. My aunt passed out. At that point I also passed out, but I came to later. My uncle's wife, who lives in the same building, knocked on the door of the apartment. She said, "let me in, help me!" I tried to drag her in, but I couldn't carry her because I am small and she was heavy. I left her on the floor by the door to go up to the second floor, to get my uncle to come and help me...[He] went down to help her, but he never came back.[41]

Fatima and her cousin, who lived in the same home, said that seven people in the house died during the attack due to chemical exposure, including Fatima's uncle, Abdul Kareem al-Youssef; his wife; Fatima's uncle, Yasser al-Youssef; his wife, Sanaa Haj Ali; two of their children Mohamed, 10, and Ammar, 7, and Fatima's cousin Shaimaa Ibrahim al-Jawhar, 16[42]

A doctor at a hospital that received many of the injured said that the symptoms included constriction of the pupils, trembling, sweating, extreme respiratory excretions, foaming of the mouth, and pale skin color.[43]

First responders and people trying to evacuate victims said that many suffered the same symptoms. Raslan, the Syria Civil Defense member who lived near the bakery, said that he eventually lost consciousness: "My chest got tight, and I had no breath left. I wanted to stand up but couldn't. Then I lost consciousness. I did not wake up until 11 hours later in the hospital." [44]

Abdelaziz al-Youssef, who said he arrived near the bakery to help his relatives five minutes after the attacks, said:

People were trying to flee, moving into basements. But as they walked, they collapsed. And those who came to their help collapsed as well. The gas spread up to 500 or 600 meters. Casualties were not only in the place that was hit. There were martyrs over the entire neighborhood. Those who stayed asleep did not wake up. Those who were in basements suffocated and died. Those who woke up and went out were affected. I swear, those who survived can't describe what happened. It was like Judgment Day — people were collapsing everywhere.[45]

Seeing that the bombs had hit his neighborhood, al-Helou, the witness who saw the bomb land in front of the bakery, at Impact Site 1, went there to see what had happened:

People had blood and foam coming out of their mouths, and there was a strong smell. The smell was really disgusting, but I am not able to compare it to anything else. We helped one person and then another, but then we passed out as well. I don't know what happened next. I woke up in the hospital.[46]

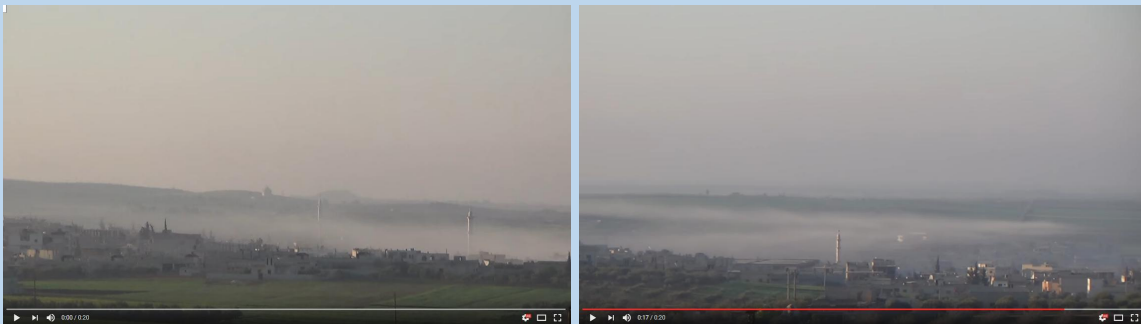
Members of the Syria Civil Defense team that responded to reports of injured after the first fly-over were also injured. Juneid, one of the team members, said that they started to suspect the use of chemicals when they found a man unconscious in his car on their way towards the bakery, near Impact Site 1. They decided to return to the base to get protective equipment. On the way, they saw a woman in the street: "Blood was coming from her mouth. As I tried to pull her up, I started shaking. I couldn't see anymore, and then I lost consciousness. I woke up in the civil defense center." [47] A civil defense member at the base confirmed: "One of the volunteers called me saying 'I'm sleepy. I'm losing consciousness. I don't know what they hit us with.' And then we lost connection." [48]

Clinical signs and symptoms that witnesses described, especially constricted pupils, indicate exposure to a nerve agent. Recep Akdağ, the Turkish minister of health, said that analysis of

blood and urine samples from four victims who received treatment in Turkey showed the presence of isopropyl methylphosphonic acid, a degradation product of sarin.[49] Referring to victims of the Khan Sheikhoun attack, the OPCW said that four different OPCW-designated hospitals analyzed bio-medical samples from three victims during their autopsies and from seven individuals undergoing treatment, and that the results indicated exposure to “sarin or a sarin-like substance.”[50]

Witnesses consistently said that those affected by chemical exposure were in the northern neighborhood and that those exhibiting the strongest symptoms were located near the bakery, or Impact Site 1. This is also consistent with al-Hussein’s account. He said that he saw smoke in the northern neighborhood after the first fly-over. When he heard that people had been injured, he immediately went to help. As he was moving towards the bakery, near Impact Site 1, he helped several people along the way who were shaking, had trouble breathing, and had foam coming from their mouths. About 20 minutes after the first attack, he said, he was around 200 meters from the bakery at Impact Site 1: “It looked like it was winter, there was so much fog. The gas was one or two meters high, all over the place.”[51]

20 minutes after the first pass means 15 minutes after the detonation of the conventional bombs in that far away. While the described symptoms speak their own language, the white mist was presumably the same dust that already had spread all over the city captured between warm and cold layers of air and undistinguishable from natural rising fog in that early hour.



Nevertheless, the account of Al-Hussein is astonishing, especially as he himself allegedly filmed the images above showing how that dust / fog spread all over the city.

Human Rights Watch has reviewed dozens of photos and videos of the crater at Impact Site 1 posted online and provided directly to Human Rights Watch by people who took them. Syria Civil Defense in Idlib posted online some of the first photos of the crater shortly after noon on April 4.[52] Human Rights Watch reviewed the original photos and interviewed the photographer. Based on landmarks visible in the photos and videos, Bellingcat geolocated the crater, showing that it was located near the central bakery in northern Khan Sheikhoun.[53] Satellite imagery confirms that a crater appeared in that location between February 21, the date of the most recent available reference image, and April 6, the first available satellite image after the attack. A reverse image search shows that none of the photos were posted online before April 4.

As mentioned above, HRW and Bellingcat disregard the two craters north of the silos. The reason for this is unknown. The only explanation I got so far states that Khan Sheikhoun is bombed on a daily basis without prove for that allegation. Even if true, the cherry picking of some damages fitting the story-so-far appears not to be helpful at least in a stage of investigation when these four damages apparently do not corroborate the alleged passes and/or heading of the fighter jets.

These photos and videos show that the crater contained two objects that are likely remnants of the weapon that was used: a twisted thin metal fragment with green paint and a smaller circular metal object. The first photos, taken a few hours after the attack, show the twisted metal remnant sticking up from the crater, but most of the crater is not visible because the photo is taken from a distance. A second set of photos, taken closer to the crater in the early afternoon, show more of the crater, including the circular object.

The Soviet Union produced several types of chemical bombs for warplanes. According to open source materials, two Soviet-produced bombs were specifically designed to deploy sarin: the KhAB-250...

Because HRW knew exactly what they were looking for, they found it too.

Nevertheless, the characteristics of a KhAB-250 are obviously different, e.g.

- the KhAB filler cap has no holes for the screw driver
- the nozzle isn't welded in the same way
- the plug appears much higher than the plugged nozzle from the crater
- a green band that includes the metal remnant and the filler cap would be as wide as a quarter of the length of the bomb.

In short, HRW had a lot to neglect in order to "see" a KhAB-250.



...consistent with the characteristics of the KhAB-250.

The first photos taken of the crater at Impact Site 1 a few hours after the attack also appear to show liquid on the asphalt around the crater. Several witnesses described it as a black, oily substance. Such liquid is consistent with the use of a sarin bomb, as some of the sarin, which is a liquid, will fail to turn into aerosol and vapor.^[55]

According to the source, this knowledge comes from the Dan Kaszeta article "Anatomy of a Sarin bomb explosion (Part I)" published by Bellingcat.

<https://www.bellingcat.com/resources/articles/2017/04/13/anatomy-sarin-bomb-explosion-part/>

The statement refers to a photo of the White Helmets that shows the crater close to the bakery with a wet edge. With the help of the electric box on the roadside, it is easy and quite precise to determine when the photo was taken. The shadow has an angle of about 107°. This corresponds to the azimuth of the sun in this place and this day at 9:00 am.



In other words, the photograph was taken about 2.5 hours after the release of sarin in that area. At 9:00 am the sun shone directly on the road, the air temperature was 21°C and it blew a light wind of about 0.5 m/s.

Criminal Poisoning: Clinical and Forensic Perspectives - Seite 110
<https://books.google.de/books?isbn=1449671527> - Diese Seite übersetzen
 Christopher P. Holstege, Thomas Neer, Gregory B. Saathoff - 2010 - Vorschau - Mehr Ausgaben
 An official announcement by the police that sarin had been identified came to the hospitals via television news, reportedly 3 hours after the release. ... Sarin is the most volatile of the nerve agents, possessing a volatility similar to that of water

Sarin has approximately the same volatility as water and this is one of the particularly deadly 'qualities' of sarin. How many liters of the alleged 60% sarin mixture are needed to wet the street in a way that 2.5 hours of direct sunshine on a summer morning wouldn't dry it? And given the needed amount of that mixture, why would the street dry first while the edge of the hole is still wet?

It might be interesting that Orient News was already filming at the hole before the White Helmets took their photo. Of course, the cameraman stood right where the evaporating sarin would be drawn with the wind.



The shadow of the box still meet the edge of the crater, the azimuth is approximately 102°, so it's about 8:30 am. Interestingly, the shape of the liquid has changed slightly. While the North of the crater in the White Helmet photo is almost dry, the South side of the crater in the White Helmet photo was apparently newly wetted.

Water would make sense here, since sarin rapidly disintegrates into less toxic components in water. It has not been reported whether someone has watered the hole with same intentions. It must be assumed, however, that it was a large amount of liquid, because at about 10:00 clock and despite the sunshine the edge of the road was still wet up to about 15 meters far from the hole.



Drone footage taken two days later show a very similar watering of the street.



The same day right after the watering the white helmets collected soil samples from a puddle some meters south of the crater.



The same group collected the dead birds and hair from the dead goat that without a doubt was dragged into its final position.



Another reason for wetting the crater's edges, however, would be exactly that which was picked up by Dan Kaszeta and the HRW: the appearance of a chemical agent. If the wet edge of the hole indeed was liquid sarin drying in the sun then the fate of the cameraman of Orient News would probably have gone through the press. Furthermore, at 8:30am some worker already drove a tractor right next to the crater and even the missing asphalt wasn't found on the street anymore.



The scene was already cleaned up in every respect but one must wonder, how that missing bomb could have thrown out such big chunks of asphalt while the filling nozzle landed in the hole on top.



That the wet edge of the crater was mentioned by Dan Kaszeta (Bellingcat) should come as no surprise. He is the main proponent of a theory, according to which the Syrian sarin production - uniquely worldwide - uses the widespread hexamine as an acid scavenger. He thereby refers to Åke Sellström and an alleged part of a CBRN interview, which was never published probably for some good reason.

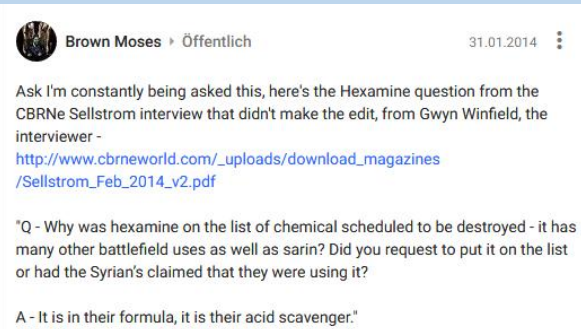
At a later date, Mr. Gwyn Winfield, editor of CBRNe World magazine conducted an interview with Dr. Sellstrom, which included this exchange:

Winfield - Why was hexamine on the list of chemical scheduled to be destroyed it has many other battlefield uses as well as Sarin? Did you request to put it on the list or had the Syrian's claimed that they were using it?

Sellstrom - It is in their formula, it is their acid scavenger.

Although various detractors have claimed that this quote is fabricated, the author has confirmed it generally with Dr. Sellstrom and specifically with Gwyn Winfield, who has a recording of it.

<https://web.archive.org/web/20140828034558/http://ciceromagazine.com/features/the-chemical-fingerprint-of-assads-war-crimes/>



<https://plus.google.com/108344897173120412718/posts/62vsHPVJPua>

In January 2014 Brown Moses aka Eliot Higgins cited Kaszetas Cicero article but linked to the CBRN Interview that never included that part. A quick full text search will reveal that words like "hexamine" or "formula" or "acid" can't be found in the entire interview.

http://www.cbrneworld.com/_uploads/download_magazines/Sellstrom_Feb_2014_v2.pdf

However, at the Key Capitol Hill Hearings, Sellström and his colleague Scott Cairns sounded quite different. The question alone conjured up a grin on Sellströms lips.



>> i will send it to my chemical colleagues. the first one, the allegation, and some witnesses reporting that we could not a robbery the statements of -- we could not corroborate the statements of the plastic cylinders, it is not verified by us. this is in places we never saw the munition in its primary state, in its native state. so again the missions are reported on, but we have not been able to verify it. as it comes to the -- what is the significance of that? >> the significance of hexamine some allege the hexamine is used as an acid stabilizer.


others have alleged it is a remnant from an artifact of reduction of rdx, which is a high explosive. it is also used as a heating element for homemade stoves. it has a number of uses. you will see in the final report a much more comprehensive detailing of some of the chemicals that were found, particularly in one incident. and in the samples you will see that hexamine is found. >> was that the 11th than where it was found -- was that the only incident where it was found? >> those were the only samples we were able to take. it is clear in the report what types of samples we were able to take. >> matthew lee.

Meanwhile, M.I.T. Professor Ted Postol has published the chemical formulas which, for quite rational reasons, make a use of hexamine as an acid scavenger pretty unlikely.

<https://cryptome.org/2014/08/postol-debunks-kaszeta.pdf>

<http://www.washingtonsblog.com/wp-content/uploads/2017/05/Postol-The-Flawed-Chemical-Analysis-in-the-French-Intelligence-Report-of-April-26-2017-Alleging-a-Syrian-Government-Sarin-Nerve-Agent-Attack-in-Khan-Sheikhoun-of-April-4-2017-April-30-2017-PQ.pdf>

Nevertheless, the Atlantic Council, a Soros-funded thinktank, now cites the wrong Sellström quote and invokes the CBRN interview. The link, however, doesn't lead to a Sellström interview including the quoted sentence but to Higgins' Moses Brown Google + page including the link to the wrong interview. The author is Eliot Higgins himself (Bellingcat / Moses Brown).



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Apr 30 · 5 min read

Uncovered Chemical Weapons

New evidence from an official French report points to Assad's repeated chemical weapon usage in Syria

The presence of hexamine has been a point of debate since the sarin attacks in Damascus on August 21, 2013, which triggered the disarmament of Syria's chemical program, and resulted in an on the ground investigation that produced more details about the sarin used. In many of the samples examined by investigators, **hexamine was identified, and in a later interview with Ake Sellstrom, head of the inspection team, by CBRNe World magazine, hexamine is described by Sellstrom as "in their formula, it is their acid scavenger."** In addition to this, 80 tonnes of hexamine were declared by Syria as part of its chemical weapon program during its destruction.

<https://medium.com/@DFRLab/uncovered-chemical-weapons-c7832860915b>

Why does Dan Kaszeta (Bellingcat / Atlantic Council) insist on the use of hexamine since 2014 using unproven quotes and wrong links and repeating it over and over? First, because hexamine was found in all samples from sarin attacks in Syria, which in reverse is meant to automatically blame the Syrian government. This startling conclusion is nourished by the fact that the OPCW in the destruction of the chemical weapons in Syria also had 80MT of hexamine on the list. Again, the twisted logic says that the Assad regime would not have given the 80MT hexamine if they would not use it exclusively for the production of sarin. Apart from the missing logic of the hexamine-argument, the list of the OPCW also included 3MT of methanol, which is best known as paint thinner.

7	BUTAN-1-OL	71-36-3	5
8	METHANOL	67-56-1	3

OPCW/CDB/EOI/01/2013	1	21/11/2013
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https://www.opcw.org/fileadmin/OPCW/ADM/PSB/Tender/Request_for_EOI_OPCWCDB_EOI012013.pdf

There is, however, a significant source that Kaszetas theory now confirms: the French Intelligence Report (FIR). This report says in the first words:

Moving on now to how the chemical was manufactured: we are reliably informed that the manufacturing process for the sarin, which was sampled, is typical of the method developed in Syrian laboratories. This method bears the hallmarks of the regime and is what allows us to establish its responsibility in the attack.

We know this because we kept samples from other attacks and were able, in what were obviously the relevant laboratories, to compare them. We are in a position to confirm that the sarin used on 4 April is the same sarin used in a grenade attack in Saraqeb on 29 April 2013, from which one of the grenades was retrieved and analysed by our services.

The presence of a specific chemical in particular – hexamine – is characteristic of sarin manufactured by the Syrian regime. This substance, typical of the manufacturing process developed in the regime’s laboratories, is present in both the samples from 29 April 2013 and those of 4 April 2017.

http://www.diplomatie.gouv.fr/IMG/pdf/declaration_en_cle8faf9b.pdf

The UN got a report in 2013 and wrote:

70. The French Government presented a report containing results of environmental samples testing positive for Sarin. The United Nations Mission studied the report but could not independently verify the chain of custody for the sampling and the transport of the samples.

<https://unoda-web.s3.amazonaws.com/wp-content/uploads/2013/12/report.pdf>

According to witnesses, three improvised bombs were dropped from a helicopter of the Syrian army on 29 April 2013. These improvised bombs were apparently made from a cinder block with improvised plastic hand grenades inserted in its cavities.

A video shows Al Qaeda activists from Saraqeb who present such a hand grenade in front of the camera using rubber gloves. One of them, however, has no problem touching the inside of the plastic bag in which they transported this grenade.



<https://www.youtube.com/watch?v=BDZ66mHIWNO>

Another piece of the puzzle is a BBC video by Ian Pannell, which is intended to show the helicopter and “2 or 3” improvised bombs. This video is edited right in the decisive moment, so you first see a helicopter in front of blue skies – cut - and then a smoking bomb in front of blue skies.



<http://www.bbc.com/news/world-middle-east-22551892>

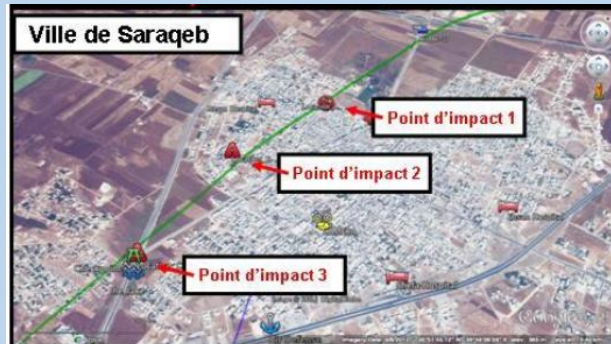
The French Intelligence report says:



d) This intelligence on the process used by the regime, which is a sign of its responsibility in the attack on 4 April, is based notably on the analysis of the content of an unexploded grenade which was used with certainty by the Syrian regime during the Saraqib attack on 29 April 2013. That mid-afternoon, a helicopter arriving from the north-east flew over the city of Saraqib at high altitude. Three unidentified objects, emitting white smoke, were dropped on neighbourhoods to the west of the city, on a north-south trajectory.

<http://www.diplomatie.gouv.fr/en/country-files/syria/events/article/chemical-attack-in-syria-national-evaluation-presented-by-jean-marc-ayrault>

A map shows the three impacts in timely order:



The BBC video shows the point of the 2nd impact of such a smoking device in the garden of victim Mariam Khatib two days after the attack. Obviously, the scene was cleaned up after the attack.



It is noticeable that every trace of a white powder is missing in the hole, which is understandable in the context of the incident. Nevertheless, the missing white powder is interesting in connection to another evidence: the 3rd impact of the unexploded grenade obtained by the French Intelligence.



<https://www.youtube.com/watch?v=aUYzA44qM0>

According to the images the cinder block completely disintegrated into powder due to the impact of > 60 m/s (140 mph). At the same time the munition shows no mechanical damage.



Munition found at third point of impact and an x-ray of it

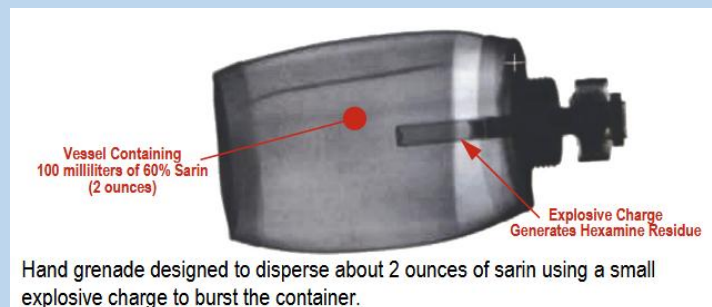
The chemical analyses carried out showed that it contained a solid and liquid mix of approximately 100ml of sarin at an estimated purity of 60%. Hexamine, DF and a secondary product, DIMP, were also identified. Modelling, on the basis of the crater's characteristics, confirmed with a very high level of confidence that it was dropped from the air.

[http://www.diplomatie.gouv.fr/IMG/pdf/170425 - evaluation nationale - anglais - final cle0dbf47-1.pdf](http://www.diplomatie.gouv.fr/IMG/pdf/170425_-_evaluation_nationale_-_anglais_-_final_cle0dbf47-1.pdf)

The modelling of the crater's characteristics as claimed by the FIR sounds interesting. Based on which data? The topography of that dirt track prior to the impact wasn't known. The size and shape of the "cinder block" object itself is unknown just like its purpose. So, a shovel full of plaster waste in a trough would probably give a similar impression.

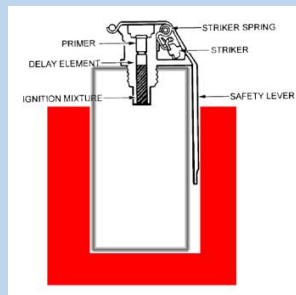
However, it is striking that this undamaged and unexploded grenade is not the same model as the one presented by the activist in front of the camera. The body has about four times the height of the outer part of the ignition mechanism, while the body of the grenade of the activist is only half as high. The holes in the side of the body are missing but maybe this version has a hole in the bottom (not shown by the report) like a military smoke grenade.

Professor Ted Postol suggests the simple design without a hole in the body.



http://www.washingtonsblog.com/wp-content/uploads/2017/05/Postol-The-Flawed-Chemical-Analysis-in-the-French-Intelligence-Report-of-April-26-2017-Alleging-a-Syrian-Government-Sarin-Nerve-Agent-Attack-in-Khan-Sheikhoun-of-April-4-2017_April-30-2017_PQ_.pdf

But there is a problem. The fuse of a hand grenade has usually a delay of 3 – 5 seconds. The BBC video shows 5 unedited seconds of the fall allegedly of such a device but without beginning and without ending. Therefore, a simple design would explode at an unknown altitude and maybe 100 meters above ground. The solution would be a kind of cinder block (red in the image below) that fixes the safety lever and crushes when impacting the ground.



Such a device wouldn't smoke while falling and at each impact side only one grenade was found.

In addition, a simple bottle of glass would have done the same job, especially when it comes to a fluid like sarin dropped from a great height onto random victims. The remains of a bottle are

unsuspicious. The bottle itself would hardly be visible for witnesses and handy cameras. So, what's the meaning of the smoke? It means that the cinder block makes no sense at all.



With the use of his hands the nephew of a victim describes the “container” that landed in the garden. A google search for the Arabic word for container shows what حاوية means.



A closer look shows that all information about a hollow concrete block refer to that third point of impact. The only source is the already mentioned BBC article.

One device was said to have landed on the outskirts of Saraqeb, with eyewitnesses describing a box-like container with a hollow concrete casing inside.

In another video, a rebel fighter holds a canister said to be hidden inside the devices. Witnesses claim there were two in each container.

Another video shows parts of a canister on the ground, surrounded by white powder.

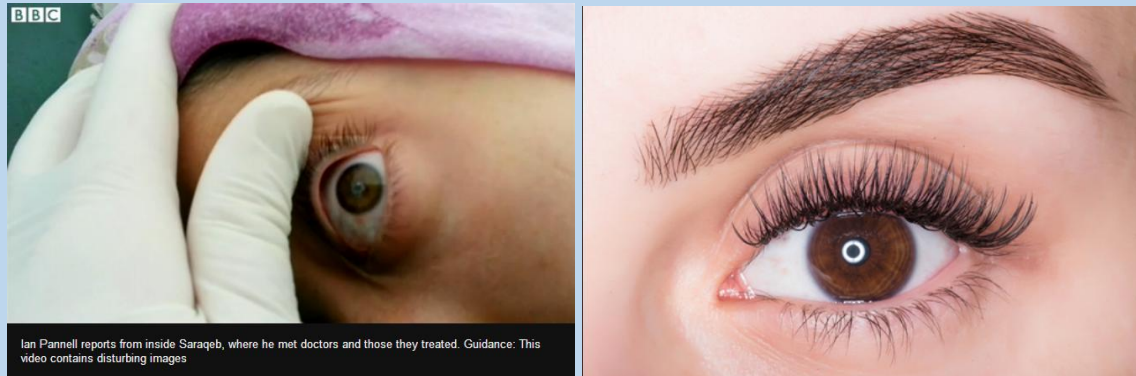
However, the question arises as to how someone could describe the powdered plaster as a hollow concrete body, which was also placed in a box before the impact.



Let's summarize: Most witnesses saw two smoking containers that were dropped from a helicopter. There are, however, some witnesses who speak of a third impact and can also describe exactly how the pulverized inner life of a carton has looked before the impact. From this third impact on the outskirts of the city but 120m from the next house is the unexploded piece of evidence, which is now the conclusive proof of the unique production method of Assad's sarin.

But there is more evidence:

The BBC video then shows a photo of the unconscious Mariam Khatib in bright light, while the commentary indicates the narrowed pupil as evidence of a nerve gas.



A photo of narrowed pupils in bright light is not proof of a nerve gas, because a healthy iris also contracts in the bright light of a lamp. And that lamp seems to be reflected in the eye around the pupil, which can distort the impression (as in the right image). A wide white edge of the brown iris appears unlikely.

Furthermore, the BBC video shows the eyes of the son of Mariam Khatib while the commentary again points to constricted pupils. Again, in the eye reflection, one recognizes a bright light, presumably a flashlight, but the pupil appears to be normally dilated or constricted.



The victims of the Saraqeb attack were sent to Turkey after the administration of oxygen and atropine for further treatment. In Turkey, blood samples of the injured were examined especially for sarin. The Turkish laboratory, however, could not find anything unusual. In May 2013, Pri.org reports:

Medics tested the blood samples — which were taken from some 13 victims of an attack that included white powder in the northern village of Saraqeb on April 29 — at the Reyhanli hospital on the same day, **but did not find anything unusual, they said.**

They tested the blood specifically for sarin gas — a nerve agent — and also ran regular bloodwork.

<https://www.pri.org/stories/2013-05-05/turkish-doctors-say-no-nerve-gas-syrian-victims-blood>

Half a year later in December 2013 a surprise followed. The UN report stated that in the organs of Mariam Khatib, sarin was actually found.

Information concerning biomedical samples

72. During an autopsy that was observed by members of the United Nations Mission, samples of several organs from the deceased woman's body were recovered for subsequent analysis. The results from most of these organs **clearly indicated signatures of a previous Sarin exposure.**

She is the only victim who died after this attack, and, according to the description, came into contact with the agent when she approached the object in her yard. There were other family

members and helpers in the yard, which also had to be treated with symptoms. It is unclear why no sarin was found in the blood of any other injured.

What kind of munition was found?

In the case of the plastic hand grenades, which are described as sticking in the dropped container, it seems to be an improvised smoke or CS-gas grenade, as it has been seen only in the use of al-Qaeda. A photo taken by [Jeffrey Ruigendijk](#) in Ras Al Ayn / Serekaniye shows an Al-Qaeda fighter (see image below right) with such an improvised hand grenade on April 21, 2013, eight days prior to the Saraqeb attack. Ras Al Ayn is the Syrian part of the divided city Serekaniye. The Turkish part is called Ceylanpinar and known for Al-Qaeda training camps.

<http://www.dw.com/en/al-qaedas-turkish-base/a-17097437>

Of course, it is possible that the Syrian army has got possession of some of those hand grenades. Nevertheless, the benefit of dropping it in a mid-afternoon sarin attack involving smoke grenades for highest visibility of the red line crossing crime is not comprehensible.

However, one of the BBC witnesses showed insider knowledge, which can hardly be explained by the finding of a gypsum pile. According to the dress code, the same witnesses had access to such improvised hand grenades and were strongly interested in pushing the Assad regime over Obamas "red line". They had access to the victims, the impact locations, the hospitals.



It would be naïve to rule out that the organization behind these witnesses does not have contacts to a range of Intelligence services.

<http://www.telegraph.co.uk/news/worldnews/middleeast/syria/10415935/Al-Qaeda-recruits-entering-Syria-from-Turkey-safehouses.html>

The intelligence community behind the Obama administration could not categorically rule out that Al Nusra/al-Qaeda has or had access to sarin.

<http://www.washingtontimes.com/news/2013/may/6/syrian-rebels-used-sarin-nerve-gas-not-assads-regi/>

WND EXCLUSIVE

U.S. MILITARY CONFIRMS REBELS HAD SARIN

Classified document shows deadly weapon found in home of arrested Islamists

Published: 09/11/2013 at 8:16 PM

<http://www.wnd.com/2013/09/u-s-military-confirms-rebels-had-sarin/>



https://twitter.com/tarek_oo7/status/851168246954938368

The FIR also shows a photo of the grenade, which impacted the ground in the garden of the family of Mariam Khatib and caused about 20 injured. Apparently, however, this grenade could not be obtained and analyzed. The FIR says:

At the first point of impact, there were no victims. At the second point of impact, one person was killed and about 20 injured. An exploded grenade was found in the wreckage. Analysis of biomedical and environmental samples collected by the French services revealed the presence of compounds consistent with exposure to sarin. [This analysis was confirmed by the United Nations in December 2013.](#)

The mentioned UN report confirms that sarin was found in the organs of Mariam Khatib but neither confirms the environmental samples taken at impact location 2 nor the source of these samples:

Information about munitions

68. The United Nations Mission was not able to conduct an on-site visit and was not able to collect any primary information on munitions.

Information concerning environmental samples

69. The United Nations Mission was not able to conduct an on-site visit and, therefore, was not able to collect any environmental samples.

70. The French Government presented a report containing results of environmental samples testing positive for Sarin. The United Nations Mission studied the report but could not [independently verify the chain of custody for the sampling and the transport of the samples.](#)

Finally, there is no reason to doubt that a helicopter has dropped smoking containers in at least two locations. According to the publicly known evidence, however, it does not seem compelling that these containers contained the sarin-hexamine mixture. It seems rather implausible that an attack with sarin was combined with highly visible and heavy smelling smoke bombs. It also seems implausible that the smoke bombs contained the sarin at the same time. First, the sarin grenade obtained by the French Intelligence service does not show drillings in the vessel and secondly, the drillings would not prevent the toxic agent from evaporating.

Therefore, it is not safe to say that the undamaged and unexploded sarin grenade was actually dropped by the helicopter. Nor can it be said with certainty that the impact point 3 was actually caused by a dropped cement block in a container.



The only known image of the improvised sarin grenade from impact location 2 seems to show some deformation due to heat exposure. The image cannot confirm any mechanical damage due to the collision with the pavement plates on the ground. Apparently, no safety lever was found but the lack of the lever makes a “hollow concrete casing” inside a container superfluous.

Based on photos and videos, Forensic Architecture, an organization specializing in spatial analysis, created a three-dimensional model of the crater. Based on the model, the organization calculated that the crater was about 1.60 centimeters wide and 0.42 centimeters deep. Since there is no public information about how much explosive is contained in the bursting charge for KhAB-250 and KhAB-500 bombs, it is not possible to assess whether the size of the crater is consistent with the use of these bombs. The lack of blast and fragmentation damage on nearby objects as shown in the photos and videos is consistent with the use of a low-blast, non-fragmenting munition like a chemical bomb.

It is astonishing how fast and purposeful Human Rights Watch came to a conclusion which, on closer examination, seems highly questionable, but by no means remained without consequences.



Without a doubt, the hastily assembled paper was much more concerned with the continuation of a policy of regime change than with the weighing of sound proofs, for the latter is wholly lacking in that work.

The reddit forum member elboydo nailed it on April 4, the very day of the attack:

Regardless, the airstrike matter has been one which has been repeated all day as the source of the chemical attack. This conclusion was fine for many.

Although the next major question would be, what bomb exactly?

Now for this one, I struggled to find any references to common soviet type aerial bombs that could realistically be re-purposed into Sarin carrying bombs. [If we claim it to be an aerial bomb, then it would largely support the claim of the pro gov side of it being a lab on the ground, except for the comment here that largely dismisses the NDF claim of hitting a chemical lab](https://www.reddit.com/r/syriancivilwar/comments/63cmgd/20_civilians_dead_200_cases_of_suffocation_after/dtfe4z/) https://www.reddit.com/r/syriancivilwar/comments/63cmgd/20_civilians_dead_200_cases_of_suffocation_after/dtfe4z/

https://www.reddit.com/r/syriancivilwar/comments/63fgw6/regarding_the_type_of_weapon_used_in_the_claimed/

Even if no chemical stockpile was found near the bombing points, it cannot be ruled out that the sarin was released on the ground in order to change the course of the war at the last minute.

Chemical exposure from the attack killed at least 89 people, including 33 children and 19 women, and injured 541, according to the opposition-run Idlib Health Directorate, which published a list of the names.[\[56\]](#) Human Rights Watch confirmed 35 of them through interviews with local residents and family members of the dead. A few people appear to have died from blast and fragmentation injuries from the attacks during the second fly-over. Raslan, the Syria Civil Defense member, said that the attacks with explosive weapons killed his neighbor, the neighbor's son, and the 15-year-old boy he had tried to help.[\[57\]](#)

Two Syrian organizations compiled a list of 103 people who had died, but it is not clear from the report whether all died from chemical exposure.[\[58\]](#) Local residents, first responders, and medical personnel confirmed that the vast majority of casualties in the morning attacks were killed and injured by chemical exposure.

It is also known that all victims were washed several times on this day. A group of dead children with initially recognizable bleeding head injuries are seen in a series of more than 5 videos until they are piled up with still living children in the back of a van. The fate of the living children is unknown so far, but was exploited for effect by CNN for example.



The same children are seen here:



And here on a gray van:



And here on a black van:



And finally, here in the back of a white van:



Piled up with still living children in need of immediate help, here on the black van:



The fate of this heavy breathing girl piled up with apparently dead bodies in the back of a white van is unknown.

Other injured children were attributed as victims of a sarin attack by the same media like this boy:



This boy was apparently the last patient in the underground hospital of the White Helmets and was treated there because of his foot injuries.



After an explosion in or near the hospital, the boy was carried around. His previous treatment bed was empty at the time of the alleged attack.



Since apparently all known media activists were gathered in the otherwise empty hospital prior to the alleged Russian airstrike and all cameras were running in the very moment, it can be said with great certainty that contrary to the claims in numerous media no patients were treated for any reason at the time in that hospital. Therefore, even the alleged airstrike itself appears like a staged drama.



While generally all the victims of this day were attributed to an attack with chemical weapons and while the witnesses (almost exclusively White Helmets or similar organisations) miraculously said

no word about pressure wave and tremendous dust, it is known that quaternary blast injuries can evoke similar symptoms, as they were observed in Khan Sheikhoun.

<https://www.cdc.gov/masstrauma/preparedness/primer.pdf>

Similarly, the fuel of a vacuum bomb (ethylene oxide, propylene oxide) can cause very similar poisoning phenomena.

0.2.7 NEUROLOGIC
0.2.7.1 ACUTE EXPOSURE
A) In high concentrations propylene oxide has caused CNS effects, including CNS depression, headache, motor weakness, incoordination, ataxia, coma, and neuropathy in experimental animal studies.

0.2.5 CARDIOVASCULAR
0.2.5.1 ACUTE EXPOSURE
A) Ethylene oxide has no appreciable effect on the cardiovascular system until respiratory compromise is serious enough to cause anoxia.
0.2.6 RESPIRATORY
0.2.6.1 ACUTE EXPOSURE
A) Pulmonary irritation is a common symptom after inhalation. Pulmonary edema may be seen with acute exposures. Pneumonia may be a complication of ethylene oxide exposure. A rare report of asthma has also been reported.

0.2.7 NEUROLOGIC
0.2.7.1 ACUTE EXPOSURE
A) Convulsive movements, twitching, malaise, lethargy, headache, seizures, and dizziness have been reported. Serious exposure may result in coma. Chronic exposure may result in peripheral and central nervous system effects, including neuropsychiatric symptoms, cognitive dysfunction, and polyneuropathies.

In other words, the visual appearance and the word of a London-based NGO hardly confirm the count of sarin victims.

Many of the dead belonged to the same families. Members of the al-Youssef family said 25 of their family members who lived in houses near Impact Site 1 died due to chemical exposure.^[59] Local residents also said that the victims were civilians, and that armed groups did not have any bases in the town, but Human Rights Watch cannot exclude the possibility that some of the victims were members of armed groups.

Al-Yousef himself poses on his now-erased Facebook photos with weapons, which makes him potentially a member of armed groups.



As described above, the al-Yousef family lived door-to-door with family al-Saleh near the impact of the 2nd conventional bomb and thus about 330m southwest of the alleged sarin crater, while the wind blew slowly to the southeast.

The House of Al-Yousefs uncle is also located 230m away from the alleged sarin crater, exactly opposite to the wind direction at that time.

If the dead in the house of Al-Yousef and in the house of his uncle are actually attributed to sarin, then this sarin may not have been originated from the crater near the bakery.



Source: <https://www.youtube.com/watch?v=uk6cqg6BaJU>

At least some of the victims in the house of the uncle show signs of other injuries like red blood in the nose of this boy in the late evening of that day.

Two theories have been presented to provide an alternative explanation to the allegation that a Syrian government warplane dropped a chemical bomb in Khan Sheikhoun: that an explosive bomb hit a chemical weapons production facility or depot in a warehouse; **or that armed groups detonated a chemical weapon on the ground**. Human Rights Watch has not found any evidence to support either theory.

In fact, the theory that a Syrian fighter plane dropped a bomb filled with sarin appears most unlikely among the three alternatives:

- Crime scene cleaned and manipulated before securing of evidence
- Remnants of the bomb do not fit a suitable weapon
- Wrong wind direction
- manipulative handling of visual evidence
- wide dispersion of victims, concentrated near conventional bombing
- impossible flyover narrative to cover all 4 craters during two passes from East to West
- only one witness of the first "silent" bomb with an impossible story
- reports of white smoke rising prior to conventional airstrike in either a secret or in a falsely attributed video
- cui bono? The Syrian government could not have expected any benefit of such a use of highly toxic sarin while radical opposition forces had to expect all benefit from it.



FILE PHOTO: U.S. Ambassador to the United Nations Nikki Haley speaks in Washington, U.S., March 27, 2017. REUTERS/Joshua Roberts

Both Russian and Syrian officials have claimed that the chemical exposure occurred because a Syrian airstrike hit an armed group's weapons depot that contained chemical bombs. On April 7, Syria's foreign minister, Walid Muallem, said that Syrian forces had not used chemical weapons and that a Syrian airstrike around 11:30 a.m. on April 4 had hit an ammunition depot belonging to an armed group, causing the chemical exposure.[60] A Russian military official gave a similar account, saying that the airstrike took place between 11:30 a.m. and 12:30 p.m.[61] But there is overwhelming evidence to show that local residents started exhibiting signs and symptoms of chemical exposure several hours earlier, which means that the 11:30 a.m. attacks that Syrian and Russian officials cited cannot explain the chemical exposure.

Meanwhile it is an old-known scam to pin the opposing party on suspicions of a first opinion, to easily question the veracity of the statements in general.

However, if the Syrian army did not use chemical weapons and the Russian partners had no knowledge of using such weapons, then it is logical to look for a source of the gas on the ground.

In the same way – failing about a KhAB bomb and green bands - it is now possible to question the veracity of the statements of HRW in general.

For this reason, it is particularly unfortunate that the OPCW could not get through to visit the scene of the incident at the invitation and urging of the Syrian government and to undertake their own investigations.

Any further determination of the circumstances therefore depends either on the intelligence sources or opponents in an extremely brutal war against the accused party, which, from past experience, does not contribute to the credibility of the outcome, on the contrary.



Human Rights Watch also investigated whether the strikes at Impact Sites 2 and 3 could have dispersed the chemical. Local residents who visited the impact sites said that there were no signs that any chemicals had been stored near the sites. Mohammad Saloum, a

local journalist who examined Impact Site 2, the house that was struck closest to Impact Site 1, said: “There were three rooms containing pillows and carpets for sleep. There was nothing else inside. It looked like any other house.”[62]

Satellite imagery shows damage to a warehouse and a grain silo near the bakery, but local residents said they were struck before April 4. Photographs of the warehouse that were taken after the April 4 attack show that large sections of the walls are open, allowing people to see inside. Local residents said that the warehouse had been empty and out of use for months except as a volleyball court. A journalist for the *Guardian* who visited the warehouse said that he found a volleyball net there, which he filmed.[63] Local residents said that they did not know about any chemicals being stored anywhere in the neighborhood.

May the truth come to light and the OPCW to Khan Sheikoun. Peace for everyone!