

Pigeon Poop on the Pump Handle:
A Critique of the Report of the UN Mission to Investigate the Use of Sarin in Damascus

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“In particular, the environmental, chemical, and medical samples we have collected provide clear and convincing evidence that surface-to-surface rockets containing the nerve agent Sarin were used in Ein Tarma, Moadamiyah and Zamalka in the Ghouta area of Damascus.”

– Sellstrom Report, pg. 5

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§A. Introduction

1. Objectives and organization of the present paper	4
2. Background	4
a. The Aug21.2013 Ghouta attack	4
b. The UN Mission’s response	5
3. Brief statement of findings and conclusions of the Sellstrom Report	6
a. The nature of the evidence	6
b. The facts	6
c. Sellstrom’s primary conclusion and the evidentiary triad	7

§B. Surface-to-surface rockets

1. Limitations with the physical/environmental evidence generally	7
a. The Sellstrom Report was co-produced by the insurgents	7
b. Cherry-picked facts tacitly point to Assad	9
2. Rocket evidence	10
a. Significance of determining that surface-to-surface rockets were used	10
b. Inventory of the rocket evidence in the Report	11
c. Interpretation of the rocket evidence	13
d. Rocket trajectories	13

§C. Sarin

1. Limitations with the collection/analysis of the sarin evidence generally	14
a. The Mission’s real goal: find sarin	15
b. Concealing Methods and Identity of Laboratories	15
c. Total lack of quantitative data	16
2. Connecting the rockets/impact sites to sarin	17
a. Moadamiyah	17
b. Ein Tarma and Zamalka	18
3. Conclusions regarding sarin	18

§ D. “Used”

1. Problems with the clinical/biological evidence generally	19
a. Insurgent-selected subjects	19
b. Failure to identify subjects	19
c. Failure fully to report the results indicates, at best, a lack of objectivity	20
2. The evidence that sarin was used, <i>vel non</i>	21
a. Fatalities?	21
b. Symptoms – as of when?	21
c. Symptom signatures – constellation	22
d. The biological and analytical limits of assessing “sarin exposure” after 9 days	23

§ E Plenary Conclusions

The evidence derived from environmental, chemical, and medical samples as reported by the Sellstrom Report constitutes neither clear nor convincing proof that any surface-to-surface rocket containing the nerve agent sarin was involved in the alleged CW attack against Ein Tarma, Moadamiyah, or Zamalka in the Ghouta area of Damascus on Aug21.2013. Although limited evidence has been found that may be consistent with the release of sarin in one or more of those communities, because of the likelihood that some or all of the evidence made available to the Mission was tainted by parties to the conflict, no valid conclusions can be drawn

§A. Introduction

1. Objectives and organization of the present paper

I have before me a document titled *UN Mission to Investigate Allegations of the Use of Chemical Weapons in the Syrian Arab Republic – Report on Allegations of the Use of Chemical Weapons in the Ghouta Area of Damascus on 21 August 2013*. I refer to this document as the “Sellstrom Report” or simply the “Report.” It can be [obtained](#) in .pdf format online.²

The Report comprises 5 pages of analysis and 33 pages of appendices, which appendices include several photographs, graphs and tables. Attached to the Report is a two page cover document titled “Note by the Secretary-General,” which is not signed, dated, or otherwise identified as to its source or author. Also attached to the document is a one-page transmittal letter dated Sep13.2013 and signed “Professor Ake Sellstrom (Head of Mission), Mr. Scot Cairns (Head of and signing for the OPCW³ Component), Dr. Maurizio Barbeschi (Head of and signing for the WHO⁴ Component).” I refer to these gentlemen as “the authors.”

The objective of the present paper is very narrow: to understand the findings of the Sellstrom Report and to verify its primary conclusion, which is quoted on page 2, above. This paper does not represent an attempt to understand what happened at Ghouta. Rather, it is an attempt to understand what the Sellstrom Report says happened at Ghouta, and for that reason I restrict myself as much as possible to what is within the four corners of the Report.

This is, necessarily, a lengthy analysis of a complex event and investigation. The reader may want to take it section by section. By that I mean look at each section as a separate analysis; contemplate the points and criticisms I raise; review the Report, the videos, online documents, and other materials provided; and objectively critique my critique. And then move to the next section. But why bother at all? I am asking myself that question as well as asking you.

While the fervor for a retaliatory attack on Syria in response to the Ghouta incident has dropped

dramatically as a result of diplomatic efforts of Russia, the US, and Syria, there is still the unfinished business of determining what happened, determining who is responsible, and punishing the guilty parties. If the civilized world does not apprehend, adjudicate, and punish those who commit the most heinous of crimes, then these atrocities will proliferate and be rewarded. But we must get it right, and it is in the spirit of getting it right that this critique is offered.

In my opinion, the Sellstrom Report does not get it right, and it’s conclusions are not adequately supported by the facts presented by the Report, not by a long shot. The Report is so confusing, contradictory, and incomplete with respect to the presentation of data, facts, and other information that no valid conclusion about anything that happened at Ghouta on Aug21.2013 can be fairly drawn. Furthermore, given the role of the insurgents in co-producing the Report and providing the evidence, and given that the areas of interest and the evidence were completely unsecured for 6-9 days between the attack and being investigated, the evidence is too suspect to be of much value in determining what happened.⁵ In short, the Sellstrom Report comes across more as a PR effort for the insurgents trying to bring down Assad than as a fact-finding mission of the UN.

The conclusion I have come to after spending weeks wading through the Report and trying to understand its contents is that if the objective of the Mission was, as Sellstrom asserts, to “ascertain the facts related to the allegations of the use of chemical weapons” in Ghouta, then the Sellstrom Report is about as helpful as pigeon poop on the pump handle. The present paper explains why I have reluctantly come to that conclusion.



2. Background

a. The Aug21.2013 Ghouta attack

In the early hours of Aug21.2013 YouTube channels of Syrian insurgents started filling up with videos of alleged chemical weapons atrocities that the videos claimed had taken place – and were taking place – in the Ghouta region of Damascus. Babies, children, women, and men by the scores were shown dead and

² http://logosphere.com/Syria/Syria%20Docs/Secretary_General_Report_of_CW_Investigation.pdf

³ Organization for the Prohibition of Chemical Weapons – an international organization independent of the UN that administers the Chemical Weapons Convention

⁴ World Health Organization – an agency of the UN.

⁵ I repeatedly refer to this 6-9 day delay. Given that the attack was at about 2am on Aug21, and given that the samples were taken during the afternoons of Aug26, Aug28 and Aug29. the samples were collected more than 5.5, 7.5, and 8.5 days later, rounded up to 6, 8, and 9.

dying, but without visible bodily trauma, wounds, or blood. It appeared that these poor souls were victims of a CW attack.

These gruesome videos were produced and uploaded by various insurgent groups trying to bring down Assad – one can tell who produced them by the logos that proudly appear in each vid, usually in the upper left corner. Google translations of the Arabic titles and text attached to many of the videos claim that Assad was responsible. It is clear that the intent of those producing the videos was obviously to enrage the world against Assad, and that’s pretty much what they did.

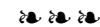
My initial impression was that these videos were very suspicious. For one thing the vids were uploaded within a couple hours of the attack, and yet many of them were able to definitively identify the CW agent being used as sarin, an organophosphorus agent that is also referred to as “GB.” For instance, one video ([Vid #001](#)⁶), which was provided to Congress by Obama’s people, is titled “Infected and martyrs as a result of the bombing of sarin on Zamalka Bdoma crimes Assad 21-08-2013.” Another video provided to Congress ([Vid #003](#)⁷) carries the title: “Always: dozens of martyrs as a result of the bombing of al-Assad chemical sarin on Zamalka.” (These are Google translations of the Arabic titles given on the vids.)

I have a PhD in pharmacology, and, to be honest, it doesn’t come in handy all that often. But it did this time. For the life of me, as a pharmacologist, I could not understand how anyone could look at those vids flooding out of Syria on Aug21 and conclude that the victims had been gassed with sarin. Even if one accepted that there was a CW attack, the agent that was used could have been any of a dozen or twenty different possible agents. Without the perpetrators themselves telling you what agent they used, there was no way to know it was sarin without some pretty serious chemical analyses. How could these insurgents be so certain within a couple of hours of the attack that the agent was sarin unless they had been told by those responsible, where “those responsible” is a PC euphemism for “the colon-scum who killed those kids”?

Think about it. The only people who could have known at 6 am GMT what agent was used 3 hours earlier were the actual colon-scum using the agent. And given that the people making the videos knew it was sarin, then logic tells us that the people responsible for the attack and the people making the videos were either the same colon-scum or so closely associated as to be co-conspirators, which is to say co-colon-scum.

You can see where I’m going with this line of thought: the hypothesis that the people who were publishing the videos and alerting the world to a “sarin” attack were the same people responsible for the attack. Thinking back to 8th grade, you may recall how the guy in class who was the first one to point at others around him was inevitably the one who farted. Same principle; it’s universal.

And so, before the sun rose on NYC on Aug21, the MSM all around the world were screaming “SARIN!!!” and whatever happened in Ghouta was internationally christened as “THE sarin attack.” Within hours rumor had become reality without first passing through the difficult but time-consuming process of fact-checking. And without one iota of skepticism. Most disappointing – and dangerous – of all were USG people like Obama, Hagel, Kerry, McCain, Graham. Doing their best to avoid appearing capable of contemplative analysis of this tragic and potentially dangerous international crisis, they immediately began braying for Syrian blood, using the polite but deadly euphemism of a “limited retaliatory attack.” This was, after all . . . sarin.



b. The UN Mission’s response

Even as all of the drama was unfolding in Ghouta, virtually just around the corner a tiny group of the most highly trained people in the whole world for investigating CW attacks was rising, showering, and heading for breakfast. A UN Mission comprising CW investigators from the UN, WHO, and OPCW was already in Damascus, having been sent there to investigate prior allegations of CW use.

If you are gullible enough, you may think that it was a complete coincidence that the UN Mission was in Damascus when the Ghouta attack occurred just a few kilometers from their hotel. But think about it: on the morning of Aug21 insurgents (who magically knew the attack was by sarin) were making videos and broadcasting the sarin allegation to the world; and the same insurgents knew the UN Mission was in Damascus and where they were staying, which turns out to be a short crow-flight from where the attacks happened; and

⁶ Video numbers in this paper refer to a [table of related videos](#) I have been compiling. Links to the videos and short descriptions can be found in that table. <http://logosphere.com/Syria/Table%20of%20Vids.htm>

⁷ https://www.youtube.com/watch?v=KTSVC-FrQzw&list=PLO_vQ_Y4IJ5B1ID1kCN-PRDm9A7aLeSkX&index=3

the same insurgents also knew that Obama had threatened to thump Assad if Assad was ever caught using CW. If you are dim enough to see only mere coincidence in this remarkable set of circumstances, then you are not likely going to be able to work your way through this paper. You might as well stop here and save yourself the frustration.

It took them almost six days to whip into action but the UN Mission eventually diverted from their scheduled investigation in the northern part of Syria in order to investigate whatever happened in Ghouta. Although the MSM blamed the delay on Assad, that was, apparently, not the case. According to [a video](#) of a daily press briefing by UN spokesman, Farhan Haq, on Aug27.2013, the UN did not make a formal request to the Syrian government to investigate the Ghouta allegations until Angela Kane arrived in Damascus on Aug24.⁸ In the mean time the evidence was deteriorating.

The diversion of the UN Mission to Ghouta meant two things: 1) the Mission would not investigate the prior alleged CW attacks, for which Russia had already published evidence implicating the insurgents, and 2) the Mission would focus its attention on CW attacks that occurred in areas controlled exclusively by the insurgents, meaning the insurgents controlled both access and evidence. This whole thing could not have worked out better for the insurgents politically and militarily if it had been planned.⁹

And so, instead of investigating the allegations of prior CW attacks for which there was already strong evidence of the insurgents' guilt, the Mission was diverted to Ghouta where for 7.5 hours over three days they collected evidence of an attack that the world was sure was a sarin attack and that Obama was already accusing Assad of. The Mission collected physical evidence provided by the insurgents, they took blood, urine, and hair samples from subjects provided by the insurgents, they then went back to Geneva or wherever they came from and analyzed what they had. Three weeks later, on Sep13.2013, the leaders of the Mission, Ake Sellstrom, Scott Cairns, and Maurizio Barbeschi, presented the Sellstrom Report to the UN . . . and to an angry, waiting world.

Before turning to my critique of the Sellstrom

Report – which is going to get extremely pointed – I want to make it clear that whatever criticisms I express here are criticisms of executive decisions made in planning the Mission and decisions made in reporting of results – decisions like what evidence to collect and what evidence to ignore, what data to report and what data to conceal, and, of course, the conclusions. I have immense admiration for all of those individuals who were willing to wade into this volatile and, possibly, toxic environment to collect the evidence. Nothing herein is intended to detract from the world's appreciation for their efforts and admiration of their courage.



3. Brief statement of findings and conclusions of the Sellstrom Report

a. The nature of the evidence

The evidence developed by the Mission relative to the Ghouta attack is reported in various tables, graphs, and textual format, as discussed further below. It falls into the following six categories:

- Visual inspection of physical objects and places such as rocket components, impact sites, living areas, and personal property found in living areas.
- Chemical analysis of 30 samples taken from physical objects and places, said chemical analysis apparently limited to the detection of sarin, its precursors, metabolites/break-down products, and “other interesting chemicals.”
- Physical examinations and/or pertinent medical histories of 36 purported survivors.¹⁰
- Chemical analysis of 34 blood samples, 15 urine samples, and 4 hair samples obtained from the aforementioned purported survivors, said chemical analysis apparently limited to attempts to detect or ascertain “sarin exposure.”
- Review of medical records of 8 alleged victims.
- Eye-witness statements from the aforementioned purported survivors and 9 health-care providers.



b. The facts

Page 5 of the Sellstrom Report sets out explicit facts

⁸ <http://webtv.un.org/watch/daily-press-briefing-sg-travel-to-the-netherlands-syria-iran-palestine-darfur-afghanistan-sg-appointment-major-general-imam-edy-mulyono-indonesia-force-commander-of-the-minurso/2632263081001>

⁹ Let me say that again for effect: “if it had been planned.”

¹⁰ The “and/or” is used here because, as discussed below, the Sellstrom Report does not reveal whether the clinical information is based on the subjects' self-reporting of symptoms occurring at the time of the attack or on the investigators reporting of symptoms 6-9 days later at the time of examination.

derived from the foregoing types of evidence.¹¹ The facts are:

- The Mission found impacted and exploded surface-to-surface rockets.
- The rockets were capable of carrying a chemical payload.
- The rockets contained sarin.
- The “area” where patients were affected was close to the rocket impact sites.¹²
- The environment of the aforementioned “area” was contaminated by sarin.
- More than 50 interviews given by survivors and health care workers corroborated “medical and scientific results.”¹³
- “A number” of patients/survivors were “clearly” diagnosed as “intoxicated by an organophosphorus compound.”¹⁴
- Blood and urine samples from the same patients were found “positive for Sarin and Sarin signatures.”¹⁵

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c. Sellstrom’s primary conclusion and the evidentiary triad

The primary conclusion that Sellstrom asserts as being supported by the foregoing facts is quoted at page 2, above. It is broken down into its components as follows:

- Surface-to-surface rockets containing . . .
- sarin, were . . .
- “used in” . . .
- Moadamiyah, . . .

¹¹ Page numbers of the Sellstrom Report given in this paper refer to actual Report page numbers. To convert from a .pdf page number to an actual page number, subtract 3.

¹² The singular “area” is used in the Report although 5 impact sites in at least two communities miles apart are disclosed.

¹³ This doesn’t say that more than 50 survivor/health care workers gave interviews, only that there were more than 50 interviews. It is clear from the Report that some survivors were interviewed more than once and for more than one purpose.

¹⁴ The fudged term “a number” is used in the Report instead of providing a precise number. Also, amazingly, Sellstrom doesn’t assert as an enumerated fact that the patients/survivors were intoxicated by sarin, specifically.

¹⁵ Hopelessly ambiguous. Presumably “same patients” refers to the blood and urine samples, and not to the patients referred to previously.

- Ein Tarma . . . and,
- Zamalka.

This conclusion suggests an evidentiary triad that is useful in assessing the validity of the conclusion. For in order for the conclusion to be valid the Report must present for each of the three listed communities: 1) a surface-to-surface rocket; 2) a victim; 3) a location (impact site) – and all three must be linked to each other and to sarin. I see it as a triad forming the base of an evidentiary pyramid with sarin at the apex. But at the end of the day the Report must provide us with at least three such sarin-connected triads – one each for Moadamiyah, Ein Tarma, and Zamalka – otherwise Sellstrom’s conclusion is false, or at least not supported.

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§B. Surface-to-surface rockets

The primary physical evidence that the Sellstrom Report discloses relates to rockets and their components, which is the first element of the evidentiary triad. Finding rockets and rocket fragments in these areas should not represent a problem. After all, Assad has been shelling these areas for well over a year. And so the only difficulty here is finding rocket components that test positive for the only CW the Mission was apparently looking for: sarin.

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1. Limitations with the physical/environmental evidence

This first sub-section of §B. is a discussion of the physical/environmental evidence generally. It will be helpful to get these general observations out of the way before focusing on rockets specifically in sub-section 2.

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a. The Sellstrom Report was co-produced by the insurgents.

The areas of Damascus that the Mission investigated – Moadamiyah, Ein Tarma, and Zamalka – are controlled by insurgent groups trying to take down Assad. No one disputes that. It was therefore necessary for the Mission to obtain an agreement from both the Syrian Arab Army (SAA) and the insurgents for a temporary cease-fire so the UN teams could get in there and get their evidence. The agreed cease-fire was for 20 hours divided over 4 days, although for some reason the Mission actually investigated only 7.5 hours over 3 days (and later complained about how little time they had to complete the mission). (Sellstrom Report, pg. 3)

There is no statement in the Report that the sites were chosen by the Mission without prior notice to the insurgents, which is what would have happened in the best of circumstances. Instead, the Report describes how the planning of the entire investigation was a joint effort between the Mission and the insurgents, even though for all Sellstrom knew the same insurgents he was partnering with were responsible for killing the women, children and babies the world was seeing in the videos.

But a partnership it was. The subjects that were examined were provided by the insurgents. The places that were visited were predetermined by the insurgents, and a local insurgent leader provided security for each area to be visited and was placed in control of the Mission. (e.g. Sellstrom, pg. 10) We can see from videos taken of the Mission on the ground that the Mission teams were constantly and closely surrounded by armed insurgents.

There are a number of videos out there showing the Mission teams in action and showing how closely the insurgents controlled the Mission. One example is a PR interview with Deputy Head of the Mission Scott Carins produced by OPCW. (Vid #019¹⁶) There are numerous video clips included in the OPCW vid showing UN personnel absolutely surrounded by insurgents. Here's a screen grab of one of those clips.



Fig 1. Screen shot from Video #019 at 02:22

There are a couple of ancillary points that arise when viewing this screen shot and the entire OPCW video. One issue is how incredibly well equipped the insurgents are. New uniforms. New ammo belts. Lots of personal firearms, most of which are American M16s, an indication of where the insurgents are getting their support.

The other issue that arises is harder to see in the screen shot, but in the upper left-hand corner there is a tiny white statement: "Video by local resident." And if you peer hard enough, just under that statement you

¹⁶ <https://www.youtube.com/watch?v=YXxnzcYWRy0&feature=youtu.be>

can see a blur where the original video's logo has been pixellated into oblivion. This is true of most of the clips spliced into the OPCW vid: they have all been sanitized of these logos.

The logos that were erased identify the insurgent groups that took the video clips used by OPCW. By claiming the videos were taken by "local residents" and by blurring the logos that identify the insurgent groups that actually took the videos, the OPCW comes across as removing evidence indicating that the "local residents" were actually members of insurgent groups that were present during the investigations, and that those insurgents later shared their videos with the OPCW for its PR effort. But the larger point here is the fact that the insurgents controlled what the Mission would see.

Fig. 2, for instance, is another screen shot from the OPCW vid. (Vid #019.) It is from a clip showing a what looks like a munitions casing being examined by a UN Mission guy bearing the number "C10."¹⁷



Fig 2. Screen shot from Video #019 at 01:08

What is interesting about the shell or "munition" is how pristine it is – barely a scratch on it, and there are no indications of impact on the concrete around it. It looks almost like an artillery casing. The ends of the shell, where one might expect the most impact damage, are in perfect condition. What is going on here?

Well, my working hypothesis, had I come on this "munition," would be that someone dropped it there. If it later turned out to be contaminated with sarin, I would hypothesize that whoever dropped it had access to sarin. Given that the insurgents controlled this entire area before the Mission showed up, and given that we know the insurgents have access to sarin, this hypothesis seems entirely reasonable.

Sellstrom acknowledges the potential for the evidence being tainted in two brief passages, page 18

¹⁷ This may be the same munitions casing described and diagramed at pages 18-19 of the Report, but it is not possible to make that statement definitely from what we are told in the Report.

and page 22. But he offers no insight as to his decision that in spite of the evidence being very possibly – very likely – tainted it was alright to use it to draw conclusions that could produce extremely unfortunate and unintended consequences.

Here is the dilemma: there are two leading suspects for this crime and one of them controls all of the evidence.

The two competing hypotheses regarding the Aug21 attack are that it was perpetrated by 1) Assad's SAA against the insurgents, or 2) by the insurgents as a false flag operation to draw the US into the conflict against Assad. Obama and various members of the USG, including members of Congress, have assumed hypothesis #1 and have accused Assad publicly of being guilty of the Aug21 attack, which, according to the USG, justifies a retaliatory attack on Assad and also justifies, according to pro-Israeli hawks like McCain and Graham, removing Assad from power. We now know how close to a military attack Obama was: he gave Israel a 48 hour advance warning that it was coming.¹⁸

While the Mission was not tasked with determining who was responsible, it almost goes without saying that the evidence the Mission collected would ultimately be applied to resolving the question of guilt, and the answer to that question will likely determine whether the USG attacks or otherwise punishes Assad. But the insurgents had complete and unfettered access to all of these places, pieces of evidence, and witnesses for almost a week before the Mission's investigation started.

If the insurgents were the ghouls who gassed hundreds of women and children – and Sellstrom did not know whether or not that is the case – then the insurgents would certainly go to any extent necessary to rig the evidence so that it points to Assad. But in order for this investigation to take place, it had to be co-produced by those who have, for all Sellstrom knows, blood on their hands. The ethical ramifications of this inescapable dilemma are enormous, but are ignored by the Report.

If this was an investigation of a murder case in which there are two suspects – and ultimately it is – it would be as if only one of the suspects controlled all of the evidence and all of the witnesses. Any evidence obtained under such conditions would likely be deemed inadmissible in court, or if it was admitted, it would be ignored by any fair-minded jury. Which begs the question: What was the point of the Mission if they

could not exclude the very real possibility that the only evidence they had access to was tainted? It is almost as if the entire UN Mission turns out to be a PR exercise for the insurgents, and I think that needs to bother us.

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b. Cherry-picked facts tacitly point to Assad

Over and over again Sellstrom reminds us that the objective of the Mission was not to allocate blame but to collect facts. And yet, there are a couple points in the Report at which the authors' bias against Assad tacitly seeps through, leaving the reader with a generalized impression that this attack really was Assad's dirty business.

Russian Deputy Foreign Minister Sergy Ryabkov makes this point in his Sep18.2013 interview on RT. See [Vid #020](#).¹⁹ For instance, as Ryabkov points out, if Sellstrom was really trying to produce an objective report why did he ignore the evidence given to him by the Syrian government? I mean, Sellstrom was certainly happy enough to let the insurgents contribute. One would think that out of a sense of basic fairness, if not objectivity, Sellstrom would also consider Assad's information and evidence. But there is no indication in the Report that anything Assad's people had to say was considered.

Another instance of cherry picking what information is presented is at page 4 of the Report where there is a short section titled "Weather conditions in Damascus on 21 August." Weather conditions?? Well, if you consider the statement that the air temperature was dropping between 2:00 am and 5:00 am to be a statement of the weather conditions, maybe so. That's the only condition Sellstrom chooses to disclose, and, with all due respect, that observation turns out to be technically correct but technically irrelevant.

For instance, Sellstrom does not tell us what the actual air temperature *was*, which is highly relevant to the rate of decomposition and volatilization of many CW agents. Humidity and precipitation are also important factors, and they were also not revealed. Nor is there any mention of wind speed or direction, which is obviously extremely relevant to the extent, rate, and direction of movement of a gaseous or volatile CW.

No, all that Sellstrom wants us to know about the weather in Damascus that night is that the air temperature was dropping. In this same "weather-section," instead of telling us pertinent information

¹⁸ [Times of Israel](http://www.timesofisrael.com/us-was-so-sure-it-was-striking-syria-it-made-warning-calls-to-israels-leaders/), Oct05.2013, Raphael Ahren
<http://www.timesofisrael.com/us-was-so-sure-it-was-striking-syria-it-made-warning-calls-to-israels-leaders/>

¹⁹ <https://www.youtube.com/watch?v=FZ69OKp3-48>

about the weather, Sellstrom tells us that dropping air temperatures means the air will be sinking and that this favors CW use because falling air maximizes the potential impact of CW “as the heavy gas can stay close to the ground and penetrate into lower levels of buildings and constructions where many people were seeking shelter.”

Seeking shelter?? From what, the elements? There was no rain, or snow, or sleet. It was a clear, pleasant night in Damascus on Aug21, and these people were sound asleep when the attack began, according to the story-line developed in the Report. The temperature had almost stabilized by 2 am. It dropped just 2° C. between 2 am and 5 am.²⁰ Contrary to Sellstrom’s theory, this two degree drop had no affect whatsoever on the dispersion of sarin or any other gas, given that the predominant weather feature was a moderate wind, gusting to 7-8 mph from the west. This wind would have obviated the sinking and pooling of any toxic gas envisioned by Sellstrom.

Furthermore, Sellstrom’s speculation that a downward air current – which didn’t exist because of the wind – would maximize the potential impact of CW by keeping the gas near the ground makes little sense when one sees the videos of these areas. All of these buildings are high-rises. We have no evidence and no reason to conclude that the victims were “seeking shelter” in “lower levels of buildings and constructions.” For all we know they were sound asleep 10 to 100 feet off the ground – well above any CW that would be “sinking” according to Sellstrom’s theory and painfully limited meteorological analysis.

This rather bizarre weather section is most revealing not in what it tells us about the weather but what it tells us about Sellstrom’s bias. Ostensibly, they went in there investigating *allegations* that there was a CW attack. And yet Sellstrom takes what should have been a simple statement of the weather conditions, strips out all of the relevant weather information, and substitutes his speculation about why the CW attack took place in the wee hours, thus tacitly turning an alleged CW attack into an actual one.



2. Rocket evidence
 - a. Significance of determining that surface-to-surface rockets were used.

“Information gathered about the delivery systems used was essential for the investigation.” (Sellstrom Report, pg 4)

The first point to be made here is that the Report’s authors clearly presupposed that there were delivery systems – rockets. Why? We know very well that sarin can be used effectively just by using the tip of an umbrella to punch a hole in a baggie full of it, as was done in the 1995 Tokyo subway attack. You don’t need rockets to kill people with this stuff.

And it is significant that Sellstrom has included the detail that the attack was carried out by surface-to-surface rockets in his primary conclusion. If the evidence takes you there, then that’s where you have to go. But if the evidence doesn’t connect sarin to the rockets, then there’s an ethical problem in concluding that rockets were used.

The problem is that there is a tacit, unspoken assumption that if sarin gas was delivered by surface-to-surface rockets, then this must be an SAA attack. Approaching this from the other direction: If the Report had concluded that the sarin had been deployed by baggies or some means other than rockets or munitions, then there would be a strong presumption that the SAA was not responsible.

It is by connecting the sarin to the rockets that Assad is implicated, at least in the eyes of the hawks in the USG. After all, it is not difficult to manufacture sarin; the 1994 and 1995 sarin attacks in Japan make that clear. But handling and packaging sarin so that it can be delivered by a rocket – weaponizing it – requires a whole different level of expertise. And, of course, the whole world knows Assad has weaponized sarin and has stockpiled rockets full of it in order to defend Syria against Israel.

So while the Mission was not tasked with pointing any fingers, when it makes statements or comes to conclusions that sarin was delivered by rocket, there is a tacit pointing of a finger at Assad. Obama strutted out this same reasoning: we know Assad was responsible because only Assad had the capabilities. By “capabilities” Obama was referring to the rockets and weaponizing technology – not making sarin – because it is known that various of these insurgent groups has the capability to make sarin or to obtain it from Iraq and Turkey.²¹

²⁰ [Weather report](http://www.worldweatheronline.com/damascus-weather/damascus/sy.aspx?day=21)
<http://www.worldweatheronline.com/damascus-weather/damascus/sy.aspx?day=21>

²¹ [RT 'Al-Qaeda and Al-Nusra in Syria may have significant amounts of sarin' Sep17.2013](http://rt.com/op-edge/syria-rebels-have-sarin-980/)
<http://rt.com/op-edge/syria-rebels-have-sarin-980/>

b. Inventory of the rocket evidence in the Report

At page 4 of the Report Sellstrom says that “several surface to surface rockets capable of delivering significant chemical payloads were identified and recorded at the investigated sites.” The use of the word “several” does not exactly inspire confidence that we are getting the most precise information. If these rockets were examined, photographed, and the data recorded, why not say precisely how many rockets there were?

Again, on page 5 of the Report we are told that surface-to-surface rockets were found to contain sarin, but we are kept in the dark as to how many. This is typical of the hide-the-ball game Sellstrom plays throughout the Report with hard numbers. He prefers to let us try and dig the numerical information out of the Report ourselves, and it’s not an easy task, particularly when the information turns out not to be there at all.

The following table attempts to make sense of all of the disclosures regarding rockets and the impact sites. The table is organized as follows:

- In the left column, rockets are designated with an “R” number, impact sites with an “I” number. The

number itself is the page of the Report on which the rocket or impact site is first disclosed.

- The second column summarizes the Report’s physical description of each rocket and impact site mentioned.
- The third column summarizes information about where the rocket/impact sites were found, and attempts to connect the rockets/impact sites to the data tables.
- The fourth column attempts to summarize the Report’s assertions connecting rockets/impact sites to sarin.

One of the difficulties in this exercise is that Sellstrom uses multiple terms – rocket, rocket motor, warhead, munition – and it is sometimes not clear whether he is talking about one object, different components of a single object, or entirely different objects. He may not know himself, which may be why he declines to go on the record as to how many rockets they examined. At any rate, all such devices or components are listed here as separate “rockets” unless it is absolutely clear they are components of the same object.

Table 1.

	Rocket/Impact site	Location, notes, and relation to Tables 6 and 7.1	Evidence of sarin
R-18	<ul style="list-style-type: none"> • Intact rocket motor “coincident” to an impact site. • Warhead apparently not found. [They refer to “rocket motor” and “munition.” Is a motor a munition?] • L.~63.0 cm. W ~14.0 cm. • engine had 10 jet nozzles in a circle. • Photos and diagrams provided 	<ul style="list-style-type: none"> • Moadamiyah • Trajectory determined as coming from east [Is this the site designated Impact Site #1? Can’t tell.] • Debris found in adjacent apt bldg. but “no intact identifiable munitions fragments were located.” 	<ul style="list-style-type: none"> • This rocket is not mentioned in the tables and is not described as related to any sarin sample or test.
I-18	<ul style="list-style-type: none"> • Impact site associated w/ R-18 • Backyard terrace of an apt. bldg. • No indication of blast/explosives, according to report. 		

	Rocket/Impact site	Location, notes, and relation to Tables 6 and 7.1	Evidence of sarin
R-19a	<ul style="list-style-type: none"> • “Munition” • “unguided rocket” • 6 stabilizer fins • Motor: L ~134 cm; Dia ~12 cm • Central tube of warhead: L ~70cm; Dia ~12cm • Vol of warhead: 56 liters • Warhead did not “function” prior to impacting roof. [?] • Photos and diagrams provided 	<ul style="list-style-type: none"> • Zamalka/Ein Tarma • Arrived from NW [Is this the site designated Impact Site #4 at Ein Tarma? Can’t tell.] • Not at all clear what they’re talking about. How does a rocket found on a roof come to rest in a room below? If it’s in the room below, it’s no longer on the roof. 	<ul style="list-style-type: none"> • This rocket is the only one associated with a roof. Sample SN 18, Table 7.1, is the only rocket sample associated with a roof. • Samples SN 14-17, 19, & 20 of Table 7.1 refer to the only non-rocket samples taken from a roof, which may be this impact site, although this is not stated anywhere. • The Report does not resolve these ambiguities.
I-19a	<ul style="list-style-type: none"> • Impact site associated w/ R-19a • “Alleged munition impact.” ?? • Roof of 5-story bldg. • Penetrated cinder block wall then a re-bar containing wall (concrete?), came to rest in room below. 		
R-19b	[Not separately described. “Same type munition” as R-19a.]	<ul style="list-style-type: none"> • Zamalka/Ein Tarma 	<ul style="list-style-type: none"> • This rocket is not mentioned in the tables and is not described as related to any sarin sample or test.
I-19b	<ul style="list-style-type: none"> • Impact site associated w/ R-19b • Open field near I-19a 		
R-23a	<ul style="list-style-type: none"> • “Munition” • Matches M14 artillery rocket • Warhead not observed – it was either original or improvised. [Is there a third possibility?] 	<ul style="list-style-type: none"> • Moadamiyah • It is not possible to determine whether this is the same rocket as R/I-18, above. Report does not say. 	<ul style="list-style-type: none"> • This rocket is not identified in the tables and is not described as related to any sarin sample or test.
I-23a	<ul style="list-style-type: none"> • Labeled “Impact Site #1” by Report • Associated w/ R-23a • Shallow crater in ground • Azimuth = 215 degrees 		
I-23b	<ul style="list-style-type: none"> • Labeled “Impact Site #2” by Report • 65 meters from I-23a • Azimuth = 214 	<ul style="list-style-type: none"> • Moadamiyah • No rocket associated w/ this site 	<ul style="list-style-type: none"> • No rocket and no sarin associated with this site.
R-23c	<ul style="list-style-type: none"> • 330 mm artillery rocket 	<ul style="list-style-type: none"> • Ein Tarma • It is not possible to determine whether this is the same rocket and impact site as R/I-19a, above. Report does not say. 	<ul style="list-style-type: none"> • This rocket is not identified in the tables and is not described as related to any sarin sample or test.
I-23c	<ul style="list-style-type: none"> • Labeled “Impact Site #4” by Report • Associated w/ R-23b • Earthy, relatively soft ground • Azimuth = 105 		

	Rocket/Impact site	Location, notes, and relation to Tables 6 and 7.1	Evidence of sarin
I-22a	<ul style="list-style-type: none"> These sites inferred from comment on pg 22 that 5 impact sites were investigated. Presumably they would be Impact Sites #3 and #5 	<ul style="list-style-type: none"> No information given on these sites other than that a trajectory could not be obtained. 	<ul style="list-style-type: none"> No rocket and no sarin associated with these sites.
I-22b			
R-31	Table 7.1: SN 21, 22, 24- 26 – These items refer to one or more rockets, ordinance, munitions etc. that are not identified to any impact site, location, or rocket described in the text.		

c. Interpretation of the rocket evidence

It is evident from the comments entered into Table 1 that, essentially, it is not possible to interpret the Report with respect to what rocket was found where.

Sellstrom says they only investigated five impact sites. He uses the labels “Impact site number 1,” “Impact site number 2,” and “Impact site number 4.” This suggests that he actually has an inventory of five sites, that he has numbered them all, and somewhere there is a site #3 and a site #5. What Sellstrom does not specifically state is how many rockets were found. It could be five, it could be 50.

One would think that the authors of the Report would go to great lengths to clearly label every one of the impact sites, provide some way to pinpoint its precise location with coordinates or street addresses, label every one of the rockets, and identify which rocket was associated with which site. But none of this information appears in the Report. None of the reasons I can think of for concealing this basic information are particularly complimentary of the authors. As indicated in Table 1 and discussed in the next section, as a result of this massive, easily avoidable ambiguity, it is not possible to identify a single rocket/impact site dyad as being contaminated with sarin, much less as being proximate to any victim.

d. Rocket trajectories

At pages 22-23 of the Report, Sellstrom presents a subsection titled “Considerations on the likely trajectory of the rockets.” This has gotten a lot of attention online and in the MSM. We are told that of the five impact sites investigated by the Mission only two of those could be used to deduce rocket trajectories, or azimuths. We are told that the two impact sites that yielded azimuths were Impact Site #1 in Moadamiyah and Impact Site #4 in Ein Tarma. But then Sellstrom immediately contradicts himself by asserting that there was a third impact site from which an azimuth was obtained – Impact Site #2, which was 65 meters away from Impact Site #1. The azimuths calculated by

Sellstrom are 215°, 214°, and 105° for Impact Sites 1, 2, and 4, respectively. There is no information whatsoever as to impact sites #3 and #5 – not just no trajectory information, no information, period. None.

I am not at all clear on what the point was of reporting these azimuths without reporting the locations of the impact sites as well. It is not useful to say the impact sites are in Moadamiyah or Ein Tarma because Moadamiyah and Ein Tarma are each miles across. In the absence of coordinates or other information providing the location of the impact sites, any attempt to use just these azimuths to pinpoint the SAA as the source of the rockets, as has been attempted by Josh Lyons of [Human Rights Watch](#)²² and C.J. Chivers for the [NYT](#)²³ is a pitifully futile, if not disingenuous, exercise.

Even if it was possible to use Sellstrom’s trajectories to pinpoint the origin of the rockets – and it isn’t – the rockets those trajectories are calculated for have not been connected to sarin, as Table 1, above, illustrates. Furthermore, we know that the SAA has been pounding this area for over a year, and so the idea that one can use a rocket impact site provided by the insurgents to calculate an azimuth that implicates the SAA (or anyone) in a sarin attack is laughable. Without a competent description of the impact sites, including their coordinates and evidence connecting them to sarin, Sellstrom’s trajectories are totally meaningless with respect to the alleged use of sarin in Ghouta.

Chiver’s NYT article is particularly odious in this respect. Chiver’s avers that the NYT trajectory analysis from the Sellstrom report “suggested that gas-filled rockets, which sailed over central Damascus and landed

²² <http://www.hrw.org/news/2013/09/17/dispatches-mapping-sarin-flight-path>

²³ http://www.nytimes.com/2013/09/18/world/middleeast/un-data-on-gas-attack-points-to-assads-top-forces.html?ref=world&_r=2&pagewanted=all&

in civilian neighborhoods, originated ‘from the direction of the Republican Guard 104th Brigade,’ which occupies a large base on the mountain’s western side.” What bunk. There is nothing in the Sellstrom Report that indicates any of the rockets or impact sites for which azimuths were reported were contaminated with sarin. Gas-filled rockets, indeed. The only thing filled with gas is the NYT.

I hate to keep reiterating the point but I feel I have to because the people writing the MSM articles have clearly not seen it. It is essential that one keep in mind that the insurgents chose what sites and what munitions the UN Mission would see. And they had many days to plan. If they had wanted to there is nothing that would have kept them from digging a hole and sticking a rocket motor in it pointing directly at the Presidential Palace so that gullible writers at HRW and NYT could conclude that Assad himself launched the rocket. Consequently, all bets are off as to the validity, authenticity, and relevance of this “evidence.”

For instance, look at Fig. 3 and Fig 4, below. I grabbed Fig. 3 from the OPCW video of the UN Mission I have alluded to repeatedly; i.e., Vid # 019. It



Fig. 3 Screen shot from Video #019 at 02:00.



Fig. 4 Blow-up of area circled in Fig. 3

shows a couple UN guys standing in an open spot, bagging a piece of evidence. Look closely and in the background you can see one of these rockets sticking out of the rubble. It’s really hard to spot, but the blow-up Fig 4 shows it more clearly. This may well be one of the impact sites used by Sellstrom to calculate an azimuth, but we don’t know that, even though the Chiver NYT article includes another shot of this rocket, tacitly suggesting that it is relevant to the trajectory issue.

But my point is that in the 6 days between the Ghouta event and the first inspection, any fool with a small shovel and half a wit could have dug a hole and jammed that rocket down into it. Do we now use the direction that rocket is leaning to put this atrocity at the feet of Assad? Not if we have a modicum of skepticism, common sense, or sense of justice.



§C. Sarin

Sarin is, of course, is the name of this game. Virtually the only name. Even if sarin could not be connected to any subject or any rocket, merely finding sarin on a window sill would be sufficient to convince a flock of war hawks that Assad was the perpetrator. Assad is, after all, a sarin kind of guy. The world knows he has stockpiles of it and he flaunts that to some extent. He has to if it is to serve its purpose as a deterrent to Israel’s nukes.

But we are not concerned in the present paper with the wider game and reasons to go after Assad; we are concerned just with what Sellstrom has concluded, and he has concluded that sarin delivered by surface-to-surface rockets was “used.” We come to the “used” component of Sellstrom’s conclusion in the next section. Here we focus on the broad issues – both political and analytical – associated with sarin, and on the nexus, *vel non*, of sarin and the rockets. As far as the important question of what rocket from where tested positive for sarin, Table 1, above, provides a summary. The short answer is: who knows? You sure can’t tell from the Report which rockets were the ones Sellstrom claims carried sarin.



1. Limitations with the collection/analysis of the sarin evidence generally

The Sellstrom Report is not, and is not intended to be, a scientific report of a caliber that would be accepted by a scientific journal – believe me, no reputable journal would accept a mess like this for publication. Nor is the Report meant to be expert forensic evidence that would

hold up in a court of law. It wouldn't – no reputable court would allow this sort of confusing, inconclusive work to be admitted in evidence. I get that. I understand that this UN report is meant for public consumption and should not be bogged down with technical and legal minutiae of the sort that would be required for publication in a scientific journal or admission in a court of law.

On the other hand, the validity of Sellstrom's conclusions depends upon the validity of the clinical and analytical data reported, and in order to assess the validity of those data one has to know at least the basics of how they were produced. It is insufficient or worse – dishonest – to obfuscate methodologies, to scramble samples, to cherry pick data, and then throw out a bunch of conclusions with a "Here's what we found! We're the UN; trust us." In other words, the Report must disclose a certain minimal amount of information in order to allow an objective assessment of not just what was found but the process by which essential conclusions were reached.



a. The Mission's real goal: find sarin.

And so we turn to the critical issue of whether sarin was found, and if so where or in whom. By now we have given up the hope that Sellstrom would present a proper evidentiary triad in which a victim, an impact site, and a rocket are all connected to each other and to sarin. We are forced to reduce our expectations of the Report just to the question of whether any sarin was found at all.

According to Sellstrom, "[t]he purpose of this Mission is to ascertain the facts related to the allegations of use of chemical weapons and to gather relevant data and undertake necessary analysis for this purpose . . ." (Sellstrom Report, pg. 1) That is the ostensible purpose – the PR purpose. But contrary to their terms of reference, the Mission did not undertake this mission to "ascertain the facts." The actual purpose was much more precise: It was to find sarin. Full stop. And that's exactly what they did. In spite of dozens of CW agents that could have been used in Ghouta, the UN chose to focus on just sarin. In other words, this was not an objective, open-minded investigation. It was an investigation co-produced by the UN Mission and the insurgents to find sarin. As noted above, the insurgents were screaming "SARIN!!" from the moment the first video hit YouTube. They knew what they wanted the UN Mission to find, and the Mission obliged.

This allegation is supported by the fact that Sellstrom makes no statement whatsoever as to what

CW agents the Mission was looking for or what CW agents they tested for – other than sarin. Nor do they explain why their focus was on sarin. Recall that – irrespective of the entire world screaming "SARIN!" – until the Ghouta samples were analyzed, there was not a shred of evidence that sarin had been used. In fact, as one trained in neuropharmacology, it was clear to me from the symptoms I saw in the videos "authenticated" by US intelligence agencies and provided to Congress that sarin had, in fact, not been used – at least not on the subjects in those videos. I return to this point below. Because Sellstrom could not have had prior knowledge that sarin had been used, his team should have been looking for every plausible agent: yes, of course, sarin and other organophosphates such as VX. But also phosgene, chlorine, hydrogen cyanide, mustard gas, dimethylheptylpyran, CN, carbon monoxide, etc.

As a corollary to this line of skepticism, it is indicative of the Mission's real goal that the Sellstrom Report is silent as to what CW agents were not found. Negative evidence has its place, too, and can be just as probative as positive evidence. Remember the dog that didn't bark in that Sherlock Holmes story? But there is not a word in the entire Sellstrom Report excluding other potential agents.

A competent report would have said: "We looked for W, X, Y, and Z and the only thing we found was Y." But Sellstrom says, in effect, "We looked just for sarin and, wouldn't ya' know it, that's what we found." thus leaving loose-thinking readers with preconceptions to infer that sarin was the only agent involved when, in fact, Sellstrom tells us nothing about what else was or wasn't there. Because Assad is well known to produce and store sarin, the implication of Sellstrom's clipped conclusion is that Assad was responsible.

Given the limited goal of finding sarin, the UN obviously decided that partnering with the insurgents was 1) necessary; 2) morally and ethically acceptable; and, 3) not objectionable with respect to the insurgents limiting the scope of the investigation by restricting it to 20 hours over four days.



b. Concealing Methods and Identity of Laboratories

The concealment of pertinent information that we know Sellstrom obviously has is a big problem in the Report. These are editorial decisions made for a purpose.

The most obvious example of the very general problem of concealing pertinent information is that the Sellstrom Report makes no effort whatsoever to state

for the record what technology or technologies were used to analyze any samples. We are given a pretty good idea of how the physical samples were packaged, sealed, and protected. But there is not a word regarding how any of the samples were actually analyzed. Was ion exchange used? High pressure liquid chromatography? Some combination of gas chromatography and mass spectrometry? Retired DEA sniffer dogs? I do not see a single word explaining what analytical techniques were used.

We do not even know whether the different labs that were employed used the same techniques. In fact, we are not even told what labs did the analyses. The labs are identified in much the same way the subjects and samples are: by number only. You have to have a moderately sharp eye to see even a hint of description about the labs. In a wee footnote to Table 7.1 found on page 34 there is the clause “used by the OPCW laboratory.” But the footnote itself says “laboratory” – singular – while referring to “Laboratory 1” and “Laboratory 2”.

Are labs #1 and #2 really just a single lab, as the footnote indicates? What about labs #3 and #4? Are these labs owned by OPCW or are they independent labs under contract to OPCW or the UN? Are they located in a country, like Israel or the US, that has a real interest in the outcome of the Report? Is there some reason to maintain the privacy of the labs that are taking public money to analyze samples collected with public money to produce data that will be reported to the public?

Below I discuss the serious problem of inter-lab inconsistencies. One possible explanation for these inconsistencies is that the labs used different analytical techniques. But because we are not given even the most basic information as to the identity of these labs or what methods are used by each lab, we cannot begin to suggest reasons for these inconsistencies. And because we are not given even a hint of what methods were used, a conclusion that the methods used to analyze the samples were valid is no more warranted than a skeptic’s conclusion that the methods were not valid. We just don’t know. Hence, the frustration.

I can see no legitimate reason for concealing the analytical methods used or the identity of the labs. This would be like a cop busting you for speeding and then refusing to tell the judge how he clocked your speed – think how frustrated *you* would be. What legitimate reason could there be for concealing this information?



c. Total lack of quantitative data

I’m having a real problem with this Sellstrom Report, as you can tell by now. But as one trained in the medical sciences at lab benches where generating data – *real data*, as in numbers – is everything, what pains me most of all is the way Sellstrom has chosen not to reveal a single quantity of either sarin or any marker for sarin in any sample. He has not provided a single quantity of *anything*! By “quantity” I mean how much of the stuff was present. This is incredibly important information and its concealment gives me an acute case of heartburn, particularly with respect to the biological samples.

And the reason I’ve got my knickers in a twist over this is that if we had data telling us what the levels of sarin or its metabolites were at the time the samples were taken – 6-9 days after the attack – we could use those levels to estimate of how much sarin the subjects were initially exposed to. For instance, following the sarin attacks in Japan in 1994 and 1995, Tsuchihashi et al.²⁴ were able to measure sarin metabolites in the urine of victims and estimate what the actual peak dose of sarin was. This would be incredibly helpful information in the present case. For one thing, the symptoms reported in the Sellstrom Report are totally wacko, as discussed below. If we knew what the peak levels of sarin was in the various survivors, maybe it would help make sense of the inexplicable array of symptoms. I don’t think so, but maybe.

Also, if Sellstrom determined the levels of sarin in the subjects’ blood and urine and the levels of pre-cursors of sarin, such as DIMP,²⁵ one could use that information to deduce the ratios of pre-cursor to sarin that the subjects were exposed to. This information would then help determine who produced the sarin because a crude synthesis of sarin such as the insurgents would likely employ leaves a relatively high concentration of pre-cursors, while a sophisticated synthesis such as Assad would employ produces a cleaner sarin. And because some of the pre-cursors produce the symptoms reported that sarin does not produce, the wacko constellation of symptoms reported by Sellstrom might be easier to understand if we knew how much of what chemicals were initially present.

The actual quantities of chemicals can also be helpful in evaluating the validity of the methods used. Every detection method has what is called a “level of detection.” The LOD is the minimum amount of the target chemical that the method can reliably detect. At

²⁴ J.Anal.Tox 22:383(1998)

²⁵ Diisopropyl methylphosphonate

low concentrations of sarin and its metabolites close to the LOD of whatever method is being employed – concentrations one would expect after 6-9 days – the reliability of the method comes more and more into question.

In summary, a competent report would have clearly set out for each lab and each type of sample 1) what chemical or chemicals were being analyzed as markers for sarin; 2) the method that was used in each case; 3) the LOD for that method, and 4) the actual amount measured. Having this information at hand, one would be a lot less skeptical about whether or not the proper measurements were done. Unless these labs were using some crude method that just determines the presence or absence of a chemical, the actual amount of the chemicals in the blood and urine can be – and should have been – determined and reported. Why weren't these values provided?



2. Connecting the rockets/impact sites to sarin

In Table 1, above, I have attempted to line up the various rockets and impact sites discussed by Sellstrom with the sarin results. Rockets, rocket debris, and other physical samples that tested positive to sarin must be connected to impact sites if the conclusion of the Report is to be accepted. But the Report is not even sufficiently organized to meet this simple objective.

The results of testing the 30 physical samples are given in Sellstrom's Table 7.1 (Sellstrom Report, pp 27-34). Five of the 30 descriptions of samples refers to a rocket. And not a single one of any of the 30 samples is explicitly identified to any of the three communities, much less any impact site. The only way the reader can attempt to wade through this thicket is that each of the samples in Table 7.1 has a sampling date, and we are told the Mission was in Moadamiyah on Aug26 and in Ein Tarma/Zamalka on Aug 28 and Aug 29. Because the sampling date of Samples 1-13 of Table 7.1 is Aug26, one can deduce that those samples came from Moadamiyah. Of course, Sellstrom doesn't actually say that, but it seems a reasonable guess, and reasonable guesses are all we have.

However, with the remaining 17 samples we don't even have a reasonable guess as to which came from Ein Tarma and which came from Zamalka because all we are told is that the Mission was in those two places on Aug 28 and 29, but we are not told which place on

which date.²⁶ This is an extremely important fail. The reader should not have to be guessing which samples are associated with which community or which impact site – this should be clearly set forth in the Report.



a. Moadamiyah

As I say, going by the sampling date, one can make a good guess that samples 1-13 of Sellstrom's Table 7.1 were most likely collected at Moadamiyah, which is the only community that can be identified to any environmental samples. So what about Moadamiyah? Sellstrom has concluded that surface-to-surface rockets carrying sarin were used in Moadamiyah. Is that conclusion borne out, or not?

It is not. For looking at Table 7.1 you will not find a single one of the 13 samples from Moadamiyah described as being from a rocket or any component of a rocket. Either the Mission did not take any swipes from these rocket parts and impact sites found in Moadamiyah or else they took them and decided to conceal the results.

How can that be?? We know that there are at least two impact sites in Moadamiyah: labeled #1 and #2 by Sellstrom. And Sellstrom goes into great detail – with photos – describing an M14-style rocket found in Moadamiyah. (Sellstrom Report, pp18-19 & 23). Why in the world would the Mission have examined the Moadamiyah rocket and taken photos of it but no swipes to analyze for sarin? Surely they must have taken these samples – they were in Moadamiyah for two hours! (Sellstrom Report, pg. 6) And if they did take samples of the Moadamiyah rockets, why does Sellstrom not report the results?

In view of this editorial silence and in view of the fact that there are no rocket samples of any kind from Moadamiyah, it beggars belief that Sellstrom can conclude that surface-to-surface rockets delivered sarin to Moadamiyah. Beggars belief.

To make matters worse, inconsistencies between the labs obviate even the limited assertion that "signatures of sarin" were found in any sample from Moadamiyah. Of the 13 samples we have guessed came from Moadamiyah, the only ones for which there is complete agreement are the samples that are negative for everything. Furthermore, neither lab #1 nor lab #2

²⁶ Much of the information in Table 7.1 is also provided in the tables of Appendix 6 (pp 24-26). However, as Mr. Gleb Bazov has kindly pointed out to me, the samples are numbered differently in Appendix 6 than they are in Table 7.1, which only adds to the confusion.

found sarin in any of these 13 samples. But lab #2 found degradation or by-product chemicals in 6 of the 13 samples, while lab #1 found such chemicals in only two samples. I'm talkin' just the 13 samples that are probably from Moadamiyah. If you look at all 30 of the "environmental" samples, there is complete agreement between lab #1 and #2 on only two of them: samples 24 and 28. (Sellstrom, Table 7.1)

It is helpful to look at these inter-lab inconsistencies as a function of what chemical is reported. In detecting DIMP the two labs agreed 80% of the time. But in detecting sarin, the labs agreed only about 50% of the time, and in detecting IPMPA²⁷ there was a meager 25% agreement. And when we put it altogether, you get complete inter-lab agreement for only 2 samples out of 30, or 7%. Keep in mind we are not talking about quantitative agreement – how much was there. We are talking the far easier task of just determining whether or not a chemical was present.

I don't believe this sort of inter-lab inconsistency would be acceptable in a court of law. If one lab finds DIMP or sarin in a sample and the other lab finds nothing, then one cannot fairly conclude that DIMP or sarin is present. By analogy, if one laboratory finds a defendant's DNA at a crime scene, and a second laboratory finds no DNA, the defendant walks. Unless you explain the discrepancy, 50% isn't good enough for a conviction. Let's hope it's not good enough to start a war.

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b. Ein Tarma and Zamalka

Ein Tarma is the only community other than Moadamiyah that is in any way mentioned in the Report with respect to a rocket. Ein Tarma makes a cameo appearance on page 22 where Sellstrom identifies "Impact site number 4" as Ein Tarma. That is the only unambiguous connection of Ein Tarma to any evidence. And there is no way at all to identify any rocket or impact site to Zamalka, which is a huge blunder because, as noted below, the only subjects that are identified to any location are identified to Zamalka.

Let me be more specific about this gripe. In the second table of Appendix 6 (Sellstrom Report, pp. 25-26), Sellstrom refers to multiple samples taken from one or more rockets, which is good. But that table is titled "Zamalka/Ein Tarma," and does not distinguish samples that came from Zamalka from those that came from Ein

Tarma, so we're out of luck there.

Table 7.1, which reports the analysis results, does not refer to any location. Not Moadamiyah. Not Ein Tarma. Not Zamalka. None. Zip. Nada. Zilch. Even if, as noted above, one may feel somewhat confident in assigning samples SN 1-13 of Table 7.1 to Moadamiyah on the basis of sampling dates, there is still no way to assign the remaining samples to either Ein Tarma or Zamalka or Impact Site #4.

Again, I must complain in the clearest terms: this failure to identify every single sample to its place of origin, which should have been given as coordinates, is a total cock-up – it is unacceptably shoddy science. The people of Syria and particularly the victims and their families deserve better.

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3. Conclusions regarding sarin

The Report goes to great lengths to describe two rockets. However, given the history of hostilities in these areas for over 2 years no one should be shocked at finding rocket parts scattered around, and so the presence of rockets or rocket parts *per se* is meaningless in the context of the alleged sarin attack. And given the 6-9 days that passed between the alleged CW attack and the time the UN Mission showed up, rockets and rocket-parts could have been freely planted anywhere the insurgents decided the UN Mission would be allowed to go. If the insurgents are the perpetrators of the attack, then it is a dead certainty that evidence was planted, tampered with, or otherwise tainted.

More problematical is the fact that the Report does not tie a single rocket or rocket part to sarin. One suspects that Sellstrom has data that could do that, but, for whatever reason, he decided to construct the report in such a way as to conceal that information. For instance, rocket impact sites are not identified by coordinates and rocket samples/swipes are not clearly numbered and identified to those unidentified impact sites.

Furthermore, because no rocket impact locations are disclosed, and because no rockets are connected to sarin, individuals or organizations, like Human Rights Watch and the NYT, who are trying to use Sellstrom's trajectories to triangulate the position from which the rockets were fired are contributing absolutely nothing except gratuitous confusion.

In other words, what we've got here is pigeon poop on the pump handle.

²⁷ Isopropylmethylphosphonic acid. This is a break-down product of sarin considered to be the most specific indicator of sarin.

§ D. “Used”

In the last section I concluded that the Report fails to tie sarin to any surface-to-surface rocket, and so the surface-to-surface rockets assertion of Sellstrom’s conclusion is, basically, off the table. Our analysis is therefore greatly reduced to determining whether Sellstrom makes a case for *any* type of sarin attack in those three communities, irrespective of whether rockets were involved.

This section is titled “Used” because that is the word Sellstrom employs in his conclusion. Sellstrom adroitly takes that four-letter word and turns it into a semantic weapon of mass obfuscation. For his (now amended) primary conclusion is that sarin was “used” in Moadamiyah, Ein Tarma, and Zamalka.

This is pretty slippery stuff, for Sellstrom does not explicitly conclude that any person was poisoned, injured, or killed by the sarin. He does not even conclude that sarin itself was “used” – he says the rockets were “used.” However, in his list of facts, Sellstrom does assert that 1) “[a] number of patients/survivors were clearly diagnosed as intoxicated by an organophosphorus compound,” and 2) [b]lood and urine samples from the same patients were found positive for Sarin and Sarin signatures.” Thus, without ever saying so explicitly, Sellstrom leads the MSM and the hawks to interpret the Report as saying that sarin was used to injure and kill civilians in Ein Tarma, Moadamiyah, and Zamalka.

Because of this semantic hide-the-ball tactic, I am forced to join the MSM and hawks and make the same obvious and necessary presumptions in order analyze the Report. I presume that by the clause “used in Ein Tarma, Moadamiyah and Zamalka” what Sellstrom means is “sarin caused death or serious injury to people of Ein Tarma, Moadamiyah and Zamalka.” Any other interpretation of “used” would have the effect of turning the entire UN Mission into an exercise in futility, if not a macabre comedy. If nobody was hurt, why was the Mission there?

Consequently, this Section D analyzes Sellstrom’s evidence tying sarin to human casualties in Ein Tarma, Zamalka, and Moadamiyah. The evidence set forth by the Report is of two types: 1) symptoms that “survivors” reported or displayed, and 2) other evidence of “sarin exposure.”



1. Problems with the clinical/biological evidence generally
As with Sellstrom’s sarin analysis of physical

objects, any objective reader of the Report will have a number of unavoidable general objections to the way the biological data are reported. It is, in fact, not possible to determine whether critical evidence is totally lacking or whether it is there but improperly and inadequately described.



a. Insurgent-selected subjects

As noted above, the insurgents co-produced the Sellstrom Report by controlling what locations and what physical evidence the Mission would have access to. The other major way the insurgents co-produced the Sellstrom was by selecting the “victims” that the Mission would examine and interview. This is the way it worked: The Mission requested that insurgent physicians make available 80 subjects that fit some undisclosed profile or criteria established by the Mission. We are not informed of what those criteria were precisely and we are not provided a copy or translation of the questionnaire used. We are only told the selection process was “designed to primarily identify survivors who had **severe** clinical presentations,” (Sellstrom Report, pg 4), and (contradictorily), to identify “individuals who either demonstrated **moderate to severe** symptoms and signs **or** were able to provide a clear and detailed history of the event.” (Sellstrom Report, pg. 11)

From this initial pool of 80 subjects chosen by the insurgents, the Mission team selected 36 who were examined and interviewed. This appears to be some sort of a technique to randomize who would be examined, but Sellstrom does not indicate how the final 36 subjects were chosen or who chose them. It really makes little difference because regardless what process and criteria were used to select the sub-population of 36, those 36 were still initially chosen by the insurgents. Had the insurgents supplied, say, 800 subjects who met the criteria, and had the Mission randomly chosen 36 from that large pool, then there might have been some statistical point to the exercise.



b. Failure to identify subjects

What then are we told about these subjects with respect to, say, where they were when they were exposed to sarin, their ages, their gender, & etc.?

Oddly, with the exception of seven subjects who are described as living in Zamalka, we don’t know a thing about any of them except the number they were assigned and what symptoms they reported. Therefore only those seven subjects we are told were living in

Zamalka can possibly be used to support Sellstrom's conclusion, and even then only in so far as Zamalka. The other 29 subjects are pretty much irrelevant as far as tying sarin to any of the three communities.

The problem is that with the exception of these seven from Zamalka, the Report tells us only where the subjects were assessed, not where they were from. We are told that 44% of the subjects were assessed at Moadamiyah, but they may have all been from Aleppo for all we are told. Simply saying where a subject was assessed is irrelevant as far as tying that subject to an impact site, a rocket, or any physical objects that tested positive for sarin.

In fact, it is a pretty good guess that some of the 80 subjects were insurgents themselves and – possibly – responsible for preparing or delivering the CW that killed the kids in the videos. And the reason I say that is that if you look at the OPCW vid (Video #019) and other vids of these areas, they are all completely bombed out. *Everything* is completely bombed out. All of the windows are busted and half of the buildings are wrecked. It looks worse than the Bronx. Worse than Detroit. In other words, the place looks like a war zone, which is what it is. After all, Assad has been bombing that area for over a year. As pointed out by Mother Agnes Mariam el-Salib, mother superior of St. James Monastery in Qara, Syria, because of a year of constant bombing, the place was a ghost town well before Aug21. Only the insurgents themselves and a few of their family members were left.²⁸ So where did 3600 victims and 1400 fatalities claimed by Obama come from? More importantly for the present analysis, where did Sellstrom's 36 subjects come from? We don't know, other than that the insurgents provided them.

As I noted above, the Report does give a bit more information about seven of the subjects. (Sellstrom Report, pp 36-38) Four of them are males between the ages of 17 and 49 living in Zamalka, which sounds a lot like insurgents to me. What other males of that age remain in the area? Two are females, one 34 and one 38, also living in Zamalka, as was one boy, aged 8. Since we know nothing about the other 29 subjects or where they are from, these seven subjects are very important to the Report because they are the only ones that could be relied on to help support Sellstrom's conclusions.

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c. Failure fully to report the results indicates, at best, a lack of objectivity

With respect to the physical evidence I remarked above that it was suspicious that the Mission appears to have looked for nothing other than organophosphates, and, more particularly, sarin. This is true for the biological samples as well. There is no indication here that any other chemical or class of chemicals was sought. But one might ask: As long as the Mission found sarin, what difference does it make if there were other agents present?

One answer is that while finding sarin would point to Assad because the world knows he has stockpiled it, finding VX, or phosgene, or carbon monoxide, or many other agents that are easier to produce and more readily available would point to the insurgents. If the Mission analyzed its samples in a way that would detect only sarin, then it can be assumed Sellstrom et al. had Assad in their sights.

But not only does the Sellstrom Report not disclose what chemicals were being sought, when it comes to the biological samples, the Report does not even disclose what chemicals were found. Here is what we get:

- Page 5 under the heading "Information concerning bio-medical samples" refers to "positive blood and urine specimens," without saying what "positive" means.
- Table 2 (Sellstrom Report, pg. 15) summarizes the biological results, but all we get is "Positive" and "Negative."
- Table 7.2 (Sellstrom Report, pg. 35) reports the actual results of all 36 subjects, but, again, all we get is "Pos" and "Neg."
- The facts set forth on page 5 of the report say that blood and urine samples "were found positive for Sarin and Sarin signatures." Now, that's what we're looking for! A statement of what they found! And yet the Report does not identify a single blood or urine sample that tested positive for sarin and does not reveal what chemicals were used as "Sarin signatures."
- Text on page 15 fudges the foregoing assertion of page 5. Page 15 says the blood samples "tested positive for Sarin exposure."²⁹ OK . . . tested positive for sarin exposure. What, precisely, does

²⁸ [ISTEAMS Report](http://logosphere.com/Syria/Syria%20Docs/Mother%20Agnes%20-%20ISTEAMS%20rpt%20Sep2013.pdf) on chemical attack on East Ghouta, Sep11.2013, pg. 9.
<http://logosphere.com/Syria/Syria%20Docs/Mother%20Agnes%20-%20ISTEAMS%20rpt%20Sep2013.pdf>

²⁹ The blood samples that were exposed to sarin? Presumably, what is intended is that the blood samples tested positive for the existence of some chemical, the presence of which indicates that the person from whom the blood was drawn was exposed to sarin.

that mean? Again, what chemical or chemicals did Sellstrom find that indicates sarin exposure? Sellstrom elects to conceal that information.

This refusal to reveal what exactly was being detected or measured in the blood/urine samples is highly problematic for a number of reasons, the first of which is that it doesn't pass the smell test.

The second relates to the huge inter-lab discrepancies. Note in Table 7.1 (Sellstrom Report, pp 27-33) that the results of the environmental samples – which **do indicate** what chemicals were detected – show problematic, qualitative inter-lab inconsistencies. On the other hand, the results of the biological samples – which give **no indication** of what was detected – are amazingly consistent between labs. A skeptic like me might wonder whether the identity of the actual sarin markers in the biological samples has been withheld because the labs were all over the place with respect to those markers – the way they are all over the place with respect to what chemicals they found in the environmental samples. For instance, if one lab found only DIMP in a blood sample and the other lab found only IPMPA in the same sample, then there is an obvious problem. But by reporting them both as “Pos” the problem goes away.



2. The evidence that sarin was used, *vel non*

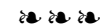
a. Fatalities?

The single most unbelievable, mind-boggling fail of the Sellstrom Report is that it does not verify or document a single fatality. We've got Obama, Kerry, McCain, Netanyahu, Erdogan, and 90% of the world's MSM screaming about 1429 sarin fatalities, over 300 of them kids, and yet there is not a word in the Report about investigating any deaths or taking any samples from corpses. 1400 – that's a lot of corpses. And that's just the humans.

Sarin is not toxic just to humans. Virtually every animal above the level of amoebae requires properly functioning acetylcholine synapses in order to stay alive. Because sarin throws these synapses into uncontrollable high-gear, it is toxic to virtually all species. Following the 1994 sarin attack in Japan, all sorts of animals paid the price, including fish in the adjacent pond. Birds, frogs, dogs and cats. There was no end of biological material for testing. Looking at the bombed-out shells of these towns near Damascus, one would think that a sarin attack of a magnitude to kill 1400 sleeping people would also kill thousands and thousands of rats, mice, cats, dogs, pigeons, and cockroaches.

If you had told me on Aug21 that a group of UN CW investigators was within blocks of the alleged sarin attack, and that those investigators were going to investigate the alleged attack, but that they were not going to investigate a single fatality or collect a single tissue sample from any fatality – human, feline, canine, caprine, or murine – well, if you would have told me that, I would have stuttered in disbelief, which is what I'm doing now. And you should, too.

The problem is that when the Sellstrom Report says that sarin was “used” in Ghouta, people – particularly those who have seen the insurgents' videos – are going to presume that “used” means the Report is confirming that people were killed by sarin. It doesn't. It doesn't make any finding about sarin killing anything, mind-boggling as that may seem.



b. Symptoms – as of when?

The 36 subjects and their symptoms figure large in the Report. For instance, there are separate descriptions of the symptoms on pages 3, 4, 5, 12-17, and 35-38 (i.e., Table 7.2). The symptoms and the biological information are summarized in 4 tables, 2 graphs, and 2 photographs. Most of this is mere repetition, presumably for effect.

In spite of repeating over and over what symptoms were reported, the Report makes no attempt to relate the constellation of symptoms it found to what symptoms are known to occur in a sarin attack. For instance we are told at least separate 8 times, not including individual subject assessments, that eye irritation was reported, and yet there is no mention as to whether eye irritation is considered to be symptomatic of sarin intoxication. In fact, it is not and its high incidence is an indication that something other than or in addition to sarin was causing problems.

One of the insurmountable problems in following Sellstrom's points as to the symptoms is that these subjects were interviewed 6-9 days after the attack, but Sellstrom makes no effort to tell us whether the symptoms that are reported are symptoms that occurred on Aug21 or whether they are symptoms that were occurring on Aug26, 28 and 29 when the subjects were examined. This is another example of incredibly important information deleted from the Report. Let's see if we can suss this out.

Let's begin with the obvious: Loss of consciousness was the most common symptom reported (78%), and we can pretty well assume this symptom was not occurring during the UN Mission interview or else there wouldn't be an interview. Besides, anyone who was still

unconscious 6-9 days after the attack probably wasn't going to regain consciousness ever – much less 78% of the subjects. So this suggests that when Sellstrom talks about symptoms, he is talking about symptoms that were present during the attack itself and then self-reported 6-9 days after the fact.

But this interpretation is contradicted at page 13 of the Report where a bar graph shows the distribution of symptoms. The legend to that graph says: "Physical examination demonstrated that 39% of survivors were confused or disoriented at the time of assessment and that 14% had miosis (constriction of the pupils)."

So this explicitly states that at least two of the reported symptoms were symptoms appearing during the examinations and not symptoms as of Aug21. But then we have the problem with loss of consciousness, which could not have been a symptom during the examination.

Once again the reader is forced to wrestle with unnecessary ambiguities in the Report in an effort to understand what the hell Sellstrom is talking about, and once again the reader comes up empty-handed. It is not possible to tell what Sellstrom is talking about when he relates symptoms. Is it a) symptoms as of Aug21; b) symptoms 6-9 days later; or, c) some undisclosed combination?



c. Symptom signature

When Obama and Kerry and Sellstrom talk about "sarin signatures," they are talking about chemicals that are detected that indicate the presence of sarin. IPMPA for instance is only known to occur as a degradation product of sarin and so its presence suggests that sarin was once there. Scientists sometimes use the term "signature" to refer to outputs of a method of detecting sarin such as mass spectrometry that prints out peaks or other signals that are in a specific place and of a specific size. But generally "signatures" refers to non-sarin chemicals that indicate sarin.

There is another signature of toxic agents that is just as helpful as a chemical detection signature, and that is the specific symptoms produced by an agent. We know the pharmacology of virtually all CWs, which means we know what the biological effects of the CWs are, which in turn means we know what the symptoms will be. The symptoms-signature for sarin is very well known and is based both on its pharmacology and on actual clinical experience.

But it's a statistical sort of thing. When only one person is exposed to sarin it is not possible to predict before hand which symptoms he/she will display. There

is some genetic variation in how sarin effects people, how quickly it gets to the brain, how quickly it disintegrates, & etc. and so different individuals may react somewhat differently even to the same attack. But when you have dozens, or scores, or hundreds of putative victims, including many fatalities, as we do with this Ghouta event, then if the agent is sarin, you will see in those victims collectively all of the symptoms sarin is known to produce. And in a situation like Ghouta where large numbers of people are allegedly exposed to lethal doses, one will see certain symptoms a lot. If you don't see them, you can be confident you are not looking at a sarin attack. You don't need an HPLC or mass spec for this sort of analysis.

The major signs of sarin intoxication are referred to as "muscarinic symptoms." The age-old med school mnemonic for them is S-L-U-D-GE. Salivation. Lacrimation (tears). Urination. Defecation. Gastric Emesis (vomiting). There is a sixth symptom that is not strictly muscarinic so it doesn't fit in the mnemonic, but it is the most common: miosis.

Before the Sellstrom Report came out, I wrote a pharmacological analysis of the 13 videos that the Obama administration provided Congress as proof that a sarin attack had taken place.³⁰ After viewing all of these, and numerous other videos, it was clear to me that these poor souls were not victims of a sarin attack. What makes me say that is that there is no evidence of U-D-GE: urinary incontinence, fecal incontinence, or vomiting. At the higher doses producing death and with dozens of dead and dying people in the same room, you would expect to see feces and vomit all over the place and a stench so bad that the non-victims would hardly be able to breathe. And yet not a single victim in the videos displayed these symptoms. Whatever those dozens or scores of people I saw in the videos died of, it wasn't sarin or any other organophosphate, and I wrote an [open letter to Congress](#) explaining that.³¹ Haven't heard back. The present article is basically a double-down on that letter to Congress. Triple.

The Sellstrom Report pretty much backs up my letter to Congress and my conclusion that this was not a sarin attack. For instance, Sellstrom reports that the most common symptom was loss of consciousness (78%). Given that loss of consciousness occurs only at

³⁰ These videos are videos 001-013 in my [Table of Videos](http://logophere.com/Syria/Table%20of%20Vids.htm). <http://logophere.com/Syria/Table%20of%20Vids.htm>

³¹ <http://www.scribd.com/doc/167219342/Lack-of-Pharmacological-Proof-of-Sarin-Attack-on-Damascus-An-Open-Letter-to-Congress>

high doses of sarin, one would certainly expect the full S-L-U-D-GE constellation to be very prevalent in Sellstrom's subjects. While vomiting was reported by 22%, urinary incontinence and fecal incontinence were not reported by any. I would have expected a far larger percentage to have experienced vomiting. Eye irritation, which is not known as a common symptom of organophosphates, was also reported by 22% of the subjects, so you've got vomiting being reported at the same rate as a symptom one wouldn't expect to see at all. This is not making sense as a sarin attack.

Dan Kaszeta, a CW expert, makes basically the same point with respect to miosis.³² He points out that in the 1995 Tokyo subway bombing, 99% of victims showed miosis, and yet the Sellstrom Report reports only 14% of subjects having miosis. Miosis is a threshold or sentinel symptom – one of the first to occur and one of the last to go away.³³ Miosis is to a sarin attack what a swoosh is to a pair of Nikes – a sign of authenticity. If there's no pinpoint pupils, you can be 99% sure the person wasn't exposed to sarin. Kaszeta asks how is it possible for only 14% of Sellstrom's subjects to report this most sensitive of symptoms while 78% report loss of conscience, which occurs only at much higher doses? It may be the result of sloppy reporting of the symptoms. If for some inexplicable reason miosis is being assessed 6-9 days after the attack while loss of consciousness is assessed as of the time of the attack, as suggested above, then all bets are off as to what the relative rates of presentations of the symptoms will be. More ambiguity of a critical point.

This all adds up to complete pharmacological nonsense, which is to say it doesn't add up at all. But what is most concerning is that nowhere do the authors of the Sellstrom Report explain how they can come to a conclusion of "sarin intoxication" when the clinical observations they rely on so clearly contradict that conclusion.



d. The biological and analytical limits of assessing "sarin exposure" after 9 days

The Sellstrom Report reported "sarin exposure" positive for the blood samples of virtually all of the subjects tested (85% and 91% by the two labs), even though the samples were not obtained until 6-9 days

after the attack. For urine samples, 4 out of 4 subjects tested positive for "sarin exposure" 6 days after the attack, and 10 out of 11 subjects tested positive 8 or 9 days after the attack.³⁴

Because Sellstrom does not reveal what indicia are used to establish "sarin exposure" it is not possible to evaluate these claims, or even to understand them. Almost certainly they did not find sarin itself in samples collected so long after the attack in spite of the assertion at page 5 of the Report that blood/urine samples were "positive for sarin." This is almost certainly a misstatement. We know that sarin and its degradation products don't last long in mammals, which includes Syrians interviewed by UN CW experts. Barr et al³⁵, who analyzed the urine of victims from the sarin attacks in Japan, state that urinary excretion of MPA³⁶, a final metabolite of sarin, peaks 12 hours after a person is exposed to sarin, and it is almost completely excreted after 2 days.

It is, however, possible that other indicia – or signatures – of sarin were found. Some signs do persist. Perhaps Sellstrom analyzed acetylcholinesterase (AChE) activity in the blood samples, or IPMPA that has formed an adduct with AChE. But it is not clear to me what persistent evidence of sarin exposure they would have found in urine or how they would have found it. Maybe Sellstrom's unnamed and unidentified laboratories used a very, very sensitive unidentified technology that has an LOD for sarin of parts per trillion. Who knows?

And that's the point: we should not have to be taking wild guesses. Because Sellstrom et al. have chosen to conceal what they measured in these subjects' blood and urine and how it was measured, the Sellstrom Report becomes incomprehensible. With all of these caveats and without more information, no objective, fair minded person would conclude that a determination of "positive for sarin exposure" is warranted in any sample. In fact, until these doubts about the biological samples are resolved, one cannot with confidence conclude that any of Sellstrom's 36 subjects were exposed to sarin on Aug21.2013. It would appear from the literature that if these blood and urine

³² <http://strongpointsecurity.co.uk/site/wp-content/uploads/2013/09/D-Kaszeta-Comments-on-UN-Report.pdf>

³³ http://www.acponline.org/clinical_information/resources/bioterrorism/chem_terr.pdf

³⁴ Due to the shoddy reporting it is not possible to tell from the Report which samples nominated "Zamalka" were collected on Aug28 and which on Aug29. Likewise Ein Tarma.

³⁵ J.Anal.Tox 48:372(2004)

³⁶ Methylphosphonic acid

samples tested positive for sarin itself, as the Report claims, then either the samples were spiked or the subjects were exposed to the sarin days after the Aug21 attack. In either case the UN should be asking why.

§ E Plenary Conclusions

At the beginning of this paper I outlined the types of evidence, the specific facts, and the conclusions that are asserted by the Sellstrom Report. One would anticipate that Sellstrom would clearly lay out the evidence so that one can see how the facts are derived from that it, and then explain how the conclusions are derived from the facts. I suggested that as a minimum, in order to support his conclusion Sellstrom should have to set forth at least one evidentiary triad: a subject, a surface-to-surface rocket, and an impact site – all three tied to each and to sarin.

Common sense and intellectual honesty demand that the Sellstrom Report would clearly connect all of the dots so that the grounds for the conclusions are crystal clear. One would expect to see, for instance, an statement something along the lines of:

At the time of the attack, subject Mr. X was asleep at location L, which was M meters to the east, down-wind, of impact site S where rocket R landed. Blood and urine samples obtained from Mr. X 2 days after the attack tested positive for IPMPA. Metal fragments from R, and dirt samples immediately adjacent to S tested positive for sarin and IPMPA. Weather reports indicate that at the time the wind was blowing at 7 mph from the west, which would have dispersed any sarin released by R directly toward Mr. X. Mr. X reported symptoms A, B, C, and D immediately after the attack.

This is the **minimum** sort of description one should expect in a report like this – it doesn't even require any quantitative reporting. Sellstrom had all of the necessary information at hand, for the Mission collected information about locations, samples, subjects' blood and urine results. Sellstrom had plenty of dots; the problem is the dots are not connected, or, more likely, they are not connectable.

As a result, the conclusion reached by the Sellstrom Report cannot be supported by the information in the Report. Not a single evidentiary triad exists: There is no evidence of any subject testing positive for sarin exposure connected to any impact site, much less to any impact site testing positive for sarin. There is no

evidence of any impact site testing positive for sarin connected to any surface-to-surface rocket that also tested positive for sarin.

The reader should not have to bang his/her head against his/her desk as I have done for weeks trying to guess what the Sellstrom Report actually found, how they measured what they found, and how the dots connect in a way that justifies Sellstrom's conclusions. Had the authors of the Sellstrom Report wanted to present their results clearly and in a convincing way, they would have done so. But what they chose to present was a sloppy description of unconnected observations, pseudo-data, and tabulated confusion.

In sum, the Sellstrom Report fall wildly short of mustering sufficient evidence to justify the conclusion it puts forward. I would suggest a re-writing of that conclusion so that it reflects only evidence that the Report unambiguously presents. I would suggest the following:

The evidence derived from environmental, chemical, and medical samples as reported by the Sellstrom Report constitutes neither clear nor convincing proof that any surface-to-surface rocket containing the nerve agent sarin was involved in the alleged CW attack against Ein Tarma, Moadamiyah, or Zamalka in the Ghouta area of Damascus on Aug21.2013. Although limited evidence has been found that may be consistent with the release of sarin in one or more of those communities, because of the likelihood that some or all of the evidence made available to the Mission was tainted by parties to the conflict, no valid conclusions can be drawn.