

2018 Douma Incident in Syria: Chemical Weapons Attack or Concealed Mass Murder?

A Critical Evaluation of OPCW Reports and Available Evidence



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Section 1: Introduction to the Douma Incident and Related Controversies

1.1 Learning What Happened

In April of 2018, the Syrian government of Bashar al-Assad was nearing the end of its offensive to reclaim the Damascus suburbs of Eastern Ghouta. Only parts of Douma were still in control of Jaysh al-Islam (Jal - "Army of Islam") when, on the evening of April 7, Syrian military helicopters allegedly dropped toxic chemicals on the city. Initial reports suggested both chlorine gas and the nerve agent sarin were used, killing up to 200 people, although this would be revised to 43 killed just by chlorine.

Although their defeat was likely imminent, Jal claimed this massive chemical attack is what finally pushed them to surrender Douma the following day, fearing further attacks and hoping to save lives. In trade for this debatable edge, Syria suffered missile strikes by the US, UK and France on April 14, mirroring US strikes a year earlier in response to an alleged sarin attack in Khan Sheikhoun. As such, Syria's motive to conduct such an attack was questionable from the start, but the evidence was said to prove their guilt anyway.

The first and perhaps most widely-seen view of the incident was chaotic footage of a medical clinic with "White Helmets" rescuers hosing down locals supposedly exposed to chemicals. Russia's delegation to the OPCW soon after hosted witnesses at the Hague to explain how there was no chemical attack they knew of, just activists staging a performance of one. Patients brought in were found to be fine, aside from dust inhalation and a little girl with hypothermia from all the hosing. The Russian delegation's leader Alexander Shulgin said that, after this, everyone will know "who is spreading fake news, and who is telling the truth." ¹

Of course, the press conference was dismissed in the West as Russian disinformation. Some of the same witnesses at the Hague are changing stories now that the Assad regime has fallen, claiming they were coerced to deny the attack and to blame the symptoms and deaths on dust from the fighting. ² People did claim this when they could hardly know for sure, perhaps on such a political script. Still, BBC journalist Riam Dalati (who previously showed how a famous "last hug" photo was staged ³) claimed in February 2019 that, after "almost 6 months of investigations. ... I can prove without a doubt that **the #Douma Hospital scene was staged,**" like the Hague witnesses said. Unlike them, in his understanding "the ATTACK DID HAPPEN," but somehow "everything else around the attack was manufactured for maximum effect" and he admitted "**no 1 knew what really happened at the flats apart from activists manipulating the scene there.**" Dalati mentioned Jal's rule by "iron fist" and specified Dr. Abu Bakr Hanan, "a "brute & shift" doctor affiliated with Jaysh Al-Islam" who just filmed the clinic scene instead of helping anyone. Dalati closed by saying "will keep the rest for later" ⁴ but seven years on, he still has not published these findings.

Under the new government headed by Al-Qaeda offshoot Hayyat Tahrir al-Sham (HTS – formerly

Jabhat al-Nusra, allies of Jai), people are assumed to "speak freely" when really the pressures have just changed. Government directives from Assad then, or from HTS now, could aim to suppress either truth or lies, both of which alleged witnesses can speak. Most could be telling the truth as they see it (some smelled gas and assumed there was a chemical attack, while others did the opposite) but, as Dalati noted, they could hardly know what happened to the victims at "the flats." Others do claim to know what happened, having survived the attack. But these accounts are questionable and, as explained in the following sections, at odds with ample evidence suggesting there was no such event. **When whole scenes with people are staged, organized dishonesty is afoot, and we can't be sure of its purpose or how deep the deception runs.**

For these and other reasons, the witness accounts should all be considered, but considered as unreliable evidence. What matters far more is the science to check against the competing claims. Experts from the Fact-Finding Mission (FFM) of the Organization for the Prohibition of Chemical Weapons (OPCW) arrived in Damascus for that stated purpose on April 14, just as suspected CW sites nearby were bombed over the still-unconfirmed reports. The Russians and/or Syrians were then accused of blocking the FFM's site visits, although the only relevant delay was decided by the UN's security department when their advance mission came under fire from unknown parties on April 17.⁵

By the 21st the FFM was visiting the two purported attack sites, starting at "Location 2" (L2) where a gas cylinder dropped from the air was said to land on the balcony of an apartment building, creating a hole it stopped just outside of, pouring chlorine inside and killing at least 35 men, women, and children. On April 25 they made it to "Location 4" (L4) where another cylinder was said to crash through a roof and then bounce onto a bed in a vacant apartment, releasing gas but killing no one.



The FFM would eventually concluded 43 people were killed by chlorine alone, with no sarin traces – not even distant breakdown products – discovered anywhere in the environment or in biomedical samples (although the actual fatalities were never tested).

1.2 Reports and Leaks

These findings were related in various reports, starting with an interim FFM report of July 6 that established little aside from the lack of sarin indicators.⁶ The FFM's final report came out only on

March 1, 2019, concluding the deaths were likely caused by chlorine gas, delivered by “impacting objects.”⁷ They had no mandate to assign responsibility, but a 2023 report of the OPCW's Investigation and Identification Team (IIT) used its wider powers to explicitly blame Syrian military helicopters for the Douma attack.⁸

In 2018, the FFM consulted experts in engineering, ballistics and toxicology on the alleged cylinder impacts and on the expected effects of chlorine gas, but according to a timeline in the FFM final report, it was only in September and October that they did so.⁹ Ostensibly, these central subjects were only addressed 5-6 months into the investigation and 2-3 months after the vague interim report.

Secrets of this delay were soon revealed with leaks of internal OPCW documents describing **a very different initial investigation**. First, in May 2019, the executive summary of an engineering assessment was leaked to the Working Group on Syria, Propaganda, and Media.¹⁰ This was drafted by “Inspector A,”¹¹ a highly-qualified, veteran OPCW inspector and team leader¹² who headed an “engineering sub-team” (EST) of the FFM. The leaked EST report calmly explained how **it was more likely that “both cylinders were manually placed at those two locations rather than being delivered from aircraft.”**¹³ **Like the clinic scene, the gas cylinders may have been staged.** The study was vehemently rejected and erased from the record. After the leak, Henderson was suspended and had OPCW leadership issue false statements about him and his documented involvement with the FFM.¹⁴ In 2025, he would publish a book detailing these events.¹⁵

Later, Wikileaks would publish records of a June 2018 consultation with toxicologists, where the FFM was informed that chlorine was unlikely to explain the reported symptoms and fatalities, and where **the chief toxicologist even speculated the Douma incident could be “a propaganda exercise”**¹⁶ **with “corpses arranged for propaganda purposes.”**¹⁷ Maybe the attack did happen, but **according to experts, the clinic scene, the gas cylinders, and the bodies of the victims may have all been arranged for effect.** As with the engineering study, the public FFM reports would pretend this meeting never happened.

Once made public, these documents were admitted as genuine but irrelevant to the FFM's process, so that their suppression hardly mattered. This also suggested a strange coincidence; 5-6 months were spent with irrelevant experts doing irrelevant things regarding the central subjects of engineering and toxicology, at the same time the FFM officially pursued expertise in neither area.

But the findings in question were included in a draft of the FFM's interim report, assembled in mid-2018 by OPCW employee “Inspector B,” aka “Alex,” that would also be leaked.¹⁸ In this, “a number of toxicologists” were cited raising similar points, months before the admitted experts were contacted.¹⁹ In line with the EST report, the FFM team was then unable “to draw clear conclusions as to the provenance of the cylinder on the roof.”²⁰ This draft had been greatly changed by June 22 when Inspector B e-mailed Chief of Cabinet Bob Fairweather to complain it had “morphed into something

quite different” that now “misrepresents the facts.”²¹ In the end, both versions were held off, with the public interim report coming out as a placeholder. The investigation was re-done in the following months by a new “FFM core team.” This excluded Inspectors A and B and all but one of the team members who had been to Douma, and consulting the new experts to shape the final report and enable the blaming of Syria. The rest, as they say, is history.

1.3 Paper Purpose and Methodology

This paper will evaluate the contested claims, comparing those advanced by the OPCW reports with the suppressed findings, and with additional analysis of related reports, photos and videos, correlated with basic scientific research. This analysis concurs with the suppressed findings and expands on them, in sometimes horrifying detail, to propose details of what likely *did* occur:

- The gas cylinders were probably placed by hand, and chlorine was likely released the same way, at both sites, so as to stage a “chlorine attack.”
- As the first experts said, chlorine is very unlikely to have caused the 35 fatalities seen at L2.
- The bodies in fact seem to be arranged in the same vein as the cylinders, after their murder with chemicals somewhere else.
- Specific clues – dubbed the “mask of death” – point away from chlorine or sarin to a different agent, likely involving nitric acid, as the cause of death.
- The same clues also suggest the victims were held under bondage and deliberately killed by exposure to this toxic gas.
- The victims were likely prisoners of and murdered by the defeated militants of Jaysh al-Islam, and there may have been 187 of them.

This paper is comprehensive but not exhaustive, focusing on key technical issues in some detail, with many fascinating details and even major points left out to focus on what the author deems the strongest evidence and explore it in adequate detail. The author is not a trained expert in any relevant field, but has over 12 years of collaborative study into alleged CW attacks in Syria, affiliated with Working Group on Syria, Propaganda and Media, A Closer Look On Syria (research wiki – estranged co-founder), the personal blog Monitor on Massacre Marketing, occasional articles and a media appearance (PushBack with Aaron Mate). With invaluable input from others too numerous to name, he has formed insights into both ballistics and toxicology that play into this paper. Special thank to Michael Kobs for last-minute notes and images and his report on the Location 4 bed cylinder, and to Dr. Piers Robinson for initially suggesting this paper and advising on how to pull it together (*some* of which advice the author followed).

Section 2: Impact or Staging? The Engineering/Ballistics Evidence

2.1 Expert Views on Impact Versus Staging

The FFM's final report in 2019 cited three experts in "engineering, ballistics, metallurgy, construction, and other relevant fields," noting they hailed from three different nations (unspecified). Simulations and calculations were mentioned, but not shared in much detail.²² The IIT report would point to the FFM's experts, adding one in missile trajectories and one in terminal ballistics,²³ with more general insights provided by a few munitions experts they also consulted.²⁴

At Location 2, these experts found the building damage suggested "a force coming from the outside to the inside"²⁵ (so an object falling up from inside the room can be ruled out), and that it was all consistent with the cylinder's impact at considerable velocity,²⁶ vertically aligned or up to 45° from vertical.²⁷ At Location 4, they agreed the cylinder likely crashed through the roof, as the IIT put it, "in a nearly horizontal attitude," considering "the elongated shape of the crater" and "flattening of the cylinder."²⁸ The IIT would say no information provided "supports the delivery of the cylinders in question by means other than helicopter."²⁹ As such, "armed groups or other entities with no aerial assets"³⁰ could hardly be responsible.

The IIT explicitly considered a manual staging scenario local groups could have managed, but found it "highly unlikely and not supported by any factual findings or scientific evidence."³¹ They found it "highly implausible" that "the cylinders may have been carried up the stairs of a multi-storey building, manually placed on the building's upper floor, and scratched, damaged, and corroded" in the ways seen.³² Specifically at L4, the IIT argues that the signs of "an impact phenomenon with a considerable vertical velocity" could hardly be staged,³³ and at L2 they cited a mesh imprint on the cylinder that suggested a real impact.³⁴ (The latter point fails radically, as explained below in section 2.6.) They found it especially unlikely that this could be done "at two different locations" under "heavy shelling," and that it went unexposed in any way the IIT was aware of.³⁵

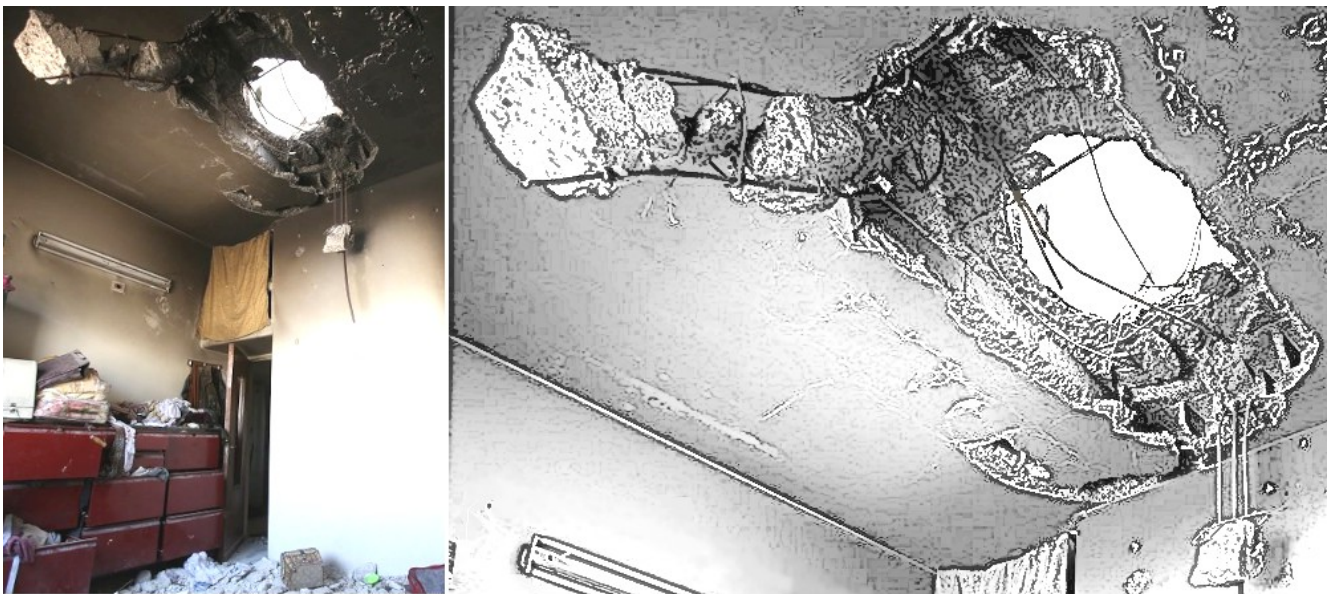
In contrast, Inspector A's suppressed EST report decided "**there is a higher probability that both cylinders were manually placed at those two locations rather than being delivered from aircraft.**"³⁶ The following will examine these different views in some detail.

2.2 An Explosive Impact at Location 2

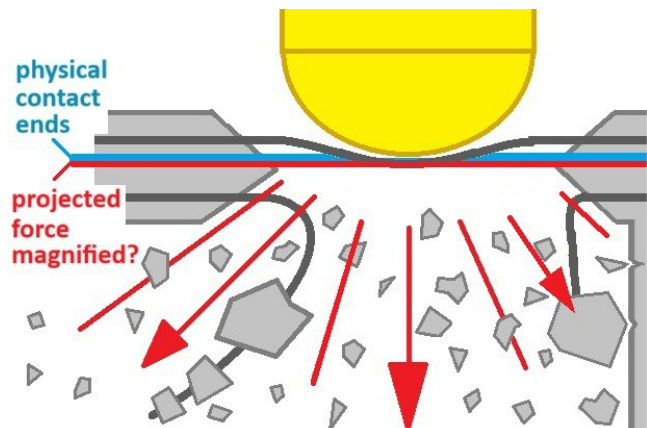
The Engineering Sub-Team report explains how "experts were consulted" to assess the crater at Location 2 and the "expert view" was that the evidence pointed more to "blast/energetics (for example from a HE mortar or rocker artillery round)" than it did to a simple mechanical impact. The report lists supporting points including:

- cratering (sloped edges) above the aperture and the inverse spalling below it
- craters of similar appearance on nearby roofs that, absent a chlorine cylinder set next to them, look just like the impacts of mortar shells or the like
- "deformed rebar splayed out at the underside of the crater, which was not explained by the apparent non-penetration and minimal damage of the cylinder"
- "an (unusually elevated, but possible) fragmentation pattern on upper walls" ³⁷

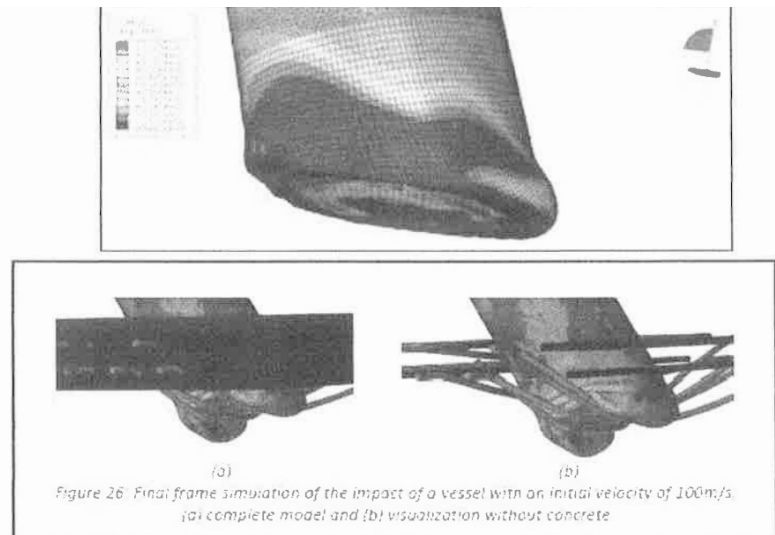
In his 2025 book *The Syria Scam*, "Inspector A" (the EST report's author) reiterates how "engineers and ballistics experts I consulted ... were unanimous in identifying the crater [at L2] as more likely having been formed by an explosive mechanism." ³⁸ Below is a cropped photo ³⁹ and enhanced detail of the crater underside and splayed reinforcing bars. Note the lower bars are broken and bent – over 130° on the left, and on the right limited to 90° by the wall – after some force passed around at least one rebar across the aperture *above them* that was distorted, but remains intact and anchored at both ends.



The cylinder supposedly stopped at the upper bar, not physically contacting anything below that, just projecting a weakened force. The illogical notion that this explains the damage is sketched at right. It should be obvious that a simple, gravity-driven impact would only direct force downward, and an increase in velocity would just increase that, not redirect it drastically in all directions to break and splay out the lower rebar after passing around upper bars. No object could do this. **A radial high explosive blast wave, on the other hand, could explain all of this perfectly well.**

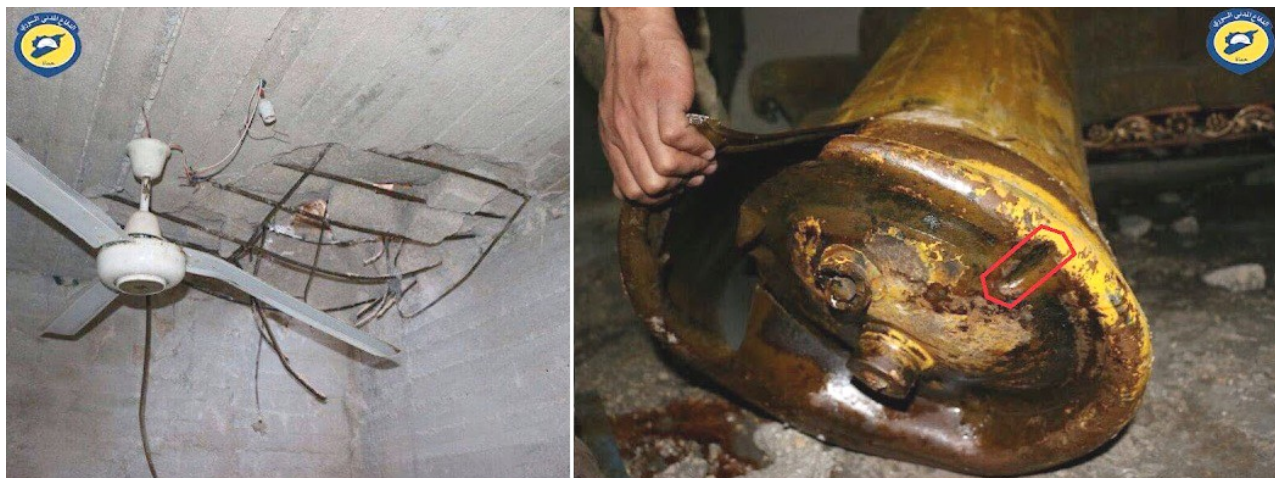


The cylinder's halted “non-penetration” of the roof was itself noted as strange. Modeling with his most generous assumptions (altitude 500m and an empty cylinder) Inspector A found “the vessel was again not slowed down to a standstill.”⁴⁰ The report included these images from another modeling to suggest how a stopped cylinder *should* appear: valve end flattened on first impact, then indented by the arresting rebar. These are distorted but, having stopped the cylinder, they do not break.⁴¹



Figures 1 & 2 (above): Predicted deformation; initial and final computational analysis

An alleged chlorine attack in Al-Lataminah from 2017 is worth comparing (images below). The same kind of cylinder was supposedly dropped from a helicopter and impacted vertically, tunneled through some loose-packed soil, and fully penetrated the reinforced concrete roof at the entrance to a White Helmets underground hospital, releasing gas that reportedly caused 3-4 deaths. This incident itself is rather questionable, but it was accepted by OPCW investigations and, in this regard, it seems more realistic than the alleged impact as Douma's L2. The rebar here shows a maximum bend of 90° only where it would be physically pressed by the passing cylinder, and the cylinder itself shows severe flattening (attributed to impact with soil and then concrete) and at least one likely rebar indent (red box), besides losing its valve and having ruptured.⁴²

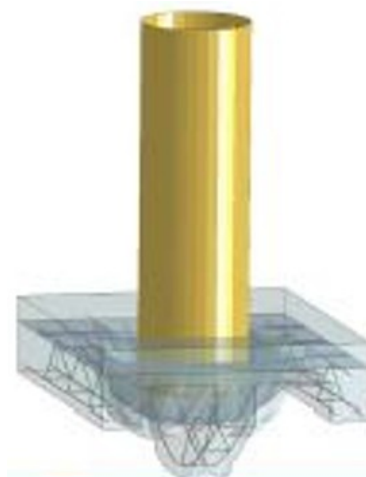


At Douma's Location 2, in contrast, the EST report noted “the front of the observed cylinder shows no signs of impact with the concrete slab or rebar, and the appearance of the observed rebar does not

indicate it having slowed the cylinder to a stop." ⁴³ We see a missing valve and some mild buckling near the front, but no sign of flattening, no indentation, and no ruptures. The alleged circumstances are different than in the above case, but probably not different enough to explain the discrepancy. As such, the evidence suggests **the vessel suffered its minor damage in some other way before it was set here next to this preexisting crater.** ⁴⁴



The FFM final report included a still image from their modeling of the impact (cropped view at right) that seems to show upper and lower reinforcing bars all bending downward in the same way, with no sign of that radial force, and none of them clearly breaking. ⁴⁵ Compared to the reality at L2, this would excessively distort the top bars while failing to explain the broken and splayed-out lower bars. They also declined to show what the cylinder looks like afterwards. **And so, by their success or by their failure, all models seem to agree: no simple impact can explain the observed damage, which is far better explained by explosives.**



OPCW official reports would address this by categorically ruling out explosives in a few, and rather insufficient, ways. The IIT's terminal ballistics expert – not the munitions experts nor the missile trajectory expert they also consulted – assured them “the damage ... was not consistent with the use of an explosive charge.” No specific reason is given. ⁴⁶ The IIT also noted the cylinder shows no sign of explosives damage and so – assuming it would be present at the time of any blast – there never was a blast. ⁴⁷ The reports would also note a lack of fragmentation marks, which is a partly valid point requiring some discussion below in section 2.3. All of this was supposed to leave the alleged cylinder impact as the only plausible explanation for the damage, however poor it might be.

It also remains unclear how the welded steel aerial harness with fins, or “cradle” as the IIT put it,

“appears to have detached upon impact and was found mangled next to the cylinder.” This was cited as a problem they encountered in modeling, such that “some elements of uncertainty remain, and that, at both locations, it is impossible to determine the exact configuration of the assembly prior to impact.”⁴⁸ The suppressed EST report noted there was no sign of the “mild steel framework and fins” ever being attached to or detached from the examined cylinder, before they were twisted together in some unclear event the cylinder seems to have had no part in.⁴⁹

2.3 Location 2 Fragmentation Patterns

One of the FFM's experts was cited with "an explanation of the cylinder not penetrating completely through the aperture" at L2. They noted "a large impact on the roof and walls above the balcony" at the southeast corner, where the cylinder may have first hit, slowing it to impact the floor “without sufficient energy to fall through” the hole it was able to create.⁵⁰

At right is a cropped image from the report, with their circle on the possible first impact point, with the cylinder and crater below.⁵¹ Just outside that circle is a band of obvious primary fragmentation or “shrapnel” marks, which continues on other walls, suggesting an artillery shell, most likely from a light mortar, impacted here. To the IIT in 2023, those marks were a clear “fragmentation pattern”⁵² and it was by then “unclear” whether the cylinder impacted here.⁵³ It would be quite a coincidence for it to hit the same spot an artillery shell had impacted, hiding its own damage with this visual ambiguity.



The FFM final report also noted "an explosive device ... is unlikely given the absence of primary and secondary fragmentation characteristic of an explosion *that may have created the crater.*"⁵⁴ (emphasis added) It may be worth laboring this point to settle some widespread confusion. First, primary marks are from metal fragments or “shrapnel” loaded in the weapon, while secondary marks are from external materials, like concrete, energized by the blast. Next, the EST report probably referred to the marks seen above as "an (unusually elevated, but possible) fragmentation pattern on upper walls," suggesting it was caused by a detonation at the balcony floor. The FFM didn't deny the marks. They just don't link them to the floor crater. The author agrees they seem too “elevated” for that, and probably link to that corner damage instead. The IIT likewise noted the lack of such marks near the crater, on the lower walls, and that the shrapnel damage above is “inconsistent with an

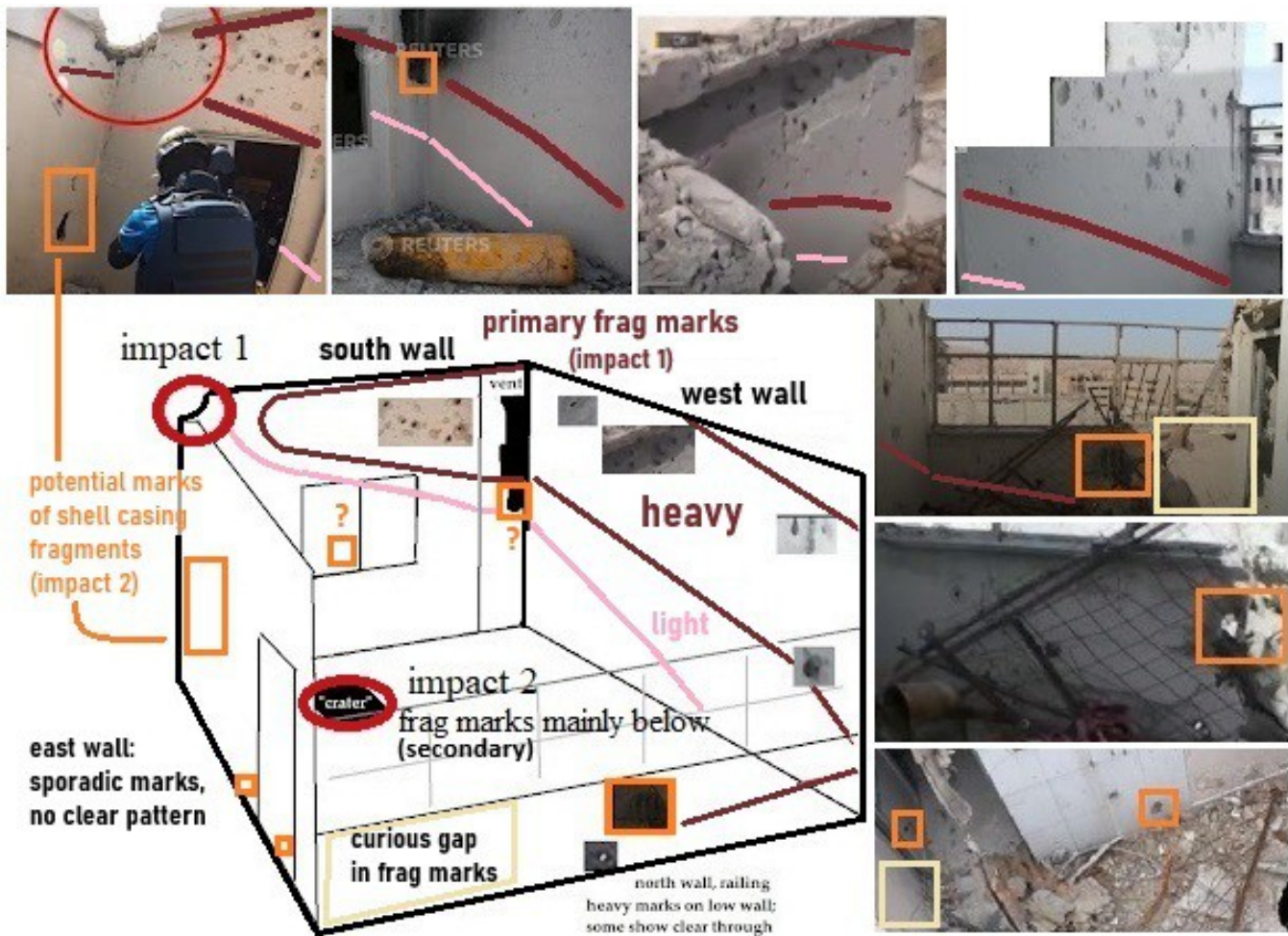
explosive event having occurred at the location of the crater." This seems to be a valid point; the author can only make out a few faint possible marks low on the wall – perhaps secondary marks of concrete from the floor crater, but not the sharp punctures of primary fragments from any shell there.

But the IIT report also says, in the caption for figure 11, "no fragmentation damage pattern consistent with explosion is visible on the walls" of *the room beneath the crater* (below, left).⁵⁵ This is not the main place to look, and the claim seems to be false. They have 8 arrows pointed at the cylinder, for some reason, and none at the dozens of chips and indentations across the upper walls they were actively denying (and it's possible the EST report was referring to these "elevated" marks). The walls to the left and right seem to be marked as well, but the clearest damage is in the view below, detail at right: 8 clear chips marked with green arrows, with perhaps dozens of faint dents in between, now obscured by soot. These seem to be **secondary fragmentation marks**, from concrete broken to bits and propelled almost sideways by a radial blast wave. One larger dent like knuckles (green box) was clearly made by the extra large fragment still attached to the rebars, when they tried to bend past 90° (and recall the other side managed to bend over 130° the other way).

FIGURE 11: VISIBLE CRATER ON THE ROOFTOP OF LOCATION 2 PHOTOGRAPHED FROM THE ROOM DIRECTLY BELOW. PART OF THE YELLOW INDUSTRIAL CYLINDER (MARKED WITH A GREEN ARROW) AND DEPOSITS OF BLACKENING SOOT ON BOTH THE CEILING AND THE WALLS ARE VISIBLE. NO FRAGMENTATION DAMAGE PATTERN CONSISTENT WITH EXPLOSION IS VISIBLE ON THE WALLS.

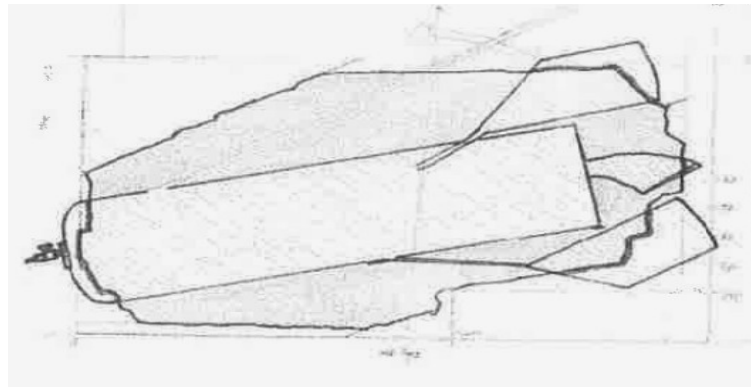


These apparent secondary marks, taken with the other signs of a blast wave at the balcony floor, leave only primary fragmentation marks seeming to lack. This could well be explained by an unusual artillery shell, perhaps locally made, with irregular fragmentation or with no primary fragments packed in it. Its outer casing might break into larger pieces, and we do see some larger holes on the lower walls (orange boxes below show potential impact spots), along with a few possible secondary marks. The following diagram (next page) crudely shows how the corner damage and floor crater might show the impacts of two different kinds of shells, one of which simply did not leave all of the usual signs.

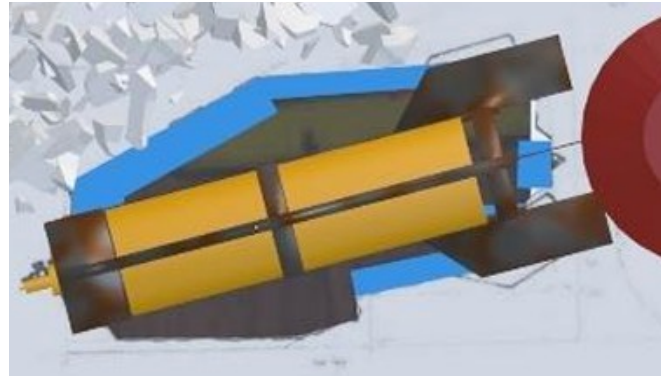


2.4 Unclear Impact at Location 4

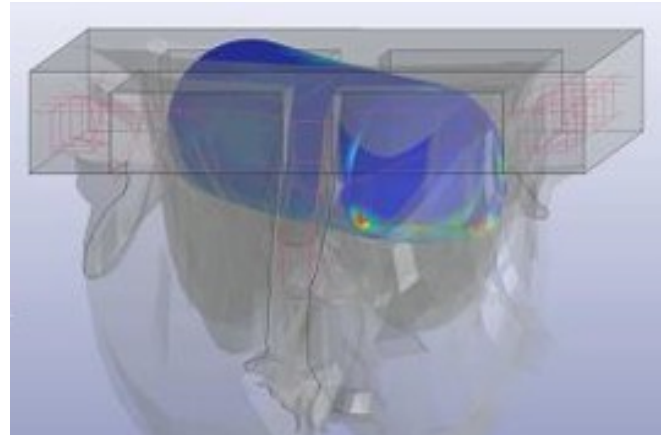
At Location 4, the FFM made no mention of explosive signs, the IIT explicitly denied them,⁵⁶ and the suppressed EST report mentions none, describing a crater caused by “unspecified means.”⁵⁷ The aperture here is elongated, consistent with the cylinder's mild deformation, suggesting it had landed horizontally after a fall, somewhere. The EST report included the sketch at right, based on careful measurements Inspector A took, showing how the crater was a bit too short and too wide in the wrong spots to match the cylinder's shape.⁵⁸ The EST report concluded “it was not possible to establish a set of circumstances where the post-deformation cylinder could fit through the crater with the valve still intact ... and the fins deformed in the manner observed.”⁵⁹



German open-source researcher Michael Kobs had modeled the impact much the same way and making the same point, as it happens, some two months before the leaked EST report was published.⁶⁰ As Kobs would later show in his detailed 2025 study of this impact, the above sketch measures the aperture's rim in the upper insulating material, while the area of full concrete penetration is even smaller, also excluding the blue areas at right.⁶¹



The FFM said their experts' modeling “matched the shape and damage observed by the team.”⁶² However, this only shows this in an unclear side view (right) where the cylinder is shown without the harness and fins and even seeming to lack the exposed valve.⁶³ It's not clear how they explain the extra damage along the sides, as they failed to show the crater their scenario produced. The IIT's experts estimated the assembly's total length was indeed “slightly larger” than the aperture, but with an angled or “nearly flat attitude,” they decided “the hole was large enough for the cylinder to have passed through it.”⁶⁴ They neglect to illustrate this, and of course the cylinder needs to *cause* the hole, not just pass through it. Aside from the problems at both ends, a lot of destruction along the sides remains poorly explained.



The FFM's expert modeled the initial impact at 60 m/s, slowed to 15 m/s after passing through the roof.⁶⁵ However, Michael Kobs challenges this in his 2025 report. With his engineering background and computer simulations, he found that for a 280kg cylinder with a kinetic energy of 504 kJ (kilojoules), the force required to slow it as the FFM proposed would be 900 kilonewtons (kN). Kobs estimates the roof as 20 cm thick including a layer of insulating foam, with an unusually weak concrete material like “gypsum or chalk” in a light rebar frame (right). He gives this roof an “optimistic” resistance of 30 kN, just 3.3% of that assumed in the FFM study. Kobs finds that this would barely slow the cylinder at all (from 60 m/s to 57 or 58 m/s), leaving it to punch through the floor as well. These calculations are open to question, but unless they're off by a factor of 30, Kobs' conclusion stands: the FFM modeling “must therefore have assumed an



unrealistically high ductile plastic energy absorption — i.e. the roof behaves like a thick metal buffer in the simulation, not like real masonry." ⁶⁶

The IIT also considered a staging scenario with the cylinder dropped from the roof of a neighboring building under construction, estimated at 14-16m higher. Their modeling showed that such a short fall “would not result in the penetration of the reinforced concrete” – the one they seem to have vastly overrated – leaving them to assume a helicopter drop instead. ⁶⁷ Kobs also modeled this roof-drop scenario, finding it would give the cylinder an impact speed of 17.7 m/s and a kinetic energy of 43.9 kJ. The L4 roof would indeed allow the cylinder to pass, he finds, with a residual speed of 10 m/s. ⁶⁸

Considering the hole shape, and some clues the cylinder had a different route of arrival (see below), it was probably not dropped in from any height. It could be that what punched a hexagonal hole in the top of L4 was something else, sufficiently heavy and compact, falling from the same roof. A large volume of masonry debris surrounds the roof crater, mostly being hollow bricks, but with at least some heavier reinforced concrete (see right). ⁶⁹ OPCW investigations don't mention this pile of rubble which, they think, the cylinder happened to land in the middle of.



A figure in the IIT report shows extensive damage to the taller adjacent building, notably of the roof-level “parapet” directly above this spot, with exposed rebar visible extending towards L4. ⁷⁰ According to Google Earth satellite views, this damage was incurred back in 2012 (first clearly visible by February 2013), during fighting that left insurgents in control of Douma. A heavy portion of this debris could be what caused the roof hole. If so (satellite views are unclear), then it existed for over five years before the alleged chlorine attack.

All the visible rebar here appears quite rusty, even staining the concrete (image: IIT report). ⁷¹ Only normal weathering would play in here; hardly any chlorine would rise as high as the ceiling. The steel in the debris appears worse off than the building's own. This could show years of exposure with the hole covered over. However, rebar can be rusty to start with, so it remains *possible* the hole is just 18 days old as alleged.



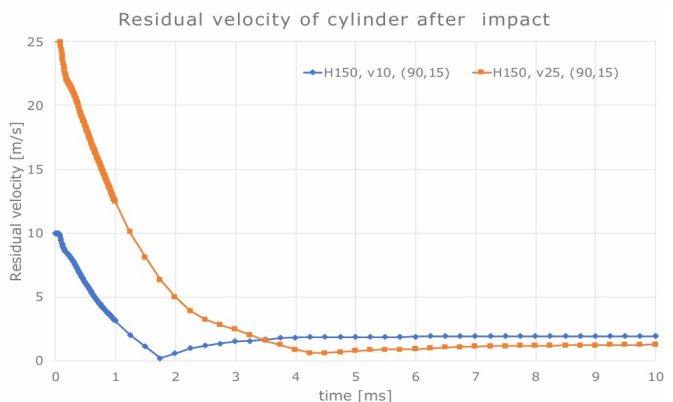
While no major building debris was seen in the room, it could have been there until someone removed it. One mysterious item (right) was seen clearly in a Russian news video by the curtains directly beneath the crater ⁷² and was apparently removed prior to the FFM site visits (not mentioned in their reports or visible in their photos). As Michael Kobs found, it looks just like the main piston of an upright concrete packer (although a different style than the example shown at right) ⁷³ Such a tool might be used to compact new concrete slabs in the neighboring building, and be left on the roof until a blast knocked it off along with the visible debris. The motor portion and packing plate would have been removed, while this piston was left at the scene. The size and weight of this possible machine are unclear, but probably smaller and lighter than the blamed cylinder. Depending on the roof's actual strength, this could be capable of punching through or assisting in that, or it might just go to show how the hole was likely caused by debris from a place under construction, as the taller adjacent building was.



The crater could also have been created or just enlarged manually, with tools, although the evidence is for this is scarce. The IIT claims to have heard no evidence for the use of such tools ⁷⁴ and Inspector A didn't see anything obvious enough to note in the EST report. Another object seen in early Russian videos is a large metal spike ⁷⁵ exactly like those used by concrete demolition jackhammers. ⁷⁶ However, its relevance is questionable. Michael Kobs also noted “some wrecking work” on the roof was done earlier – a notch on about the scale of that tool – “in order to lay a rainwater pipe.” ⁷⁷

2.5 Cylinder Movements, Location 4

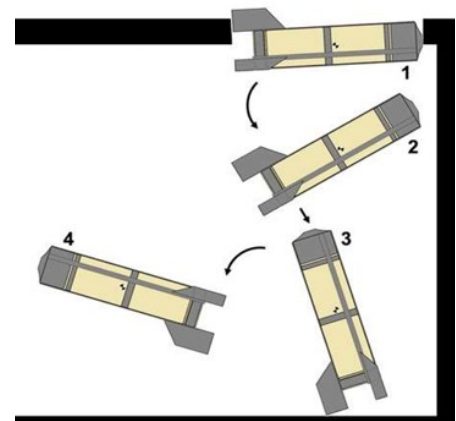
The FFM's expert assessments “indicated that, after passing through the ceiling and impacting the floor at lower speed, the cylinder continued altered trajectory, until reaching the position in which it was found,” laying on the bed. ⁷⁸ Their figure at right shows the modeled velocity change during the brief (2-5 ms) floor impact, at two initial speeds. The orange line, 25m/s, bounces back poorly due to deformation the vessel suffers, so the FFM favors the slower 10 m/s (blue line), finding this would bounce back up at



2m/s.⁷⁹ As mentioned above, Kobs found a helicopter drop ending in a 60 m/s impact would barely be slowed by this roof, and would then punch through the floor, rather than slowing to zero and bouncing back up as shown here. "Surprisingly," he also found this 10 m/s favored speed would actually result from the proposed cylinder drop from the neighboring roof, rather than from a helicopter.⁸⁰

Even by the FFM's modeled result, it remains unclear if the cylinder could bounce high enough to land on the bed or just how its trajectory would be "altered" to do so. The EST report had noted the assumed vertical entry and the lack of signs of impact with any walls to cause "the "equal and opposite" forces required to deflect the cylinder in a horizontal direction."⁸¹ Michael Kobs found the cylinder at 10 m/s would only reach a height of 100mm and a maximum distance of 400mm, in some combination based on uncertain details.⁸² The scale of motion is not specified in the official reports, where the height of the bed is given as 385mm and its distance from impact about 3 meters⁸³ – both several times too far, by Kobs' calculations.

The IIT's terminal ballistics expert would propose the cylinder had flipped end-to-end after first impact, so that "the orientation of the cylinder on the bed is opposite to its orientation on impact (about 180°)."⁸⁴ Figure 48 at right explains: rotating as it falls, it seems to land almost vertically on a tail fin and then to somehow bounce sideways.⁸⁵ The IIT decided this flip "may explain why it moved diagonally across the room" to land on the bed.⁸⁶ It's not clear that this makes sense, and the fin deformation suggests it's laid on the bed the same way it landed, not flipped around.



The IIT report also observed whimsically how "the location in which the cylinder was found is as unlikely as any other location within the room."⁸⁷ But it may be likelier than most spots; beds can seem like good places for people to set down larger items, and they can also have emotional resonance in a propaganda exercise.

The IIT's experts would say this bounce onto the bed unassisted was "conceivable,"⁸⁸ and that its getting there "without human intervention" was "possible."⁸⁹ Implicitly but not explicitly, they also felt the cylinder getting there *with* human intervention was quite possible, even as they vigorously lobbied against that possibility. But they would say this possible scene manipulation would only follow on the cylinder crashing through the roof; they doubt that the "heavy and cumbersome" object was first "carried up several flights of stairs" and "through narrow corridors."⁹⁰ Open-source investigators Bellingcat would concur, saying this cylinder was quite a "bulky object to get up the stairs and through the door, apparently without leaving any obvious marks."⁹¹ The lower fins might scrape some stairs on the way up, for example, or the handlers might drop the cylinder trying to squeeze through the

doorway, chipping the concrete doorjamb. In fact, two post-attack Russian News videos show signs of exactly these things (below).⁹² This damage could have other causes, but it does exist. It's unclear if Bellingcat found these marks not “obvious” enough, ignored them as “Russian disinformation” or were simply unaware of this open-source evidence.



The aerial harness was especially awkward, with the beam attaching the wheels broken loose and splayed out about 45°. It would be hard to move it even in the room without a mishap, let alone up the stairs and through the door. And as it so happens, it appears there *was* such a mishap.

A shower next to the bed had its glass door smashed into by this loose member (right, cropped from FFM final.)⁹³ The EST report noted the door “appeared to have been pulled outwards” or “primarily in the west (“left”) direction,” rather than “forwards in the direction of cylinder travel” assumed in the FFM report.⁹⁴ That makes little sense as the result of the assumed trajectory. But in a manual staging scenario, one handler might stumble into the shower with the heavy cylinder, having the splayed-out wheels smash into and get tangled in the door frame. Then – especially if the handlers were cut by the broken glass – they might hastily yank it out onto the bed, just hoping it looked plausible enough.



The handlers also might have stumbled forward at this time, smashing the cylinder into the bed's headboard. A dented scrape along the top edge is noted as the final point 5 on the FFM's "possible trajectory of the cylinder inside the room," shown at right with additions.⁹⁵ (Inset better view from Kobs report.)⁹⁶ Coming after its supposed impact 3 with the shower, this movement seems to deny the more sideways movement away from that and onto the bed evidenced by the broken door frame. But their same "possible trajectory" also includes as point 4 a rather sharp and vertical linear

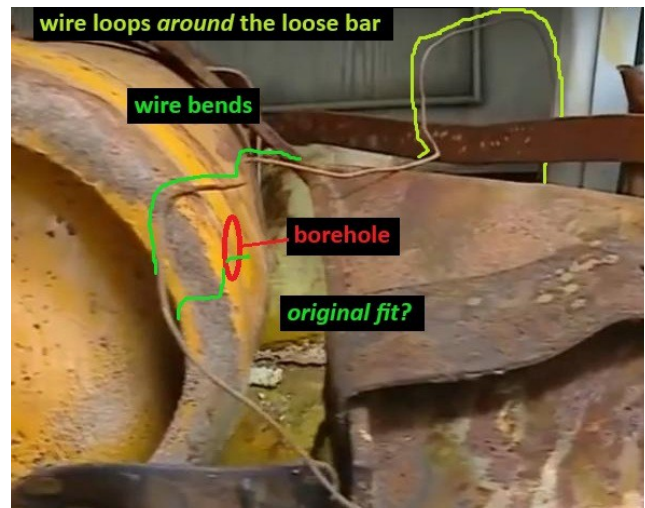


gouge into the bed's wooden lower frame, right across from the shower (inset IIT),⁹⁷ along with other possible damage further along the base that's less clear and could hardly make sense.

The badly bent lower fin – and nothing else on the cylinder – might have a roughly vertical edge to cause this gouge, if there were a primarily leftward movement, which is already evident. Red boxes at right compare the gouge and that fin's edge. (IIT fig. 47). The cylinder would have to pivot almost sideways upon the shower mishap, with the rear end dropping low and swinging left and its front end pivoting up and into the shower (the glass on that side is also broken out). This is not modeled out or certain, but it's unclear what else could have caused the gouge, and it's impossible the same fin could, on the assumed trajectory, wind up on the bed rotated underneath, a bit above, to the left, and slightly *behind* this gouge. One way or another, this "possible trajectory" seems to have too many directions to it. Some awkward "human intervention" is by far the better explanation.



The author takes special note of a length of wire that may have wrapped around the loose member with the wheels and helped to hold it in during transport (likely along with other fixtures, including a blanket now tangled up on the fins). The best view, from a Russian news video, is at right.⁹⁸ The wire would best go through a borehole in the cylinder's base, maybe crossing the base to exit another borehole, and then fixed with a sharp bend somewhere. With a good bit of wire at both ends unseen, we can see a stretch looping around the loose bar near the wheel axle crossing, and spanning to the cylinder's base, where the wire has four bends. This foreshortened view makes the bends appear sharper and closer than they are, but this could also be after they were pulled out from their original state.



The IIT report's figure 47 (top view) may show that end of the wire on the left, with no sharp bend at the end to help secure it, but 2 more mild bends suggested. The loop over the wheel axle is seen more fully, suggesting a compound S curve there, and then a long straight span – as if to run back down the cylinder's length – extending off-frame. The FFM report's figure 14 (bottom view) shows the cylinder after being rolled over, with the S-shaped tweak around the axle plain as day, and the long straight span again extending off-frame.⁹⁹



It remains possible for a length of wire with such bends to innocently get tangled up in this scene, but that would be quite a coincidence. It's even more “conceivable” that this wire was used during the course of some planned-out “human intervention,” to keep the loose bar held in tight during transport. That hardly seems necessary for the few steps from the alleged impact point, but it would be required to get up stairs and through doorways, for example. It's possible this affixed wire had come loose a couple of times before its final failure next to the shower, letting the wheels suddenly spring out and smash into the shower door, explaining that bizarre piece of evidence – and the likely-related bed damage – as proof of manual placement rather than any aidrdrop with a nonsensical “altered trajectory.”



2.6 Cylinder Movements, Location 2

The issue of impact velocity seems fully unrelated to the artillery shell impacts that caused the balcony damage, as explained in section 2.2. Here, we will focus on the cylinder's actual manner of arrival, as best illustrated by the “grid pattern” on its side. This was embraced by OPCW investigators as proof of aerial delivery. However, as the following explains, this conclusion leads them to accidentally highlight a **prime clue for manual placement and thus against aerial delivery**.

A framed mesh of thin, crossing bars, with attached scraps of cloth, was seen next to the crater. This likely covered the balcony as a canopy, and the FFM suspected the falling cylinder impacted it in that sate. Showing the image at right, they explained: “The visual damage on the body of the cylinder indicates that the lateral aspect of the cylinder did not slide on the mesh but it hit perpendicularly,”



somehow creating a crisscross imprint on the side.¹⁰⁰ The later IIT report would cite this “grid pattern corresponding to the metal mesh” as “consistent with the cylinder having hit the mesh at a considerable velocity, which in turn, would be at odds with the cylinder having been manually placed on the rooftop.”¹⁰¹ Note the visible mesh has loose bars sticking out along the edge with regular spacing.

The mesh-pattern connection was first proposed as relevant on May 7, 2018, by researcher Michael Kobs as indicating “some kind of pulling [the cylinder] over the fence.” His image used red arrows to compare the spacing of the scratches with the loose ends of the bars in the mesh (he noted parallel “diagonal scratches” but no “grid”). This was copied the same day by a Bellingcat collaborator as some kind of airdrop clue he never really explained.¹⁰² Then, in a possible coincidence, Bellingcat and Forensic Architecture would help the *New York Times* to model the Douma incident, with the *Times* video report of June 25 presenting this “grid” pattern “seared” into the yellow paint “most importantly” among the clues proving an airdrop.¹⁰³ The report



Michael Kobs
@MichaKobs

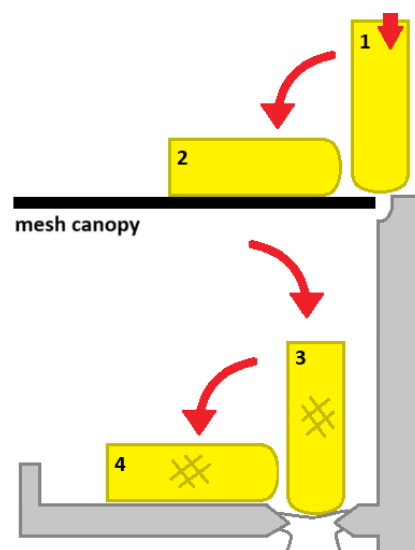
Replying to @MichaKobs @Deus_Abscondis and 12 others

I think the best explanation for the diagonal scratches is not some kind of corset or heli-drop but some kind of pulling it over the fence.

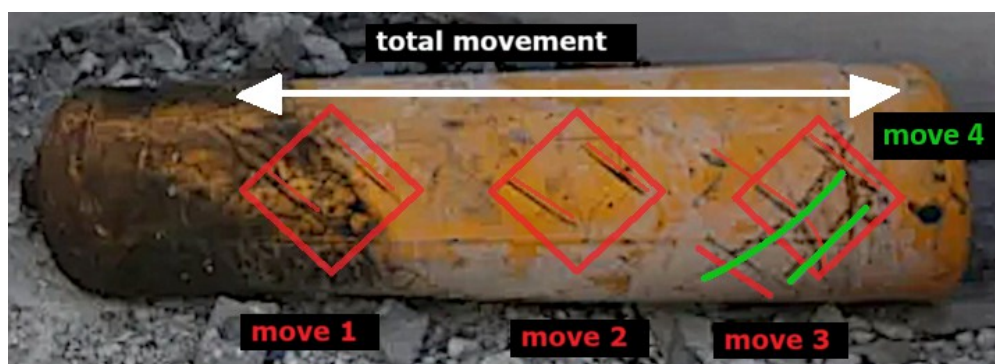


impressed many people and even earned the *Times* a News Emmy award.¹⁰⁴ But when OPCW inspectors viewed what sounds like this video, in the office of Inspector A, they "occasionally burst out in guffaws that brought other spectators in from adjacent offices," as he writes in his book.¹⁰⁵

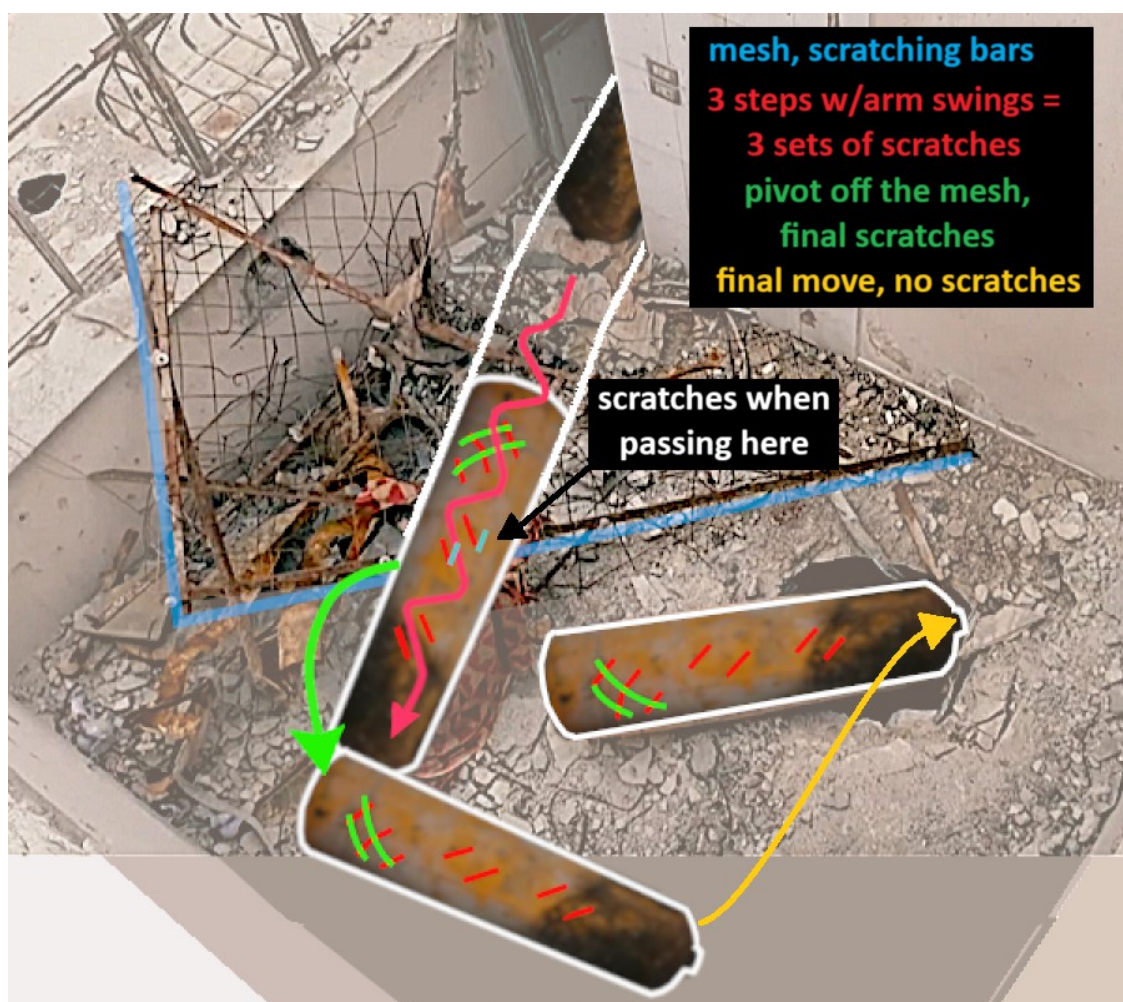
The FFM claims to rely on none of this (they eschew "open sources."¹⁰⁶), and would ostensibly have one of their experts (who might *embrace* open sources) come up with the idea separately, sometime prior to the 2019 report. The IIT and its experts would again propose the notion, following on whatever reflection, in 2023. But all these lofty endorsements suggest a widespread failure of spatial reasoning. Inspector A had heard this theory, and noted in the EST report how it was "inconsistent with the vertical, or near vertical, angle of incidence of the cylinder that was assumed (and would have been required) to have created the crater in the concrete slab." At right is the author's illustration of the point that seems to escape many people; with or without the first impact, implausible moves are required to hit the mesh horizontally and then hit the balcony vertically. This is extremely illogical as a clue for aerial delivery.



In his book, Inspector A writes how he and other FFM members noted a "'Shroud of Turin' effect" in the prevailing reading of these marks.¹⁰⁷ Indeed, note how the "grid" pattern is incomplete, mainly being 3 pairs of lines in a single direction – "crisses" with no "crosses" – spaced so as to *approximate* the scratches of six parallel bars in a sideways move (as Kobs' image had proposed).



The author proposes these are all scratches on the underside (the side later coated with soot from the fire below), **as the cylinder traveled – slowly and in two directions – over the sharp ends of a few bars of that mesh.**¹⁰⁸ The order could be different and could include movements after; a rotation between views was noted.¹⁰⁹ However the best explanation has these marks all made during the cylinder's arrival, as the image below shows, via the patio door.



Two movers would come in heaving the cylinder nose-first at the shown angle, to avoid the propped-up outer edge of the mesh (blue) and the existing crater. There would be three steps with arm swings (wiggling red path) over two scraping bars at the edge of the mesh, with each swing to the right making two scratches (red scores) on the underside. (shown above just before the second set is made). The last step seemingly had the rear end dip lower for longer contact, a third score, and the bending of one bar. The scene is too chaotic to specify yet just which bars these would be, but it seems clear the rear end was then pivoted off the mesh, with the same or nearby tips creating two scratches in a roughly perpendicular direction, but with closer spacing and somewhat curved (green), forming a crude “grid pattern” only there. A final move alongside the mesh (gold) would glide it in place where it would later be seen, with no more scratches added. (note: the red and green scores are flipped here, to reflect an imaginary view of the bottom, as seen from above).

The IIT balked at how the cylinder would have to be brought in “through a narrow door or through a small window opening,” ¹¹⁰ and they couldn't see how this would leave it “scratched” like it was by the intact mesh. ¹¹¹ But it probably came in the door, which seems a fine fit without the harness, and the

scratches seem well explained simply by that and the presence of that mesh, already broken and in position under the scene managers' feet. The IIT said this pattern was “at odds” with staging, but quite the opposite; **this kind of “pulling it over the fence,” as Kobs put it, would best explain the observed damage, serving far better to illustrate the point OPCW inspector A raised about this scene – like the clinic drama – being quite likely staged by some dishonest locals.**

This all seemed especially unlikely to the IIT, given the “heavy shelling” that might complicate the staging, and the lack of external documentation (which could be disrupted by the same shelling, or by the armed men trying to work in secret). They also point out there was another scene that would need to be staged; maybe they could fake one impact, but surely not both of them. But the Assad regime and the local Islamists were unlikely to collaborate on a half-real and half-staged attack, so logic dictates that if one scene was staged – and there's reason to suspect either of them was – then both of them probably were.

In that case, neither cylinder would rupture upon impact to leak their contents, so any gas release would also be managed by hand. This in turn would raise serious questions about the dozens of people who allegedly died at Location 2 in the minutes following this release. The following sections address those questions.

Section 3: Considering Chlorine Release and Toxicity

3.1 Was Chlorine Released? If so, how?

A discussion panel organized by the Courage Foundation in October 2019 hosted OPCW whistleblower Inspector B (then dubbed "Alex") ¹¹² to speak about the Douma investigation. "Alex" raised several points, including with emphasis the trace levels of chlorinated compounds found at the alleged attack sites. He was cited as explaining how some relevant compounds turned up "in a lower dose than in the coffee you drink" ... "in parts per billion (PPB), as low as 1 - 2 ppb." ¹¹³ This was read by attending journalist Jonathan Steele (as it has been read by others) as questioning gas release and thus "rather suggest[ing] there was no chemical gas attack, that a lot of this was propaganda." ¹¹⁴

"Inspector A" would note the issue in his book much the same way his cohort had, comparing to common items like paper napkins (usually chlorine-bleached) and also to coffee (usually brewed through bleached paper filters). But he pointed out that the findings fail to either prove or disprove a release. ¹¹⁵ OPCW e-mails released to Wikileaks reflect genuine concerns about these trace levels, but even these experts couldn't agree what it meant. Concerns were aired that the results could be misconstrued as clear proof for *or* against chlorine release, when they were neither. ¹¹⁶

These same inconclusive findings were taken by some powerful actors, Inspector A writes, "as proof there had been a chlorine attack and that the Syrian regime had been found guilty." ¹¹⁷ However, as he aptly notes, gas would also be released if the cylinder had been manually "carried up the stairs, dropped onto the crater in the terrace, then had the nose valve knocked off." ¹¹⁸ The IIT would spend most time on staging scenarios considering the chemical aspect (using liquid bleach, etc.), concluding "it would have been extremely difficult, if not impossible, to mimic the spread of a gas such as chlorine gas." ¹¹⁹ But it seems quite simple to release it for real, and the IIT gave no reason to think otherwise. In fact, it would be logical to expect this; without it, the scene analysis could debunk the attack claims and nullify the other staging efforts.

Although they remain debated, there are also indicators in the visual record of gas release at both sites. First, the underside of the cylinder at L2 appears strangely white in a video filmed just after 10 PM (about 2.5 hours after the alleged attack). This was mentioned in the IIT report ¹²⁰ – after the FFM reports had ignored the point ¹²¹ – as a likely coating of frost suggesting gas release. This would cause auto-refrigeration of the effectively liquid compressed gas, so that metal in contact becomes freezing cold. The author cannot disagree on that point, and notes how the potentially frosted area has a visible edge (blue curve), suggesting that only around 1/3 of the bottom is frosted. That would mean that a



majority of the content has already expanded to gas, most of that after a rapid initial release as a swiftly-evaporating liquid.

The L2 valve was hidden in shadow for the above view, and it was snapped off by the time anyone saw it clearly, maybe right away as the method of staging a gas release, or later on to hide another method. A fire was deliberately set in the corner of the room beneath the cylinder, coating the walls, ceiling and the exposed underside of the cylinder with heavy black soot. This FFM heard this was done hoping to detoxify the room,¹²² but perhaps it was meant to do the opposite and “toxify” the scene. The valve should have a soft metal fusible plug set in the side that would melt away and release the compressed gas after just a mild fire (to prevent explosions).¹²³ The soot is all there in the video with the possible frost coating.¹²⁴ The obvious soot is *not* “a dark compound” that’s metal-related but forms atop the yellow paint and that proves chlorine release, as argued in the Emmy-winning New York Times video report.¹²⁵ But it *is* hard to see how a yellow cylinder *coated in black soot* could possibly appear so white, except with a layer of frost covering it.¹²⁶

On the other hand, it could be the cylinder actually “had the nose valve knocked off” (as Inspector A put it) as the manner of gas release, maybe after the fire wasn’t hot enough. It seems possible that dislodged atoms of metal could float a short distance in the gas (as discussed below). Samples from the cylinder’s exterior yielded higher levels of zinc than at L4 (10,00 ppm vs. 4,700) even though it was set well above the caustic gas cloud and had far less residual iron from the steel cylinder (11 ppm vs. 390 ppm at L4).¹²⁷ Gas valves are usually made of brass,¹²⁸ an alloy containing zinc. Damaged brass with rough edges would lose zinc easily, so the valve being smashed off could explain why almost 1,000x more zinc than iron turned up (vs. just 12x more zinc at L4).

Either way, if there was no impact to initiate it, this release would be controlled by the scene managers who had manually placed the cylinder over the balcony crater, as described in section 2.6.

While it seems that the L2 cylinder emptied in just a few hours, it took nearly a month to empty less than half of the contents at Location 4. When they visited 18 days after the alleged attack, the OPCW’s Fact-Finding Mission noted signs of a prior chlorine release, but **“there did not appear to be any leakage” at the time of the visit, and “no chlorine gas was detected”** by their sensitive tools.¹²⁹ They neglect to mention how full the cylinder appeared to be, but on a later visit he headed on May 1, whistle blower “Inspector A” saw a cylinder that was still “noticeably heavy, and appeared to be mostly full of liquid ... sloshing around inside,” as he writes in his 2025 book.¹³⁰

As discussed below in section 3.3, much higher levels of chlorinated compounds were found at L4 than at L2 even though it was four days later and far less chlorine was released. Logically, it was released much more recently. Inspector A notes that “we smelled a faint trace of chlorine” during the May 1 visit, perhaps from a leak in the cylinder or valve, although none has been noted and the valve

appeared “intact” to him.¹³¹ The IIT would contend that the valve was “*largely* intact” (emphasis added) – suggesting there was limited damage no one has seen – and would find this “consistent with a slow and steady release.”¹³² But this “steady release” seemed to be on pause when the FFM visited, at least. In fact, **the evidence is more consistent with an *intermittent* and seemingly controlled release.** In a video from April 9, open-source researchers Forensic Architecture noted an audible hiss taken to show gas release while, as Kobs noted, it was silent at other times.¹³³ It's not clear to the author if there even should be a hiss, and that video might relay a simple background noise. But still, as explained below, it seems that scene managers were somehow deliberately releasing gas in controlled waves, saving the rest in between uses.

3.2 Location 4 Color Mysteries and Release Timeline

A strange color change of the bedspread at Location 4 may provide clues about the gas release there, although this remains a point of contention between researchers (the author and the oft-cited Michael Kobs), sparking some external discussion with no immediate result.¹³⁴ So the following is disputed, and also rather speculative, but it provides a logical accounting for all evidence. Some readers might skip these details and see the conclusion on page 31 for the potential significance.

Sequential images over 17 days (video times via Kobs¹³⁵) are read by the author as showing:

- 1) April 8, ~10 am: the white bedspread has its lower points and debris coated in dense gas and/or somehow stained that color, as a red-brown trail and spots appear on the white pillow.
- 2) April 8, ~4 pm: around 6 hours later, the staining is now definite and coats the entire bed, minus perhaps the highest points, but is somehow *a mild reddish brown color*.
- 3) April 25, as the FFM visited, there is new yellow-green staining atop the brown and even on the pillow, as from another release (the bed has also collapsed by then).



To pile as deeply as those images suggest probably requires a lot of gas released quickly, and for less than half the contents to be used in these weeks, little to no gas escaped in between these episodes. This kind of emptying would be slow on balance, but not at all “steady.” And the most logical single explanation for all of the colors we see would be: the staining happens first in a chlorine color, and this shifts to brown over the span of a few hours. Green appearing twice would then mean there were at least two distinct episodes of release.

(side notes: The cylinder's top was first coated with a white dust as if in a recent crash, or a staging of one. This is not frost indicating gas release, as argued by the team behind the Emmy-winning NYT report.¹³⁶ The relevant bottom and sides are free of frost, suggesting that little or no gas is escaping. Kobs notes the dust on the sides shows no sign of runoff, so little if any frost or even dew had ever formed prior to those images, likely because each release was so brief.¹³⁷)

A viscous red-brown residue at L4 has also appeared with previous alleged chlorine attacks, like the 2017 incident in Al-Lataminah cited in section 2.2 (enhanced photo at right). It seems the spilled majority of liquid pooled in the dark brown spot on the floor (and likely off-frame) before it vaporized. But a thinner brown residue also coats the painted exterior of the cylinder (mostly *above* the rupture) and, it seems, across the floor, as if it were floated there in the gas cloud. This image also includes



an upholstered couch that sports green and gold by design, along with red-brown patches that could also be part of the design or added by the gas. (In a sudden and total release in a small space, a deep cloud would form, most likely enveloping the cylinder and couch entirely.)

As to why chlorine would leave a brown residue, one source explains "chlorine gas can also react with iron to produce iron (II) chloride and iron (III) chloride." The former isn't described, but the latter "is characterized by its red-brown color and its ability to dissolve in water, forming a yellow-orange solution due to the presence of iron (III) ions."¹³⁸ Both colors are widely evident on the L4 bed. In the FFM photo at right (natural color), the bedding materials appear yellow-orange with brown crust.¹³⁹ Iron (III) chloride (or FeCl_3) may be what we see, presumably from iron in the steel cylinder and its steel harness reacting with the abundant chlorine, seemingly worsened with water repeatedly splashed over the scene (for no obvious reason).



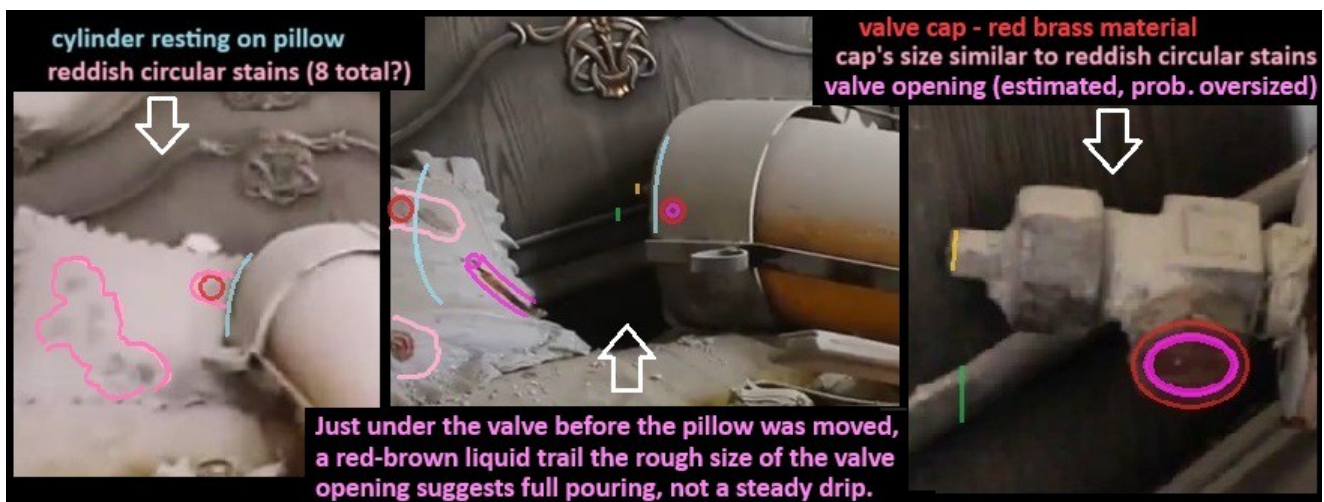
Note also how the lower, gray part of the headboard appears to be stained a yellow-green hue. Visually, this could be floating chlorine but, again, the FFM said no gas was detected in the room at this time, and the color concentrates along cracks like staining might. It seems that this wood, like the

bedding, somehow absorbs the color of chlorine besides the colors of iron chlorides. It may be that FeCl_3 initially has a yellow-green color due to its three chlorine atoms, and then shifts brown over time. That's only possible as far as the author knows, but it would explain all of the staining we see.

In the author's non-expert reasoning, it seems possible for FeCl_3 to coat the bed and beyond just as seen. While chlorine gas is heavier than air, in this case it would initially rise in a steam-like cloud as it expanded from the compressed liquid escaping the cylinder. This would provide some buoyancy that could float atoms and molecules of other materials as well. With a molecular weight of 162.2 g/mol, FeCl_3 is probably too heavy to float far in the much lighter chlorine gas (atomic weight 35.45 g/mol.). But iron itself, at 55.845 g/mol, could perhaps stay in suspension for some time before tumbling onto the cylinder, the bed, or nearby, and it might react with chlorine along the way.

Traces of iron were found by the FFM in dry wipes from the exterior of both cylinders, suggesting it was deposited by the gas. At L2, a possibly meaningless 11 ppm was found. But at L4, with the steel cylinder and harness sitting in the gas, they found 390 ppm (nearly 40x as much).¹⁴⁰

The “smoking gun” in this dispute might be the trail of some liquid of the same red-brown color, on a corner of the white pillow that had been directly beneath the valve. This brown trail can be seen in most views here, once the pillow was moved aside. **While a light drip would have each drop evaporate quickly, staining just one spot, a liquid flow as suggested here requires a release much faster than evaporation, most likely from an open and pouring valve. And the color is about the same as on the bedspread, albeit more concentrated.**



Faint circles of a similar color, but with a more reddish hue that's almost blood red in one case, appear across the pillow. There seem to be eight of these, appearing added (not in the pillow design, although concentric white circles *within* these spots seem to be from the pillow's embroidery). These might be where someone wiped the valve cap during this management, several times for no obvious reason. Their diameter appears a bit bigger than the cap's face, but it could have been pressed into

the fabric for contact with the sides as well. ¹⁴¹

The reddish hue may relate to the brass the valve is made from. An alloy of copper and zinc, brass exposed to chlorine produces different compounds: zinc chloride (ZnCl_2) and copper chloride (CuCl_2), both of which can also be brownish or other colors, depending on the circumstances. In a photographed test, brass corroded in chlorine gas gives off a rising white cloud of zinc and is left smooth but more reddish, like the metal we see here. ¹⁴² If this is what we see – and that only makes sense – zinc would be heavy in the escaping liquid (the pillow trail), and some corrosion products might also wipe off on fabric (the pillow spots). Some ZnCl_2 would likely rise in the gas that coated everything else. In fact, it's likely that all brown residue at L4 is a mix of chlorides of iron, zinc and perhaps copper, along with other compounds, water, dust, and a few other things.

The valve's opening knob on top appears unchanged between the views below, likely in the closed position but perhaps damaged inside, allowing some gas to escape (there is a mild deformation of the cylinder's front end). Liquid spray is suggested by wet brown spatter marks. There could be a leak in the valve here or, if the cap alone is holding in the gas, this spray may be from a gap in that seal, or from **the cap recently being replaced against the pressurized flow allowed by its brief removal.**



Aside from the cap, the valve is initially white, perhaps coated in dust adhering to the sticky coating, or perhaps coated in frost as Kobs proposes. ¹⁴³ The cap looks different probably due to a recent removal, where the frost melted or where the dust and goo was wiped off. After the dust is all washed off, or the frost melts (right), a deep brown crust has accumulated on the cylinder thread. On page 28, we can see this crust was cleaned off prior to the FFM visit when it was swabbed for analysis. A dry wipe from the thread revealed 390 ppm of iron and 4,700 ppm of zinc. ¹⁴⁴

The brown goo was ubiquitous. “The FFM team observed a viscous liquid throughout the room, which was not apparent in videos.” ¹⁴⁵ They did not describe its color, but it's reddish-brown. Just one photo in the IIT report (below, left) shows this in the run-down of water splashed on the wall, in a thick puddle on the bedside cabinet, and in a tacky residue on the broken shower door (glass and frame). ¹⁴⁶ The FFM further noted how “The same liquid was observed also before the entrance to the apartment

and on disposable gloves present at the location.”¹⁴⁷ Some gloves seen in a Russian news video (below right, via Kobs) are most likely either the same ones, or others used for the same task, and it seems the task involved a reddish-brown viscous fluid. The residue on the gloves was tested by the FFM and found to include 17,000 ppm of combined chlorides, and 1,500 ppm of zinc.¹⁴⁸ More zinc might be expected if these were used to manage the valve, but either way, it seems the valve was managed.



Although nothing clearly rules it out and the effect on fabrics and wood seems little-studied, chlorine staining as the author suggests is not generally known to happen. The couch above is the only possible example, aside from Douma, that the author has noticed. Michael Kobs for one believes chlorine causes no such discoloration and has long argued, as in his recent report, that the bedspread (“duvet”) was always brown; it only looked white initially due to a uniform frost from gas evaporation, and the chlorine color atop that was from floating gas.¹⁴⁹ That case has some optical logic to it and it seems possible to the author, but it remains disputed, and the greenish coloration added later on seems totally unexplained in Kobs' scenario.

The OPCW's investigations don't seem to mention the color issue at all.¹⁵⁰ It could be that even they failed to clarify if this was a genuine effect of chlorine, or that they did so but **found the suggested timeline of release was inconvenient – as it is (see below) – and so they ignored the issue.**

In conclusion: To the extent the described process or similar is at play, it may illustrate the nature and timing of gas release at Location 4. It would take less than six hours for a full coating of the bed, the associated staining initially in yellow-green, and the color shift to brown. As such, the initial white at least 14 hours after the alleged attack means **there was no release following the alleged crash. As if for the camera alone, gas began flowing only in the morning.** It piled deeply and then apparently stopped. The valve was possibly hissing on April 9 in a new release. The April 25 view suggests another chlorine release probably just a few hours before the FFM's visit, so it was just starting to brown as they saw it. Aggressive ventilation after the brief release could explain how the FFM detected no gas,

even with sensitive tools. The olfactory smell on May 1, as noted by Inspector A, suggests another release at that time with less care to ventilation. As such, **the evidence may indicate at least four distinct episodes of controlled gas release by the scene managers.**

3.3 OPCW Exaggeration of Chlorine Clues

As noted above, there was uncertainty among FFM investigators on the trace levels of chlorinated compounds and how clearly they indicated a gas release. Perhaps it was a desire to resolve this uncertainty that drove the FFM and IIT investigations to exaggerate the signs for release and especially for a high concentration that might explain the deaths at Location 2.

Perhaps just to avoid confusion, the low returns were omitted from the public interim report, which listed some discovered compounds but gave no concentrations. The final report in 2019 would provide some levels – likely high ones – but not others. At L2, it says 11,000 ppm combined chlorides were found in a wipe from the cylinder thread, and 1,100 ppm from "kitchen wall above the oven (level 2)." At L4, a cylinder wipe yielded 15,000 ppm of chlorides, and "chips of paint from wall behind bed" turned up 2,600 ppm.¹⁵¹

Note that the continuous or repeated release at L4 – perhaps including a release just hours before the FFM's visit – might explain the higher levels of chlorides that turned up there (roughly twice as much as at L2). This could mean that chlorinated compounds are rather volatile, so that low returns two weeks after a onetime release at L2 might be normal.

Several samples the FFM noted also turned up "CLOC (trace, LC-HRMS)." CLOC means chlorinated organic compounds, and these are always given as "trace" for both locations. But the significance of that is unclear, while the reported overall chloride levels seem rather high, and the FFM reports higher levels in samples from on or near the cylinders, as opposed to lower levels in distant samples.¹⁵² This all suggests, as does the evidence discussed above, that there was a genuine gas release. The main issues would then be how much escaped how quickly, and what relevance it can have to the observed fatalities.

The IIT report uses the word "concentration" 8 times, almost always referring to chlorine and preceded with "high" or "very high." It seems to be an obsession of theirs, likely passed down from management. The FFM and IIT reports would name various compounds they argue would only occur upon exposure to chlorine gas, notably including tetrachlorophenol (TeCP). The IIT explained the production of TeCP "requires the presence of a high concentration of chlorine gas."¹⁵³ The FFM final report had listed this found on two samples from the bed at L4 and for some reason one at the field hospital, far from any known chlorine release. But it seems that no FFM samples from L2 turned up TeCP, and there were fatalities there to explain.¹⁵⁴

The IIT report would improve on this, citing "an additional sample," supposedly recovered from "the room under the crater and the cylinder" at L2 by "a third party" the IIT trusted but didn't name – most likely the White Helmets. The sample was reportedly collected April 8, handed over later, and analyzed on July 24,¹⁵⁵ but it went unmentioned in 2019's FFM report. The IIT would proclaim TeCP found "in the concrete sample collected at Location 2 specifically" – and purportedly – "attests to the presence of chlorine gas in very high concentrations."¹⁵⁶

It may be plausible for TeCP to turn up 3-4 months later in a sealed sample while it had vaporized from the open site in two weeks. But as *The Gray Zone's* Aaron Maté noted, they cannot be sure of the sample's legitimacy, since it was accepted in violation of the OPCW's chain-of-custody rules.¹⁵⁷ This violation has been standard practice in Syria since insurgent fighters attacked and detained OPCW investigators in 2014.¹⁵⁸ Since that, the organization has let others, primarily the White Helmets, collect their evidence in opposition-held parts of Syria. Douma was the first time since 2013 OPCW personnel were able to collect evidence directly, and *still* they wound up outsourcing some of that work, yielding this transformational result. This is curious.

But as the next section explains, all these findings for high concentration of chlorine gas wind up seemingly irrelevant to the fatalities at Location 2.

3.4 Chlorine Toxicity: Erased Expertise, Embraced Errors

Two months after the alleged attack in Douma, on June 6 2018, four members of the FFM made a visit to an unnamed member state (said by the well-informed Peter Hitchens to be Germany¹⁵⁹), presumably for a good reason. They consulted there with three toxicologists/clinical pharmacologists and one bioanalytical and toxicological chemist, all experts in chemical weapons, to discuss the deaths, symptoms, and the possibility of body exhumation in Douma.

A brief summary or "minutes" of this meeting would be released via Wikileaks.¹⁶⁰ Based on the known science of chlorine exposure, the experts made the following observations:

- "The experts were conclusive in their statements that **there was no correlation between symptoms and chlorine exposure.**"
- "They stated that the onset of excessive frothing, as a result of pulmonary edema ... would not occur in the short time period" of "approximately 3-4 hours" between the reported attack and the first images (it was actually about 2.5 hours).
- "The experts were also of the opinion that it was highly unlikely that victims would have gathered in piles at the centre of the respective apartments at such a short distance from an escape" to fresh air, if they had simply been exposed to chlorine.¹⁶¹

According to the meeting minutes, the FFM team leader – perhaps realizing chlorine was not the best

answer – "informed the experts that a second canister, not witnessed by the FFM team, had landed in front of the building where the alleged exposure took place, which could have contained some other highly toxic chemical that might explain the symptoms observed and their rapid onset." ¹⁶² The experts had no good idea what that might have been, and according to the final report, this mythical second device (which no one was able to document) was said to release chlorine gas, not anything else, in front of a house "50 to 60 meters from the basement at Location 2," not "in front" of it. ¹⁶³

There isn't much detail in the leaked document, but **the "key take-away message" was agreed as "the symptoms observed were inconsistent with exposure to chlorine, and no other obvious candidate chemical causing the symptoms could be identified."**

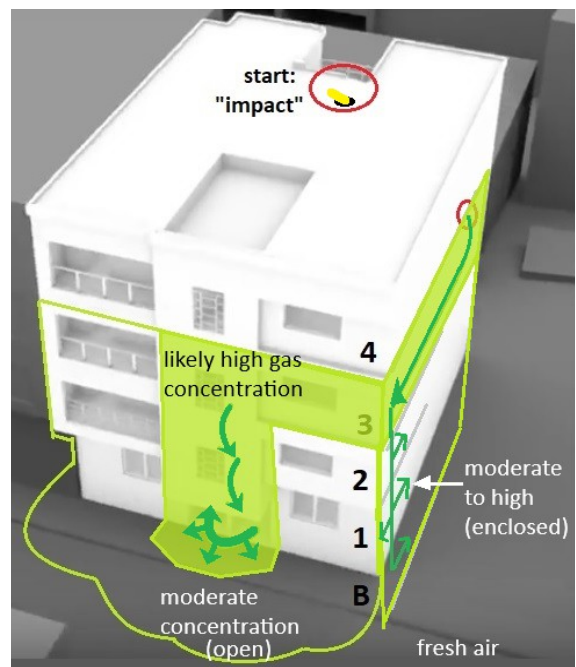
The author's research on the subject agrees; chlorine is a simple irritant that reacts with water to form molecular amounts of hydrochloric and hypochlorous acids. ¹⁶⁴ Its main effect is that it burns. Every other effect stems from this and takes time to develop; acid damage in the airways triggers mucous production, perhaps as protection from the acid, although it takes a while to begin. The fluid in turn complicates breathing (pulmonary edema), a delayed effect that can eventually lead to unconsciousness or death. Prolonged breathing through the fluid will produce a foam that clogs the airways and, in extreme cases, come pouring out the nose and mouth.

Critics have questioned the toxicologists claiming at least 3-4 hours would be needed for the advanced pulmonary edema and profuse foam seen in Douma. In fact, the fluid first has to be produced, then worked up with air bubbles as the victim struggles to breathe through it. This normally takes 2-4 hours, ¹⁶⁵ but some studies find this can happen within 90 minutes or even within "30 to 60 minutes of severe exposure," as postulated for Douma. ¹⁶⁶ So, as established, edema foam should take a bare minimum of 30 minutes to form. Even if the experts overstated the delay, the lodged accounts of instant frothing (noted in the interim report but ignored in the final one) remain extremely unlikely.

Contrary to reports out of Syria since 2014, unconsciousness due to chlorine exposure is rare, and not an instant effect. It would occur from low oxygen supply to the brain, following on pulmonary edema, and so it should not happen any quicker than the foam would. ¹⁶⁷ Extreme exposure can halt breathing right away, killing within minutes, but with no time to work up any foam.

There is also no instant immobility as with a nerve agent; a study of several incidents illustrates how people remain alert and try to flee the gas. A few will die from acute or prolonged exposure, sometimes at immediate or suffocation speed, but usually hours or days later in the hospital. ¹⁶⁸ And yet, as the FFM final report noted, when the Douma victims collapsed, they did not appear to be attempting escape or even covering their faces, "indicating a very rapid or instant onset." ¹⁶⁹ This is a mystery that was never resolved.

The image at right shows likely gas-filled areas at Location 2.¹⁷⁰ Heavier-than-air chlorine would flow down the central stairway about as shown (green arrows), flowing by building design out in the street before descending to the basement (see video frame below of the entrance as seen from the street).¹⁷¹ The victims were reportedly sheltering in the basement until they escaped the gas in the opposite direction, towards its source. They had to flee into the street, where fresh air was available (the immediate area would be contaminated, but open and subject to any breeze), before they could run *back* inside. Bodies were found just outside, in the stairwell, and a little ways into floors 1 and 2, all with little to no sign of movement towards the exit.



It's not clear if this detail was explained to the experts, but it sharpens the point they raised; **the victims probably would and *allegedly did* escape to the outside, before rejecting that to run back into the dense gas to die, in piles, near *the exit they had just used in reverse*.** Locals had been instructed to seek higher floors in a gas attack, but it makes little sense that they would be able to get well inside, despite the greater and fatal concentration, *before* suffering that “very rapid or instant onset” and being totally unable to escape again. It's even stranger with the claims that the victims had stopped inside to wash their faces and hair before collapsing, as discussed in section 4. Allegedly, nothing prevented them from doing *that*.



In the FFM's draft interim report, “a number of toxicologists” were cited, months before the admitted experts were contacted. As if relating the above opinions, this report questioned accounts of victims fleeing back inside, noting “it should be expected that on encountering the irritant gas, victims would instinctively have retreated and exited the building” and that no instant immobility would prevent this: “people will escape however possible,” the report stated.¹⁷² The report also noted “the rapid, and in some reported cases, immediate onset of frothing described by victims” was inconsistent with chlorine, while in the case of high concentrations and swift effects, “asphyxiation would have been the likely cause of death before pulmonary edema and frothing could develop.”¹⁷³

Leaked e-mails from August considered whether to accept or disregard this sought-out expert input.

One team member complained "all we "gave" the experts were open-source videos and photos – so their insight was (and had to remain) limited." Inspector B countered "I think it's important to have a record of their comments," noting they had also given the experts case details for a more useful opinion.¹⁷⁴ Inspector B apparently lost that argument. As with the engineering study, all public reports would pretend this meeting never happened, so that only unauthorized leaks would reveal its existence.

The final report's annex 3 says it was only in September and October that the FFM finally "consulted with four toxicologists and one toxicologist and medical doctor."¹⁷⁵ The exact input of these replacement experts is unclear. The FFM report uses phrases like "a wide scope of chemicals" and "a rapidly incapacitating or a highly toxic substance" almost interchangeably, giving the impression that if it's irritant it's toxic, and if it's toxic it can immobilize or kill in an instant. But the report had to conclude "it is currently not possible to precisely link the cause of the signs and symptoms to a specific chemical."¹⁷⁶

The later IIT report was bolder, stating the toxicologist they consulted agreed the reported symptoms "were consistent with the rapid release of a high dosage of chlorine gas."¹⁷⁷ A high concentration can trigger a faster onset of the *relevant* symptoms and, as noted above, high concentration seems to be a point of obsession for the IIT, which improperly accepted an off-chain sample used to prove "very high" chlorine levels at L2.

Some mental gymnastics were also called on. The IIT report cited "models" indicating that "within three minutes" the gas concentration at L2 "would lead to occupant death,"¹⁷⁸ without specifying their methods, the resulting gas concentration, the assumed duration of exposure or expected time to death. It was no modeling but "information" that suggested the air had "at least 1,000 ppm" of chlorine in the spots where people died.¹⁷⁹ This is cited as a fact supporting their case, but it's just their case stated another way. Their cited source only says "immediate death follows inhalation of a concentration of 1,000 ppm."¹⁸⁰ It seems like the IIT simply assumes the deaths occurred there, were caused by chlorine, and were immediate, and so they reasoned that must be "at least" how much chlorine there was. That is a type of "information."

Again, an "immediate" death here means suffocation speed, so this would leave little time and perhaps none of the breathing required to develop that profuse foam, even if the edema fluids had appeared instantly – and they usually don't.

Finally, while the FFM's draft interim report would point to real chlorine accidents to show how "people will escape however possible,"¹⁸¹ pressure was soon brought to revise that thinking. As related in this report's conclusion, some unexplained US officials came to the OPCW on July 4 to advise the FFM of their own findings for a chlorine attack. Inspector A's book describes how these

visitors passed on a media report from a 2005 chlorine spill in South Carolina, where 9 people died. This article included a first responder describing “people running around foaming at the mouth” highlighted as something relevant to the Douma probe.¹⁸² But it's not clear how long this foam took to form, and the people displaying it were “running around,” not collapsing instantly. The OPCW's public reports would simply avoid reference to this or any past chlorine incident, apparently realizing that **the known record and the known science is no help in making their case.**

In short, no concentration of chlorine can truly account for the accepted narrative where 43 people dropped dead with foam cones before they could even cover their faces. As such, the FFM and IIT mission to prove high chlorine levels was always doomed to actual irrelevance on this point. Something else, yet undiscovered, must be at play.

3.5 Chlorine Toxicity: Ocular Oddities

A white clouding of some victims' eyes is couched in OPCW reports as a big clue for chlorine exposure. The FFM final report states "The corneal opacity seen in many of the victims is similar to ocular injuries seen with acid or alkali burns but also resembles post-mortem changes."¹⁸³ The IIT would ignore the latter option and would leadingly state that this opacity is “typically caused by corneal burns as a result of exposure to a high concentration of chlorine gas.”¹⁸⁴

There is type of clouding that occurs in some cases of acid exposure, and perhaps this quickly.¹⁸⁵ But red inflammation is a more standard symptom of acid injuries, mild or severe. Eye redness is included on some lists of symptoms,¹⁸⁶ but is perhaps too general to mention in others.¹⁸⁷ Degrees of red inflammation and neovascularization are obvious in all photos of acid injury except for the most severely clouded, where it may be hidden.¹⁸⁸ And yet, **red eyes are just sporadically reported or seen in the abnormal chlorine attacks reported in Syria since 2014, and no redness is observed in the eyes of any victims at Location 2 in Douma.**¹⁸⁹

As the FFM noted, this clouding could also be an unrelated postmortem change. The eyes in fact usually cloud over exactly like this in the hours following a death *by any cause*.¹⁹⁰ Absent other indicators, opaque eyes prove nothing but death. Adding the lack of redness actually suggests that *this death did not involve any acid injury to the eyes*, as one would expect from high-level, swiftly-fatal chlorine exposure.

In fact, this plus the clues discussed in the next section indicate that **the real question here is not the agent used but the circumstances; somehow, it seems the victims had their airways - but not their eyes - exposed to a caustic substance that, apparently, was not chlorine. And most crucially, this exposure was unnaturally prolonged – apparently by bondage – so as to be fatal.**

Section 4: Considering How and Why the Victims Were Killed

4.1 A Propaganda Exercise?

Warning: Graphic Images

As explained in the last section, a fatal exposure to a simple irritant like chlorine almost requires the victim be trapped with the gas for some time. But in the Douma attack narrative, open air was close at hand and people were free to escape. This is why the toxicologists found it strange how the victims had allegedly "gathered in piles" and died rather than fleeing the site. In fact, the "chief expert summed up his conclusions," the meeting minutes relate, "by offering two possibilities that included on the one hand a real chemical attack and on the other, **the possibility of the event being a propaganda exercise**. He elaborated on the possibilities," but the elaborations are not included in this summary.¹⁹¹

In follow-up e-mails from August, one FFM team member fretted how the experts had suggested "real chemical attack or staged" were both possible, when for some reason "their insight was (and had to remain) limited." That unsolicited theorizing was, in his opinion, "fueled by" how **the deaths "do not match chlorine rather than corpses arranged for propaganda purposes."**¹⁹² That chilling realization just might spur someone to speak out of line.

So like the clinic scene, the cylinder placement at L2 and L4 (and thus any gas release at either site), the experts say *the bodies of men, women and children may have been "staged" to flesh out this chemical attack allegation.*

Consider how the victim dubbed G9, a toddler, was picked up from the back room by a White Helmets "rescuer," shown off in a published photo next to the shower a step away, then set down on the body pile at the "rescuer's" feet. That's a clear case of "corpses arranged for propaganda purposes" that could even be called (as it was by the author) a "microphone drop." But it doesn't prove much.



Other bodies were re-arranged in a similar way, most or all of them strangely had their faces and hair washed (as discussed below), and they even had some jewelry go missing.¹⁹³ There are many visual clues to suggest the victims didn't even die at Location 2, and that their bodies were placed there after they were killed somewhere else. The rooms where the victims were found unnaturally piled sometimes appear forced open with doors even taken off their hinges.¹⁹⁴ Most of the victims are in bare or stocking feet with dust-free soles in this rather dusty house (at right: composite view of a woman's dust-free socks next to a removed door, its bottom hinge and remaining screws).¹⁹⁵ It's as if someone broke into these apartments just before the victims levitated themselves into the house ... or before their bodies were carried in just like the gas cylinders might have been.



The front door scene may be instructive. With three bodies laid orderly alongside the curb, one of them on a stretcher, this could be either an interrupted body recovery or an interrupted body planting. Perhaps rescuers just worked around the woman's body after she died right there, or maybe she was being carried out feet-first, or carried in head-first (and the latter makes more sense), when that work was halted for some reason.¹⁹⁶



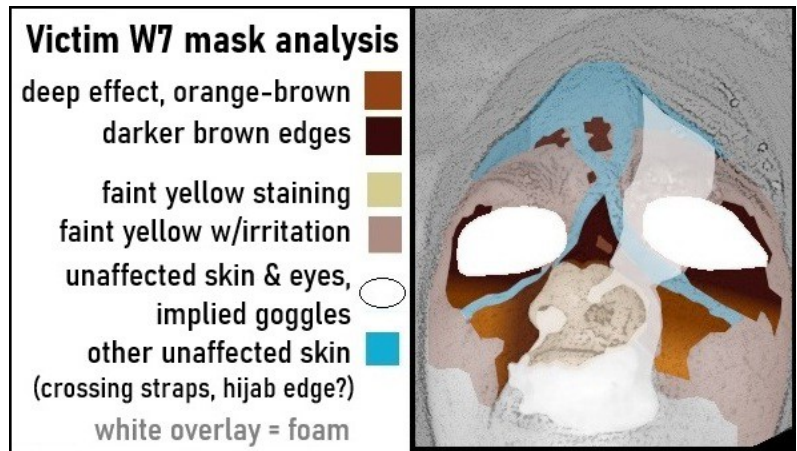
The OPCW's IIT report would dismiss "the alternative scenario in which the fatalities would have been killed elsewhere and subsequently moved to Location 2 in an attempt to "stage" an attack," but their given reasoning is inadequate. They note signs that the victims died around the time of the alleged chemical attack, that there is no sign of them being shot, stabbed or bludgeoned, and that the IIT had not seen any videos of bodies being planted nor, with their imaginations engaged however, did they see any visual evidence for it.¹⁹⁷

Considering the possible visual evidence mentioned above and more that exists, agreeing the victims seem to have been killed with chemicals, and noting that one boy can be timed by developing "tache noir" of the eyes to a death around 7-8PM (roughly the "correct" time),¹⁹⁸ the following analysis accounts for all of those issues as well as several mysteries the OPCW's probes left unsolved. Collectively, these clues point away from chlorine and to different and horrifying circumstances engineered on cue to match with and bolster the reports of a regime chemical attack.

4.2 The Mask of Death

The Douma victims display a mysterious skin effect including a yellow-to-brown discoloration, primarily in a pattern across the upper face resembling a domino mask. This starts around the nose and mouth, deepening at the upper cheeks and the bridge of the nose, and wrapping around the eyes while somehow avoiding them, with the clear areas uncannily taking the shape of swimming goggles. This is a new mystery the author had never seen before, and clumsily dubbed “Douma's mask of death.”¹⁹⁹ Some of the photographs used there merit inclusion in this report, but most of them are too graphic to show up front, so they're set aside in a following section (p. 49). A reference page with victim numbers, site map, listed names and more might assist in following this material.²⁰⁰

The most vivid example of the mask pattern is on a woman dubbed W7. Her discoloration ranges from a light orange-brown to dark reddish brown, partly covered in foam. She has unusual clear strips across the cheeks besides the goggle-shaped areas, suggesting some kind of straps protecting the skin here. These straps seem to have run over her hijab (headscarf), securing it on a line marking the upper edge of the effect. The visible parts of the pattern are re-painted with analysis at right (see Image A on p. 49 for the distressing original photo).



This discoloration is no simple stain, it seems, but part of a complex process inside the skin. The color is usually fainter and less brown than with W7 – usually a pale yellow or orange color with brown only on the edges – and frequently accompanied by or replaced with a red irritation in the same area or along its edges. The effect continues after death and visibly increases over the span of hours. In some cases, the skin seems to compress and harden. Some version of this effect appears on the faces of 25 out of 38 seen victims (23 of the 35 seen at L2, and 2 of 3 others seen at the Point 1 morgue), and likely applies less visibly to the rest.²⁰¹

This is a highly relevant mystery that OPCW investigations failed to resolve. The FFM final report made brief note of a "periorbital discoloration." Technically, it's the periorbital area immediately around the eyes that seems protected, while there is no clear name for the discolored area surrounding that, so the term works. They found, correctly enough, that this discoloration "is not associated with any specific known toxic exposure."²⁰² It's not clear what they meant here. The actual periorbital dark rings they may have taken this for has many causes as vague as tiredness, but as far as the author can

find, this mask pattern has **no normal cause**. The FFM report proposed that it could be a simple postmortem change, but there was none that they, or the author, could identify. To find out "would require additional steps," they said.²⁰³ These steps were probably never taken before the IIT would twice lists symptoms including "discoloration of the skin" – now with no location specified – as consistent with chlorine exposure.²⁰⁴ But they cited no sources, and as far as the author knows, no one has produced information about chlorine actually discoloring the skin in this color and in this strangely-shaped area.

Perhaps someone among the "activists manipulating the scene" (as Riam Dalati called them), noticed this skin effect as a problem that was getting worse. It seems someone used water and rags to wash the victims' faces and some of their hair and perhaps applied some white alkaline powder. They did this at the last minute before the first images were allowed, so that some skin and most hair remained visibly wet at filming, 2.5 hours after the alleged attack.²⁰⁵ Image B on page 49 shows a pile of bodies with wet hair, including W7, laid on a rug that seems tugged up to the shower, as if for ease of washing. A clear workspace is suggested with muddy boot prints surrounded by dirty wet rags, a pail of dingy water, and a discarded plastic respirator. Someone probably used that while working here despite the lingering chlorine gas. They must have had a good reason to go this hassle.

Alleged witnesses tried to explain away this wetness by claiming the victims had washed their own faces and hair, somehow thinking it would save them, before collapsing next to sinks, showers and washbasins.²⁰⁶ That in itself makes little sense, and no one can explain why the victims dried out so slowly afterwards. The FFM noted the wet hair but ignored those claims, and proposed instead "profound diaphoresis" or cold sweats "shortly before death," which had no clear cause (it's not a chlorine symptom), which failed to cause damp armpits or the like, and which was then inexplicably slow to dry. The report admits the FFM found this all "difficult to assess."²⁰⁷ It's easy enough to understand if one is willing to consider the obvious; **someone probably washed the victims' faces and hair for some reason. That strange mask pattern stands out a sufficiently strange cause for this strange activity.**

4.3 The Color and the Effect: Nitric Acid?

There is at least one "specific known toxic exposure" – to nitric acid ("NA") – that could explain the skin effect perfectly while addressing the rest just as well as chlorine would.²⁰⁸ Much like with chlorine, "inhalation of high concentrations [of NA] can lead to severe respiratory irritation and delayed effects, including pulmonary edema, which may be fatal."²⁰⁹ "When in contact with the eyes it is possible that severe burns and permanent damage result."²¹⁰

When it comes in contact with "aromatic amino acids" in body tissues like skin, nitric acid causes a unique "xanthoprotein" or "xanthoproteic" reaction ("XP reaction"). The following effects of this

match all the observed details seen on those faces in Douma:

- * "specific yellow to brown-stained wounds" ²¹¹

- * "a bright yellow to brown staining with surrounding red and oedematous swelling" ²¹²

- * As explained below, there is a progression of the effect over time, with the color shifting from yellow to brown

- * hardening of the skin in the affected area ²¹³

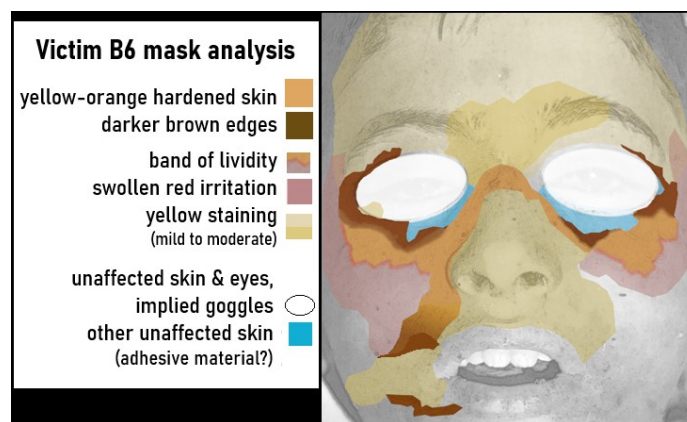
The XP reaction is most commonly seen in humans with accidental exposure to liquid NA, which has various industrial uses. One article with images relates a victim splashed in the face in a deliberate assault (see Image C, panel 1 on p.50). Golden yellow stains are seen where the liquid ran down his cheek, with mild redness along the edges and worse on his neck, and pale brown staining of the scalp and forehead. ²¹⁴ Another article relates several cases of accidental exposure to liquid NA with photos showing "Ila-b chemical burn on day 1 with relatively pale staining" vs. "intensified yellow-brown staining" seen on day 2. A shoulder is shown with small liquid splashes shaped by clothing seams, all of it darkening to orange-brown in the second image (Image C, panel 2). ²¹⁵ This is from brief exposure with early treatment, slowing the effect. Another visual case of the XP reaction is more advanced, yellow NA burns on a man's foot have turned bright orange 24 hours later, with greenish areas turning dark brown. Both areas seem to show more underlying skin and thus more redness than usual. After delayed treatment, his burns were assessed between stage II and stage III. (Image C, panel 3) ²¹⁶

As noted in section 3, chlorine in the presence of iron can oxidize to brown, but it is not known to cause this sort of skin discoloration along with its burning. This is because **chlorine is not a source of nitric acid**. It forms hydrochloric and hypochlorous acids on contact with water, and these acids are not known to have such an effect. ²¹⁷

Diesel exhaust is one common source of airborne compounds, like nitrogen dioxide, that instead produce molecules of NA when they touch water. ²¹⁸ If a victim were somehow trapped with such an agent, or with a pure vapor of NA, they would eventually suffer enough acid damage to trigger pulmonary edema and then die suffocating on the resultant mucous. If their eyes were left vulnerable, they would probably be damaged. Intact skin would be little effected unless it became wet.

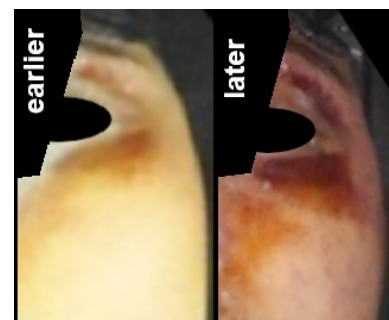
The FFM final report noted "some of the secretions also have an additional light brown colour," perhaps from gastric contents or blood. ²¹⁹ Some victims did cough up bloody mucous, but mainly, the edema fluid is a yellow-brown color, as seen when it collapses from foam. It may also shift more brown over time, as if the mucous undergoes the same XP reaction seen on the skin. In fact, as the following examples show, **the fluid seems to trigger the effect on the skin, in flow patterns originating in the nose and mouth, which is where the mask pattern also seems to begin**. So this little-noted mucous color seems quite related to the little-noted skin discoloration in a similar hue.

As shown at right, victim B6 (a boy aged around 10-12) has **yellow-orange patches of skin beneath the eyes that appear sunken, with "surrounding red and oedematous swelling," both included in the XP reaction.** Above this area are his unaffected eyes, marked with a clear goggle shape, at least on what would be the outer rims, where the color darkens to brown (aside from a small leak or later flow on our left). Other clear areas (blue) may be from adhesive material set on the lower rim, and likely on the top as well. (Image E on p.50 compiles photos over time.) His edema foam largely dried into a cone, but some of it collapsed into a liquid that flowed down both cheeks after positioning at L2. Dark brown stains later formed along the edges of that flow, especially on our left, when slow-collapsing foam kept lingering there. His upper face and hair was washed at L2, but probably not his mouth, which only had the foam hosed off outside in the morning. The last images, including the one used above, are at the morgue the following day, where B6 was in the famous "last hug" staged photo decried by Riam Dalati, ²²⁰ probably about 15-20 hours after death.

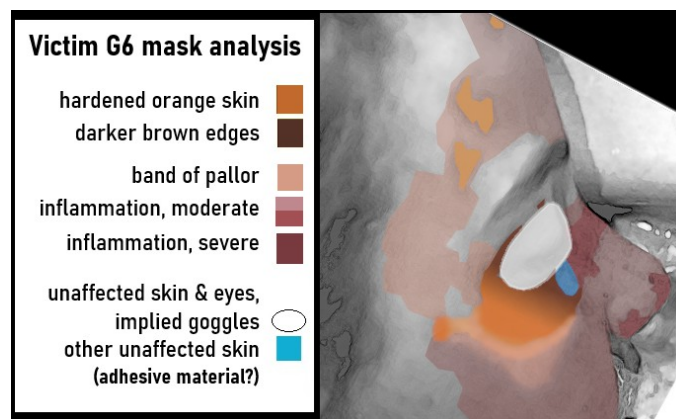


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Besides B6, other cases show a color shift over time similar to the NA cases above, but here, it progresses faster. W7 displays it most markedly, as shown at right, with wider and darker discoloration in the later image, which was taken probably around 8-10 hours later. (image D on p. 50 uses the full photos to compare three spots where the effect is clearly more advanced in the later image). As explained below, W7's color shift was probably faster than in most cases, due to her unusual body position as seen at L2 – laid on her back with her face upside down so new foam ran "up" her face for hours, apparently accelerating the process.



Victim G6 (a girl aged around 10-12) also has clear goggle-shaped exclusions above deep orange cheeks that appear severely burned and sunken, as if the skin has hardened, with a band of pallor before the splotchy redness evident in her cheeks, perhaps as blood is squeezed out of compressing skin. Between images from 10PM and early morning, the effect visibly deepens. (See image F on p. 51 for original images. The analysis at right uses the later one.)



4.4 The Shape: A Sign of Bondage?

The lodged story of people sheltering at home might conceal the true story where the victims were held prisoner, presumably by the ruling insurgents of Douma, Jaysh Al-Islam, or allies of theirs. This could explain how their bodies were on hand to arrange and manipulate at L2. It could solve the mystery of why they failed to flee the caustic gas – they were tied up. Bondage is also all-but required to explain the mask pattern evident on so many of their faces.

To explain the full pattern, the fluid would have to effect skin like nitric acid does, be coughed up and then somehow roll "up" their faces. On account of gravity, **fluids could only roll up the face if the victims remained in a position so their faces were upside-down** (e.g. suspended by their ankles, or strapped to a table with their heads hanging inverted over the edge). In that case, a few burn spots on their foreheads could be pooling and drip points for these fluids. G6, B6 and W7, among others, also display cyanosis from prolonged suffocation, and it's usually worst in the forehead, as if upside-down.

And for this fluid to be slowed down at the upper cheeks for longer contact and deeper effect – while somehow avoiding the eyes – almost requires all of the above plus protruding objects with the shape and effect of goggles, as already shown above. With W7 (mask pattern turned upside-down at right), the possible goggles seem to be abnormally secured with straps across the cheeks, with a crossing at the bridge of her nose that also slowed the fluid, and it seems her hijab was secured by these straps, causing some slowdown before her protected forehead. Others like B6 and G6 suggest no such straps, instead having additional clear patches, perhaps from a wad of adhesive material set in the middle of the lower rim, and likely on the top rim as well (the flow pattern there is less clear). The usual connection across the nose is suggested by increased fluid effect there in several cases. The usual side-straps of the goggles were likely used as well, but if so they don't seem to have effected the flow around the outer rims.



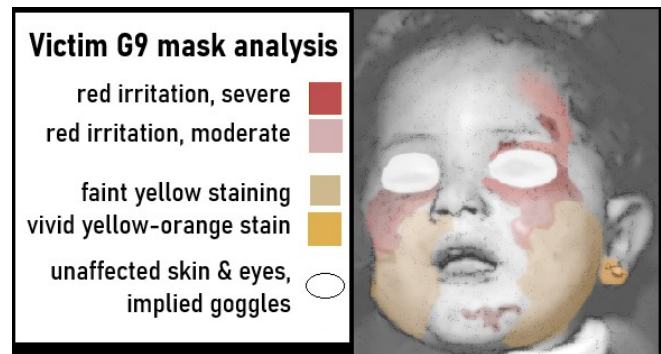
There are natural effects that could protect the eyes in a similar way, but obstructing objects would best explain the fluid slowdown at the upper cheek and the sharp lines marking the clear patch of clear skin, and the need for straps or adhesives. The shape and location of the protected areas and their effective protection point to these objects being the very goggles they appear to be.

As noted above, W7's exceptionally dark pattern is likely due to her unusual body position as seen at L2 – laid on her back with her face upside down, as proposed to initially cause this pattern. The early flow would leave the most vivid effect, formed over probably 1-2 hours or less while the goggles were

on. This would be in the gas chamber where the mucous would continue reacting with the airborne agent for much more NA produced. At Location 2 this wouldn't happen, so the later progression would be from the foam alone and much slower. But with that body position, **new foam here flowed "up" her face in about the same way as it may have flowed at the time of death, and did so for several hours. This enhanced the previous reaction there, more so than with anyone else, and helps to clarify the problem it seems all the victims had to start, when they were murdered.**

It seems even the babies were killed this way, more or less. Victim G9, seen above being re-arranged, had a rash-like lividity appear in the same mask shape with a partial but distinct outline of goggles (see image G on p.51 for earlier and later photos). A smaller size would be used for her and the other smaller victims. She has some flow "up" the face as if suspended or inclined, but

less than most, and with no sign of straps or adhesives. Both cheeks suggest yellow fluid down the sides, with one earlobe vividly stained, and a red patch on her chin – all consistent with a position on her back, but likely after death.

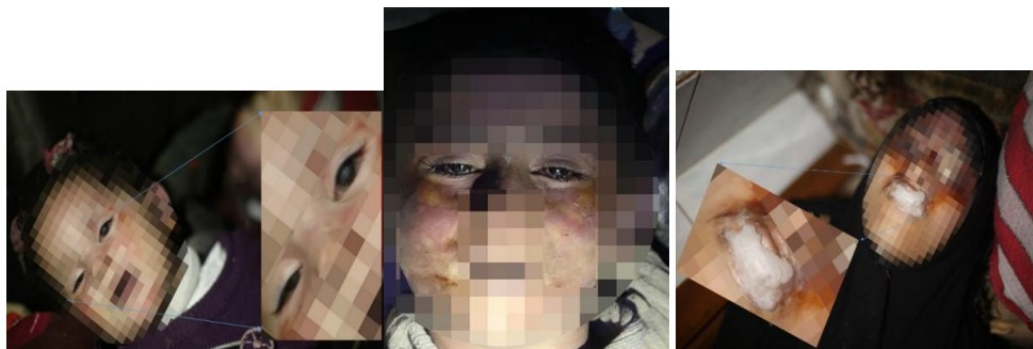


As such, the author's longstanding and current reading is that **the victims were bound** (in a way that leaves little to no mark), most of them **probably suspended upside-down**, and in fact **fitted with swimming goggles**. No witnesses and no logic suggest the victims put goggles on themselves before they even covered their noses or got any dust on their socks. If this happened, someone else put the goggles on, and then removed them prior to planting the bodies at L2. These people would know what happened but would tell the outside world another story, like the one we heard.

The likely reason for suspending the victims upside-down would be to keep their heads low in the cloud of heavier-than-air gas, vapor or smoke, so as to ensure their deaths. It's not as clear just why their murderers would fit the victims with goggles. Perhaps this was meant to suggest sarin killed them before the chlorine could cause any redness. Or maybe they just wanted open eyes for emotional effect, and knew that acid-damaged eyes tend to clench shut. But motive aside, this is the only cogent explanation anyone has offered for these little-known mysteries.

The IIT report's figure 6 (below) shows the noted G9, the noted B6, and the clearest example W7, labeled as if to shame the doubters "persons who died as a consequence of being exposed to chlorine" which was, as they found, delivered by Syrian helicopters.

FIGURE 6: IMAGES SHOWING SYMPTOMS: PERSONS WHO DIED AS A CONSEQUENCE OF BEING EXPOSED TO CHLORINE (SOURCE: OPEN SOURCE)



The pixelated vs. clear areas indicate they want to show us clouded eyes lacking redness, the strangely discoloring edema foam they would only have moments to work up, and the discolored skin that might point to nitric acid. The IIT insists there was no "evidence of any types of chemical compounds except for chlorine" and then include *this sign for a different chemical* as an actual effect of chlorine, when it never has been – not even in the FFM report. And, of course, they ignore the effect's "mask" shape that suggests the Douma victims died under bondage, in a story that their sources – White Helmets included – would likely have known, but never told them about.

These signs all point to **deliberate murder, with poisoned air in a gas chamber**, of selected babies, children, women (at least one of them pregnant), and men. To die from a simple irritant – as argued, perhaps nitric acid – would probably take an hour or more, suffocating on caustic foam that burns even their skin, and perhaps forced to helplessly witness their loved ones also dying in pain and terror. But then it seems they had their bodies crudely arranged and shown off beneath that staged gas cylinder, more props in a fabricated story which the OPCW's investigations effectively rubber-stamped.

This is all "difficult to assess," as the FFM would say. Perhaps the best explanation, as offered here, admittedly sounds bizarre and potentially insane. Other options still need to be considered. It remains possible this skin effect can somehow be explained by chlorine or another agent, but the mechanism would be unclear and needing explained, and the mask pattern remains. This could be caused by circumstances other than the bondage described, but the author is still waiting to see any other cogent explanation that accounts for all of this evidence.

4.5 "But why would the rebels gas their own people?"

The motive for insurgents to launch a false-flag chemical attack, especially on the verge of their final defeat in Douma, is not so hard to understand. Obama's "red line" threat to Assad would be an offer to them; stage an "Assad chemical attack" and potentially get direct US military assistance. President Trump would actually attack Syria over an alleged sarin attack in 2017, raising the motive to lodge

another such claim. But still, why would they actually gas “their own people”? It stands to reason they would rather fake some deaths with actors, pass off some unrelated deaths, or for greater realism ... they might kill some *enemy* civilians. Some evidence suggests they in fact did the latter.

As the author noted early on, nearly one third of the 35 identified fatalities (11) shared the family name Bakriyeh. At least some others were probably intermarried and they could all be related, although this remains unknown. Bakriyeh is a very rare name found almost entirely in Douma, shared with just 6 other fatalities across Syria listed by opposition sources up to to 2018 (17 in total). The most prominent of these was Omar Diab Bakriyeh (right), the founding commander of a Douma Martyr's Brigade (DMB).²²¹ In 2014, DMB would lead the largest rebellion against the notoriously brutal Jaysh al-Islam (“Army of Islam” – Jal) before that was ruthlessly crushed.



Jal may have killed commander Bakriyeh shortly before that rebellion broke out, maybe even helping to spark it. He was listed by the well-informed Violations Documentation Center as killed in clashes with the Syrian army on April 4, 2014. But one Amjad Diab Bakriyeh from Douma, a civilian, was listed as killed the same day in seemingly unrelated “shelling.” An Arabic middle name is usually the father's first name, and it's hard to imagine there were two men in Douma named Diab Bakriyeh who both lost sons on the same day. This suggests the men were brothers, and that the commander's kin were being targeted for some collective punishment (although it's not clear for what). Especially after the suppressed 2014 rebellion, **Jal's ire might have extended to imprisoning other members of the Bakriyeh family. They may have been held for years before Jal gassed at least 11 of them to populate their “chlorine attack” scene.**²²²

In 2018, Jal likely understood that they faced a final defeat and would soon be relocated to Idlib, in a brokered deal by which surviving prisoners would be set free. April 7 would be their last chance to kill any of them for punishment, for propaganda, or simply to keep them from talking about the “Army of Islam.” The well-informed Syrian Observatory for Human Rights (SOHR) estimated that Jal held roughly 3,500 prisoners, both military and civilian, including hundreds of Alawites kidnapped from nearby Adra.²²³ Al-Masdar News heard that “up to” 5,000 captives were once held, but “only 200 of them remained alive” as of April 9, when some 100 were released.²²⁴ On the 14th AFP reported another 100 prisoners were released, and the SOHR said that some 3,000 people remained unaccounted for.²²⁵ There would be no more updates. Everyone seems to use rounded numbers and nobody seems to know the full story, but most likely those 200 is all that remained, after the suggested 3,300-4,000+ missing people died or were killed off over the years.

It was initially reported that the Douma attack claimed around 180-200 lives, with many specifying 190, nearly that, or over that. This was strangely revised to “more” than a confirmed 42, and then a general consensus of exactly 43 was settled on (although similar numbers are still cited around).²²⁶ Then in 2019 **two well-connected insiders, relocated to Idlib, would swear that “more than 185” or exactly 187 were in fact killed “down in the bunkers” they entered.** The insiders – both also seeming to be experts on the 2013 Ghouta chemical massacre – mention a swift and debilitating secondary contamination. This suggests – as initial reports did – that sarin was used.²²⁷

It's not clear if these insiders realize they're clashing with the accepted narrative or why they would want to do that. They cannot explain why no sarin traces turned up, nor why everyone else agreed to the smaller death toll. But it could be these men know the truth, that 187 were murdered in “the bunkers,” under captivity by Jaysh al-Islam, perhaps all in the manner theorized above, before most of the deaths were re-classified. (And the reasons for that could only be guessed at. Perhaps sarin traces were supposed to be engineered somewhere, but the people in charge of that were killed in an airstrike ... Perhaps the mask effect was even worse in most cases, making them too bizarre-looking from the start ... Perhaps it was a few causes in combination.)

187 killed would make Douma the second-deadliest alleged CW attack, after Ghouta 2013. And it would be about as many prisoners as the 200 they would release alive after the surrender deal. Jaysh al-Islam may have had nearly 400 prisoners left at the end, before they killed half of them for this final massacre rather than set them free. Either way, it seems like they may have killed some 90% of the Syrian citizens they had kidnapped over the years – some dying under slave labor, under torture, due to neglect, and perhaps massacred in other atrocities blamed on the Syrian government. When Jal surrendered, they said it was fearing further attacks and hoping to save lives, but the evidence says otherwise – they simply realized their time to kill with impunity was over ... for the moment.

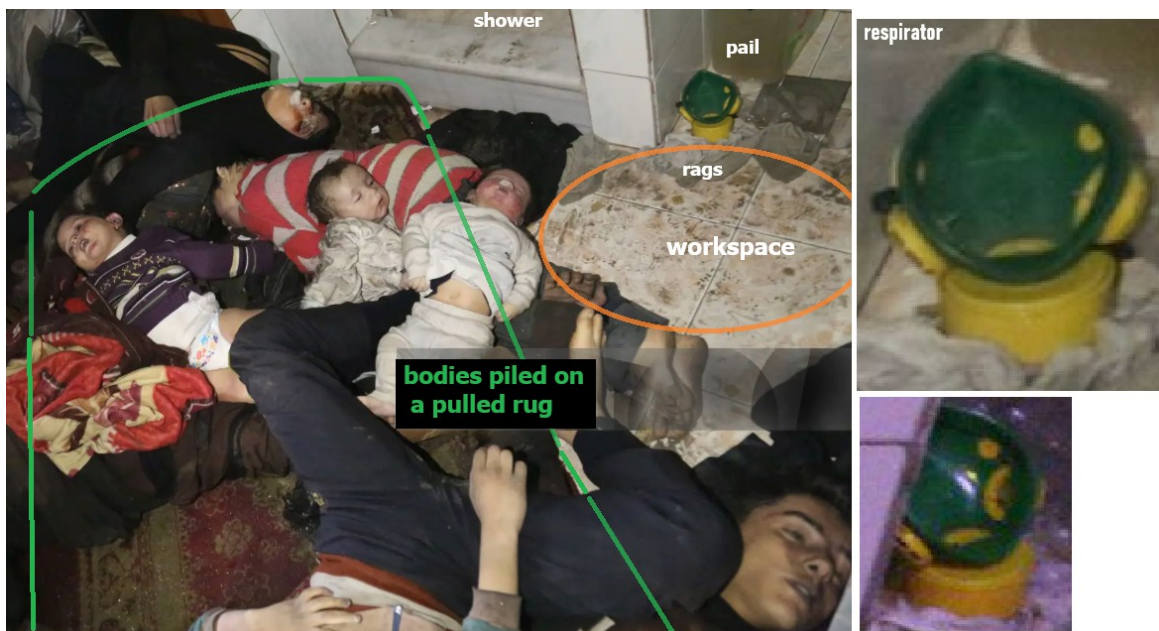
Warning: Graphic Images on Next Page

[skip to summary of findings](#)

4.6 Graphic Images For Section 4



A) W7 vivid mask pattern – rotated view nearly upside-down – natural color. ²²⁸



B) bodies piled at the shower, signs of a wash-up. Note: the bodies of 2 young girls had been in the “workspace” until they were removed before this photo, but it still looks like a workspace the girls were later set in. Perhaps they were placed later *and* removed earlier than the rest. ²²⁹



C) XP reaction examples



D) W7 progression. Left: early photo, color-enhanced. Right: early morning, natural color.



E) B6 progression: inside and outside Location 2, at Point 1 morgue



F) G6 progression. Left: 10pm video, color-enhanced to reveal the faint pattern then. Right: early morning, natural color ²³⁰



G) G9 progression – earlier and later views inside Location 2 (natural color)

Summary of Findings

Section 2: Impact or Staging? The Engineering/Ballistics Evidence

An explosive Impact is the only logical explanation for the Location 2 (L2) crater. Broken and drastically bent rebar beneath intact bars, cratering and spalling, and upper walls peppered with secondary fragmentation marks all testify to a mortar or other artillery shell causing the damage, as with similar roof craters seen nearby. The evidence does suggest this shell lacked the usual primary explosive fragments, a complication OPCW investigations seized on to dismiss all the other signs.

A distinctive pattern of scratches on the L2 cylinder – taken as proof of an airdrop and prior impact with a mesh canopy – virtually proves the barely-damaged cylinder was placed by two people carrying it through the patio door, with three steps over some sharp wires of the canopy – that was already torn down – and a final pivot off the mesh before they set the cylinder down next to the existing crater.

The alleged impact crater at Location 4 (L4) was most likely caused by building debris and construction equipment from a neighboring roof that was damaged in the battles of 2012. The hole is the wrong size and shape to be caused by the cylinder, and the OPCW's expert calculations on penetration and bounce onto the bed are highly questionable and refuted by other open-source analysis.

Signs suggest the L4 cylinder was instead carried up the stairs and in the door, with marks left in both places. A wire likely used to secure a loose member for this travel may have detached at the last moment, causing an otherwise inexplicable mishap with the shower door, along with damage to the bed on a more sideways “trajectory,” before resuming its supposed bounce onto the bed. This all but proves manual placement at L4 as well as L2, but even more botched.

Many of these points were raised by an official OPCW engineering study by “Inspector A.” This was rejected as the FFM investigation sought other experts, five months in to the probe, who assured them – contrary to the evidence – that both scenes were consistent with cylinders dropped from the sky.

Section 3: Considering Chlorine Release and Toxicity

Signs indicate that chlorine was probably released at both sites, in a controlled manner by the scene managers who had placed the cylinders. At L2 they either melted out the fusible plug with a fire that was deliberately set, or by snapping off the valve, as it later appeared and as high zinc residues might suggest. Signs indicate the majority of the gas inside was released within 2-3 hours.

At L4, less than half the contents were released over 3 weeks, apparently in repeated quick bursts

with long spans in between. It's likely gas was first released only on the morning after the attack, and other controlled releases came just before each of two OPCW visits, somehow staining the bed in a repeated cycle of yellow-green to red-brown, likely from the gas reacting with abundant iron and other metals (although this point is contested and speculative).

It seems OPCW investigations exaggerated clues for chlorine release and maintained an obsession with high concentrations, as if in desperation to prove allegations against the Syrian government rather than simply following the science.

The original toxicology experts, consulted 2 months in, were clear in noting that chlorine could hardly explain the observed fatalities, whatever the concentration. Chlorine, they argued, is a simple irritant that does not ordinarily cause the instant foam nor the sudden death, unconsciousness, or collapse that were reported; in reality, the victims should be able to escape the gas rather than dying in piles near the exit. Those directing the FFM's investigation ignored this expert input, deleted all reference to it, and – six months into the investigation – consulted other experts who would assure the FFM that, contrary to the known science, chlorine at high concentrations could probably explain everything well enough. This conclusion was eagerly accepted and amplified with expressions of confidence.

The FFM and IIT would note clouding of the eyes as a clue, which accompanies acid burns alongside red irritation, but also occurs upon death from any cause. Since none of the Douma victims displays red eyes, the clouding plus pulmonary edema suggests that the victims had their lungs exposed to a caustic substance while their eyes were protected – a mystery the OPCW's investigators failed to recognize, let alone answer.

Section 4: Considering How and Why the Victims Were Killed

Just from a few images, the ignored original toxicology experts had expressed concern that the Douma incident could be a “propaganda exercise” with arranged corpses. Indeed, the visual evidence shows bodies were arbitrarily piled and re-arranged, with dust-free socks, amid signs of break-in at the relevant apartments, but with faces and hair inexplicably washed shortly before the first images. None of this fits with the lodged story. The bodies seem to be arranged in the same vein as the cylinders, perhaps after their murder with chemicals somewhere else.

The unusual “Mask of Death” effect is an important and complex clue that also might explain the face and hair washing. A discoloration (yellow shifting to orange and brown depending on exposure), irritation, and hardening of the skin across the upper face may be the result of nitric acid, administered directly in a vapor or caused by an agent like diesel exhaust. Nitric acid causes a unique “xanthoproteic reaction” chlorine does not cause and that would explain all the observed effects and their development over the span of several hours. Other causes may exist, but chlorine does not fit

the bill. Nitric acid would also be a simple irritant and in itself would not answer why the victims failed to escape the scene.

The shape of the effected area may indicate that the victims were bound in place during their fatal exposure. This would explain their failure to escape the gas. Protected eyes inside goggle-shaped exclusions, with deep skin effect on the upper cheeks beneath that, and around the outer rims – in total much like a domino mask – suggests that 1) the victims were indeed fitted with goggles (albeit for unknown reasons) 2) the acid-laced edema fluids they coughed out flowed “up” their faces to be slowed by the goggles, because they were also positioned so their faces were upside-down (perhaps suspended that way).

The mask effect appears clearly in several cases, with mixed signs in other cases, and likely applies to all victims. For so many people to hold an unusual position after fitting with goggles while inexplicably failing to flee a simple irritant gas can only be explained by their being held captive and bound this way prior to their deliberate gassing. Their deaths were probably slow, painful and terrifying.

The victims were likely imprisoned enemies of the ruling Jaysh al-Islam. Out of 35 publicly identified fatalities, 11 were named Bakriyeh, a rare local name suggesting they were related to a commander of an opposing faction, the Douma Martyr's Brigade. It's entirely possible they and the rest were originally kidnapped by Jal as enemies, in a collective punishment of entire families, and were eventually killed for the April 7 “propaganda exercise.”

Reports at the time and insider confirmation a year later suggest there may have been 187 civilians actually killed, with someone deciding to revise that (for unclear reasons) to the accepted 43. April 7 was Jal's last chance to do anything with their prisoners besides set them free, and they may have killed half of their few remaining prisoners for this horrific project (another and final 200 prisoners were released alive in the following days). Thousands of others once held were unaccounted for, likely killed off by their captors over the years.

There is no credible sign that any Syrian helicopters were involved.

Concluding Remarks

In 2002, the first Director-General of the Organization for the Prohibition of Chemical Weapons, José Bustani, insisted on doing his job – disarmament – rather than help the US Bush administration spark a war over Iraq's “refusal” to disarm. Bustani was then forced from office in a vote by just one-third of the OPCW's member states, at an unusual “special session” pressed by the US and supported by the UK, but later judged unlawful by a UN tribunal.²³¹ Bustani was later compensated, and donated his monetary award back to the OPCW.²³²

This vote came after the DG refused to quietly resign, as reportedly instructed by US Undersecretary of State John Bolton. He was paraphrased as telling Bustani “You have 24 hours to leave the organization, and if you don't comply with this decision by Washington, we have ways to retaliate against you,” adding after a pause: “We know where your kids live. You have two sons in New York.”²³³

This story – of course disputed by Bolton – resurfaced in 2018 when he was appointed Trump's National Security Adviser, as it happens starting work two days after the Douma incident. The US, UK and France would soon launch missile strikes on suspected CW facilities in Syria based on the assumption of the government's guilt. When the OPCW's initial findings challenged that assumption, **US pressure was again brought on the organization.**

On July 4, as Jonathan Steele would report, OPCW Chief of Cabinet Bob Fairweather “invited several members” of the team drafting the FFM report to meet, in his office, with **“three US officials” (they didn't give their names or specify their agency) who “told them emphatically that the Syrian regime had conducted a gas attack.”** The inspectors saw this as “unacceptable pressure and a violation of the OPCW's declared principles of independence and impartiality.”²³⁴ The FFM had just established the chemical attack story was likely a work of fiction, and were basically instructed by Donald J. Trump to prove it true anyway, to justify the ongoing punishment and destabilization of another Ba'ath Party government. To deliver this message, they chose July 4 – America's Independence Day – as if to reiterate US independence from international law or responsibility to the inter-dependent world it tries to control.

Two days later, the FFM interim report was released. Inspector B or “Alex” was told that, “for the OPCW's credibility,” management demanded “a smoking gun” (for Syrian government guilt, as understood).²³⁵ This directive seems to have defined the next round of the FFM's work. The process was overseen by people including Chief of Cabinet Fairweather, a British diplomat, who invited his inspectors to meet those US officials. The next CoC, French diplomat Sebastien Braha, would have Inspector A's EST report removed from the OPCW's documents archive, asking “please remove all traces” of it ever being there.²³⁶ The experts accepted by the FFM and IIT likely came from the same or allied nations and with the same biases, freely shaping the findings that would, among other things,

justify the military strikes already delivered by the US, UK, and France. (Furthermore, the OPCW's Director-General to July 2018, or the whole span of CW allegations against Syria, from 2012 until Douma – was Ahmet Üzümcü, a Turkish diplomat liaising specifically with NATO and Israel.)

When Inspector A addressed the UNSC in January 2020, he closed by mentioning that he had led the OPCW's "highly intrusive inspections" at the very chemical laboratory in Barzeh that was destroyed in 2018's missile strikes, including the two visits prior to its destruction.²³⁷ The OPCW reported then on "a second round of inspections" on November 22, 2017, wherein "the inspection team did not observe any activities inconsistent with obligations under the [Chemical Weapons] Convention."²³⁸ Chapter 9 of Inspector A's book describes in detail the rigorous investigations he led in Barzeh, finding no sign of CW production.²³⁹ After videos of the Douma incident emerged, US military officials decided this and other sites were active and bombed them. Damascus said only permitted medical products were made at the Barzeh site, and a CBS News reporter who visited could only see that they made snakebite anti-venom.²⁴⁰

Inspector A says he also led the final inspection at Barzeh, after the site's destruction in response to a chemical attack that, as he and others found, may have never happened. He only hints at the irony, saying this presented "another story altogether. And I shall now close. Thank you." He was speaking in a prerecorded video on a giant screen, after his visa to travel to New York and attend in person was blocked, presumably by the US government.²⁴¹ The US representative, Cherith Norman Chalet, only showed up at that session briefly to denounce Russia – not China who called the session, and not the disinvited OPCW inspector – for a "blatant attempt to use a Security Council meeting to weaken the credibility of the OPCW," whose investigations she commended for being so "independent and impartial."²⁴²

Of course OPCW inspectors saw the US pressure of July 4, that seemingly directed their Douma findings, as a violation of those principles.²⁴³ Its US-ousted first DG José Bustani would contend what really harmed the OPCW's credibility was US-led manipulation of this sort. The former DG would learn of the Douma leaks and declare in October, 2019 "the convincing evidence of irregular behaviour" in the Douma investigation "confirms doubts and suspicions I already had."²⁴⁴ One year later, "a group of delegations" including the UK would block Bustani from testifying about this state pressure on the grounds that, since state pressure ousted him in 2002, he was "not relevant to today's discussion."²⁴⁵

The later Investigation and Identification Team (IIT) would start from the FFM's tainted work, now with a mandate to explicitly blame someone (Syria, as it turned out), but also forced to consider alternate scenarios and the leaked materials. They dismissed all questions with ease and little regard to reality, as partially related in this report. They had zero new leaks or whistle blowers along the way, likely reflecting changes to their staffing and process after the Douma debacle, to ensure the correct politics

from the start, and then twist the science to fit that. Having critically examined OPCW reports since 2013, the author had actually assumed this was always the way. Only the Douma whistle blowers finally showed that real science was still done – and then suppressed – at least up until 2018.

The OPCW was meant to be a trustworthy presence in the multilateral tradition of the United Nations. But it is routinely used, by a cabal of Western and allied states with overlapping or entwined interests, to craft their war propaganda for regime change as neutral “fact.” This seems to be part of a broader effort to co-opt international systems and distort the law, to punish foes of the West while protecting its allies and proxies, to call that justice regardless of the truth, and to simply re-write the truth as needed.

Along the way, vast Human suffering is unleashed. In the case of Douma, OPCW official investigations may well conceal the deliberate and torturous murder, with poisoned air in a gas chamber, of perhaps 187 selected babies, children, women (at least one of them pregnant) and men. In this case, the OPCW would have twisted itself, on command, to put their stamp of scientific approval on the politically useful cover-story, absolving and even rewarding the perpetrators of a hideous chemical massacre of innocents, just for another scrap to clothe their controllers' naked desire to control everything.

Consider that this dubious story helped to underwrite global acceptance, in December 2024, of the Syrian government's strange final collapse and takeover of unchecked power by Ahmed al-Sharaa, the unelected former leader of Al-Qaeda offshoot Hayyat Tahrir al-Sham (the Islamist “good cops” who “fought both Assad and ISIS”) and an early founder ISIS (the “bad cop” he would play “good cop” to). HTS was allied with Jaysh al-Islam, having teamed up for events like the sectarian massacre and mass kidnapping in Adra, December 2013. Essentially, it seems people are now handed control of nations and seats at the UN and the OPCW as a reward for their ghastly crimes, including the deliberately massacre of children and other civilians in their gas chambers. The motive is firmly established for this pattern to play out to deadly effect in other nations, and some powerful people are excited by this.

The actual and full truth about Douma remains unknown, but we have an unusual window – thanks to the courageous whistle blowers and their leaked documents, and to further research, like that contained in this paper – to see how likely it is that a mass murder remains concealed and unsolved. This would obviously be an affront to Humanity, against which Humanity should push back. There are a great many of these, and they seem to be increasing rapidly in 2026. And even for this one, the author can only offer this explanation and call on serious and relevant minds to consider this possibility, and what could be done to correct these problems and discourage or prevent further atrocities. As it stands, the practices of the OPCW and others serve better to *encourage* such crimes.

- 1 Sputnik Globe, April 26, 2018 <https://sputnikglobe.com/20180426/opcw-russia-delegation-press-briefing-1063933214.html>
- 2 France 24, December 23, 2024 [Syrian medics say were coerced into false chemical attack testimony](#)
- 3 <https://x.com/Dalatr/status/984011488938643456>
- 4 <https://x.com/Dalatr/status/1095677401433022466> (and following posts)
- 5 [Monitor on Massacre Marketing: Swept Under the Rug, Part 1](#)
- 6 [FFM interim] "INTERIM REPORT OF THE OPCW FACT-FINDING MISSION IN SYRIA REGARDING THE INCIDENT OF ALLEGED USE OF TOXIC CHEMICALS AS A WEAPON IN DOUMA, SYRIAN ARAB REPUBLIC, ON 7 APRIL 2018." OPCW TECHNICAL SECRETARIAT. S/1645/2018, 6 July 2018. Original: ENGLISH https://www.opcw.org/sites/default/files/documents/S_series/2018/en/s-1645-2018_e_.pdf
- 7 [FFM final] "REPORT OF THE FACT-FINDING MISSION REGARDING THE INCIDENT OF ALLEGED USE OF TOXIC CHEMICALS AS A WEAPON IN DOUMA, SYRIAN ARAB REPUBLIC, ON 7 APRIL 2018" OPCW TECHNICAL SECRETARIAT. S/1731/2019, 1 March 2019. Original: ENGLISH <https://www.opcw.org/sites/default/files/documents/2019/03/s-1731-2019%28e%29.pdf>
- 8 [IIT] "THIRD REPORT BY THE OPCW INVESTIGATION AND IDENTIFICATION TEAM PURSUANT TO PARAGRAPH 10 OF DECISION C-SS-4/DEC.3 "ADDRESSING THE THREAT FROM CHEMICAL WEAPONS USE" DOUMA (SYRIAN ARAB REPUBLIC) – 7 APRIL 2018" OPCW TECHNICAL SECRETARIAT. S/2125/2023. 27 January 2023. Original: ENGLISH <https://www.opcw.org/sites/default/files/documents/2023/01/s-2125-2023%28e%29.pdf>
- 9 See 6, FFM Final, Annex 3, MISSION TIMELINE, page 37
- 10 [EST] "Engineering Assessment of Two Cylinders Observed at the Douma Incident - Executive Summary - draft or internal review - expanded rev 1" OPCW FFM Engineering Sub-Team, 27 February, 2019 <https://wikileaks.org/opcw-douma/document/20190227-Engineering-assessment-of-two-cylinders-observed-at-the-Douma-incident/> - or <https://syriapropagandamedia.org/wp-content/uploads/2019/05/Engineering-assessment-of-two-cylinders-observed-at-the-Douma-incident-27-February-2019-1.pdf> - or <http://acloserlookonsyria.shoutwiki.com/wiki/File:Engineering-assessment-of-two-cylinders-observed-at-the-Douma-incident-27-February-2019-1.pdf> - WGSPM assessment: <https://www.syriapropagandamedia.org/working-papers/assessment-by-the-engineering-sub-team-of-the-opcw-fact-finding-mission-investigating-the-alleged-chemical-attack-in-douma-in-april-2018>
- 11 Named as Ian Henderson in the leaked document, and Inspector A in OPCW's investigation, His book (see 15) p. 249 Inspector A was dismayed that his name was not redacted from the published report, but he confirms that is his name, and elsewhere in the book has someone else referring to him as "Ian."
- 12 <https://thegrayzone.com/2020/05/06/opcw-douma-whistleblower/>
- 13 See 10 EST
- 14 <https://libyancivilwar.blogspot.com/2020/05/opcws-as-such-lie-about-ffm-inspector.html>
- 15 *The Syria Scam: An Insider Look into Chemical Weapons Geopolitics and the Fog of War*. Inspector A. Greenhill Publishing, 2025.
- 16 [Minutes] https://wikileaks.org/opcw-douma/document/actual_toxicology_meeting_redacted/
- 17 e-mails regarding toxicology meeting minutes https://wikileaks.org/opcw-douma/document/correctly_redacted_emails_re_toxicology_minutes/
- 18 [draft] "REPORT ON THE PROGRESS OF THE FACT-FINDING MISSION REGARDING THE INCIDENT OF ALLEGED USE OF TOXIC CHEMICALS AS A WEAPON IN DOUMA, SYRIAN ARAB REPUBLIC, ON 7 APRIL 2018." OPCW TECHNICAL SECRETARIAT. S//2018 June 2018. Original: ENGLISH <https://wikileaks.org/opcw-douma/document/FirstdraftInterimReport/>
- 19 Ibid. Draft 7.82
- 20 Ibid. draft 7.28
- 21 <https://wikileaks.org/opcw-douma/document/Internal-OPCW-E-Mail/>
- 22 See 7 FFM final, Annex 12
- 23 See 8 IIT 6.196
- 24 See 8 IIT 3.6
- 25 See 8 IIT 6.215, 6.216
- 26 See 7 FFM 2.14
- 27 See 8 IIT 6.217
- 28 See 8 IIT 6.220

29 See 8 IIT 6.319
30 See 8 IIT 8.55
31 See 8 IIT 6.301
32 See 8 IIT 6.182
33 See 8 IIT 6.207
34 See 8 IIT 6.203
35 See 8 IIT 6.299
36 See 10 EST 33
37 See 10 EST 25
38 See 15 Inspector A p. 271
39 Reuters photo Ali Hashisho April 23, 2018 <https://www.cbc.ca/news/world/syria-opcw-douma-chemical-attack-1.6728066>
40 See 10 EST point 19
41 See 10 EST Appedix 1
42 <https://libyancivilwar.blogspot.com/2019/11/more-on-alleged-chlorine-attack-of-25.html>
43 See 10 EST point 20
44 Open source (left), FFM final, Figure A.6.5 (right)
45 See 7 FFM final figure A.6.7(a)
46 See 7 IIT (6.218)
47 See 7 IIT 6.146
48 See 7 IIT 6.230, 6.231
49 See 10 EST point 26
50 See 7 FFM final, annex 6, point 7
51 See 7 FFM final figure A.6.4
52 See 8 IIT 6.145
53 See 8 IIT 6.269
54 See 7 FFM final annex 6, point 8
55 See 8 IIT figure 11, p.53
56 See 8 IIT 6.224
57 See 10 EST Location 4 Hypotheses
58 See 10 EST appendix 4
59 See 10 EST point 27
60 Kobs, Michael. Location 4 discussion report. March 7, 2019. page 15
<https://www.michaelkobs.de/Papers/LOCATION4%20-%20discussion.pdf>
61 Kobs, Michael. The fall and jump of the Douma bed cylinder. <https://michaelkobs.de/Papers/The%20Fall%20and%20Jump%20of%20the%20Douma%20bed%20cylinder.pdf>
62 See 7 FFM final 8.34
63 See 7 FFM final, figure 10
64 See 8 IIT 6.291
65 See 7 FFM final, figure 10
66 See 61? Kobs paper
67 See 8 IIT 6.222, figure 35
68 See 61? Kobs
69 See 7 FFM final, annex 7, figure A.7.4
70 See 8 IIT - S/2125/2023 - figure 54
71 See 8 IIT fig33
72 Re-post: https://x.com/citizenjournos_/status/1959383968442433707
73 <https://x.com/MichaKobs/status/1959586791440138553>
<https://x.com/CL4Syr/status/1959605913901212020>
74 See 8 IIT 6.300
75 Zveda news re-post: https://x.com/citizenjournos_/status/1959648769311719629 (original locations unclear, likely deleted or inaccessible)

76 <https://x.com/PavewayIV/status/1959817987801968794>

77 See 61? Kobs paper – page 11

78 See 7 FFM final 8.34

79 See 7 FFM figure 51

80 See 61? Kobs paper – page 11

81 See 10 EST 31

82 See 61? Kobs paper

83 See 8 IIT figure 51

84 See 8 IIT 6.295

85 See 8 IIT Figure 48

86 See 8 IIT 6.298

87 See 8 Ibid. IIT 6.298

88 See 8 IIT 6.294

89 See 8 IIT 6.221

90 See 8 IIT 6.299

91 <https://www.bellingcat.com/news/mena/2020/01/23/the-opcw-douma-leaks-part-3-we-need-to-talk-about-a-false-flag-attack/>

92 Rossiya 1, Zveda News – saved copies via Michael Kobs (original locations unclear, likely deleted or inaccessible)

93 See 7 FFM Figure A.7.6

94 See 10 EST 30

95 See 7 FFM final, Figure A.7.7

96 See 61? Kobs p. 13

97 See 8 IIT figure 47 p. 98

98 Russian video saved copy via Michael Kobs (original locations unclear, likely deleted or inaccessible)

99 See 7 FFM figure 14

100 See 7 FFM final Annex 6

101 See 8 IIT 6.133

102 <https://libyancivilwar.blogspot.com/2020/02/the-illogical-douma-airdrop-clue-that.html>

103 “One Building, One Bomb: How Assad Gassed His Own People” By Malachy Browne, Christoph Koettl, Anjali Singkvi, Natalie Reneau, Barbara Marcolini, Yousur Al-Hlou and Drew Jordan. New York Times June 25, 2018
<https://www.nytimes.com/interactive/2018/06/25/world/middleeast/syria-chemical-attack-douma.html> -
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104 <https://x.com/malachybrowne/status/1176754823422709761>

105 See 15 AI p.269-270

106 See 7 FFM final, Mission activities, Methodological considerations, 7.5

107 See 15 AI p.269

108 <https://libyancivilwar.blogspot.com/2020/02/the-illogical-douma-airdrop-clue-that.html>

109 <https://twitter.com/MichaKobs/status/984596184428924928>

110 See 8 IIT 6.299

111 See 8 IIT 6.182

112 Externally doxxed as Brendan Whelan - <https://popularresistance.org/in-search-of-alex-the-elusive-opcw-whistleblower/>

113 <https://www.couragefound.org/2019/10/opcw-panel-statement/> - <https://wikileaks.org/opcw-douma/document/OPCW-Analytical-Points-final/> - <https://www.nachdenkseiten.de/?p=55809> -
<https://www.docdroid.net/OHlubQo/whistleblower-the-opcw-report-on-the-alleged-poison-gas-attack-in-douma-is-not-true-pdf>

114 <https://timhayward.wordpress.com/2019/10/27/major-revelation-from-opcw-whistleblower-jonathan-steele-speaking-to-the-bbc/>

115 See 15 Inspector A p 332, 256 (“neither case is conclusive” and “no conclusion could be drawn either way”)

116 <https://al-bab.com/blog/2019/12/leaked-opcw-documents-what-they-really-show-about-douma-investigation#traces>

117 See 15 IA p. 189
118 See 15. Inspector A p 332
119 See 8 IIT 8.13
120 See 8 IIT 6.135
121 See 15 IA p. 270. "...any discussion or mention of frosting is completely absent in the official FFM report."
122 See 7 FFM final, annex 6, point 9
123 <https://www.mhoxigen.com/2016/wp-content/uploads/PressureReliefDmd.pdf>
124 <https://libyancivilwar.blogspot.com/2018/04/cw-barrel-bomb-that-wasnt-there.html>
125 See 103 NYT report, 8:10 in the video report
126 See 15 IA p. 270 Inspector A thought "overexposure as a result of light" could explain the white appearance. ... See 124? blog post: the author initially saw the expected dark cylinder as missing from the crater, with a lit-up sky visible instead. Finally the "hole" emerged as the cylinder, unexpectedly white maybe due to overexposure, but it remained puzzling for a day or so until the author learned about auto-refrigeration and frost, which would far better explain the imagery.
127 See 7 FFM final, annex 5
128 [Brass Material Selection for Gas Cylinder Valves: HPB59-1 and Its Exceptional Properties – Chunhe Valve](#)
129 See 7 FFM final 8.33
130 See 15 IA pp. 165, 212, 272
131 Ibid.
132 See 8 IIT 6.115
133 <https://x.com/MichaKobs/status/1212022944119054343> & see 60, p.43
134 Douma Location 4 "Magical Color Change" <https://libyancivilwar.blogspot.com/2025/11/douma-location-4-frost-and-magical.html> and discussion on X: <https://x.com/CL4Syr/status/1994377709141807232>
135 <https://x.com/MichaKobs/status/1995048643636998582>
136 <https://x.com/MichaKobs/status/1127622359937167363>
137 See 61 Kobs, p. 20
138 <https://reviewston.com/chemistry-guide/inorganic-chemistry/group-17/assorted-reactions-of-the-halogens/>
139 See 7 FFM final, figure A.7.8
140 FFM final, annex 5
141 See 133? discussion
142 <https://home.alb42.de/versuche/english/v44-1-10.html> - [https://en.wikipedia.org/wiki/Copper\(II\)_chloride](https://en.wikipedia.org/wiki/Copper(II)_chloride)
143 See 61 Kobs p. 18
144 See 7 FFM final, annex 5
145 See 7 FFM final (Annex 5). p.63
146 See 8 IIT fig 50
147 See 7 FFM final (Annex 5). p.63
148 See 7 FFM final, annex 5
149 See 61 Kobs p.19
150 (Annex 5). p.63 "observed changes to the scene" shows the color change, but makes no mention of it. Nor, it seems, does the report at large, nor the IIT report, that author has noticed.
151 See 7 FFM final, Annex 5
152 See 7 FFM final, 8.18, and IIT 6.57
153 See 8 IIT 6.70
154 See 7 FFM final Annex 5
155 See 8 IIT 6.44
156 See 8 IIT 6.52
157 <https://thegrayzone.com/2023/02/03/opcw-smoking-gun-backfires/>
158 The author, Monitor on Massacre Marketing, December 2018. [2014 Chlorine Attacks and the OPCW's Loss of Trust](#) and Dr Piers Robinson [From Sarin Nerve Agent Attacks to Chlorine Gas; the Syria Chemical Weapons Story Telling Continues](#). Substack. Jun 03, 2025.
159 <https://www.dailymail.co.uk/news/article-7793253/PETER-HITCHENS-reveals-evidence-watchdog-suppressed-report-casting-doubt-Assad-gas-attack.html>
160 See 16 [minutes]

161 See 16
162 See 16 (team leader named as Sami Barrek)
163 See 7 FFM final 8.68
164 [UKHSA Incident Management Hydrogen chloride.pdf \(gov.uk\)](#)
165 <https://www.ncbi.nlm.nih.gov/books/NBK537213/>
166 https://www.ncbi.nlm.nih.gov/books/NBK537213/#_article-30320_s10
167 <https://libyancivilwar.blogspot.com/2017/02/does-chlorine-make-you-pass-out.html>
168 Ibid. passout
169 See 7 FFM final, 8.96
170 The author's colors and labels on a 3D model from the New York Times video report (see 103)
171 Associated Press video https://www.youtube.com/watch?v=120_Wik62-c
172 See 18 Draft, 7.84
173 See 18 Draft 7.82, 7.83
174 Team member named as Marc-Michael Blum. See 17 e-mails https://wikileaks.org/opcw-douma/document/correctly_redacted_emails_re_toxicology_minutes/
175 See 7 FFM final, annex 3
176 See 7 FFM final 8.103, 9.6
177 See 8 IIT 8.15
178 See 8 IIT 6.111
179 See 8 IIT 6.107
180 <https://www.atsdr.cdc.gov/toxprofiles/tp172.pdf>
181 See 18 Draft, 7.84
182 See 15 Inspector A p. 10-191, see 143? pass-out
183 See 7 FFM final 8.97
184 See 8 IIT 6.105
185 [https://eyewiki.org/Chemical_\(Alkali_and_Acid\)_Injury_of_the_Conjunctiva_and_Cornea](https://eyewiki.org/Chemical_(Alkali_and_Acid)_Injury_of_the_Conjunctiva_and_Cornea)
186 https://www.health.harvard.edu/a_to_z/chemical-injury-to-the-eye-a-to-z
187 <https://www.cdc.gov/chemical-emergencies/chemical-fact-sheets/chlorine.html>
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189 <https://libyancivilwar.blogspot.com/2018/07/irritated-eyes.html>
190 <http://listverse.com/2012/10/26/10-fascinating-stages-of-death/>
191 See 16 minutes
192 See 17 e-mails. The team member was named as Marc-Michael Blum
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197 See 8 IIT 8.19
198 <https://x.com/CL4Syr/status/1209500863577743361>
199 Douma's Mask of Death, part 1 <https://libyancivilwar.blogspot.com/2018/04/doumas-mask-of-death-part-1.html>
200 <https://libyancivilwar.blogspot.com/2018/04/douma-cw-massacre-victim-analysis.html>
201 Ibid. mask of death
202 See 7 FFM final 8.101
203 Ibid.
204 See 8 IIT 6.105, 6.118
205 <https://libyancivilwar.blogspot.com/2018/05/douma-chemical-massacre-april-7-2018.html>
206 Ibid. washing
207 See 7 FFM Final 8.102
208 Douma Chemical Massacre – How the Victims were Killed, by Whom, and Why
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