Strategic Insights: The Assad Regime and Chemical Weapons

Robert J. Bunker
docbunker.warlord@gmail.com

Follow this and additional works at: https://press.armywarcollege.edu/articles_editorials

Recommended Citation
https://press.armywarcollege.edu/articles_editorials/9

This Article is brought to you for free and open access by USAWC Press. It has been accepted for inclusion in Articles & Editorials by an authorized administrator of USAWC Press.
On April 7, 2018, insurgents and civilians in a rebel enclave in Douma, east of Damascus, Syria, were subjected to a chemical weapons attack during an offensive conducted by Assad regime and allied Russian and Iranian-linked ground forces. At least 42 individuals were reported to have been killed in the attack due to suffocation—primarily in their homes—with more than 500 additional individuals seeking medical attention. Local reports from the encircled enclave suggest that during the late afternoon and evening hours, Assad regime helicopters dropped two barrel bombs containing a substance with signatures consistent with that of chlorine. Chlorine—an industrial hazardous material (HAZMAT) chemical with many commercial uses—can also be utilized in chemical warfare as a choking agent. Upon dispersal, this chemical—in its gaseous form—is greenish-yellow in color and heavier than air, which allows it to settle in spots such as basements and other low lying areas, slowly suffocating those to which it comes in contact.

The use of chemical warfare agents—and dual-purpose HAZMAT agents such as chlorine with regard to the recent Douma incident—is prohibited under international law. The Syrian Arab Republic, as a Chemical Weapons Convention (CWC) signatory, is bound under such laws not to engage in chemical warfare attacks, but has repeatedly ignored its legal and moral obligations in accord with that treaty. The timing of this new chemical warfare incident has come at a highly inopportune time for the present U.S. Presidential administration vis-à-vis its recently declared intention to begin to disengage from Syria. This incident has resulted in pressure being brought upon the Trump administration to take some form of punitive action against the Assad regime, as took place earlier in response to that regime’s Khan Sheikhoun sarin gas attack on April 4, 2017. All the while, Russian, Iranian, and Hezbollah news outlets and social media have been actively promoting an ongoing propaganda narrative focusing on Western (read liberal democratic) lies and fabrications surrounding the recent Douma incident.

From the perspective gained from past research on the Assad regime’s relationship to chemical weapons and their domestic use against regime-challenging insurgent forces within Syria, this new incident blatantly appears both premeditated and calculated in the manner in which it was conducted. To gain an appreciation of this strategic insight, a discussion of the Assad regime’s chemical weapons program, earlier chemical weapons use, and the lessons learned from them are provided in this essay.

**CHEMICAL WEAPONS PROGRAM**

Given the sensitive nature of this subject matter related to the Syrian Arab Republic—it exists within a highly classified state program—its chemical warfare capabilities are opaque at best. The Assad regime—then under Hafez al-Assad—initially acquired chemical weapons, most certainly sulfur mustard (a blister agent) and possibly sarin (a nerve agent), as early as 1972 from Egypt prior to the start of the Yom Kippur War. Russia, during the same period, provided defensive
equipment for Syrian military personnel that would be fielding these chemical weapons.\textsuperscript{5} As a result of the Yom Kippur War defeat, the subsequent defeat in June 1982 in Lebanon by Israel, and ongoing regional security concerns with Iraq, the Assad regime continued to develop its chemical warfare program primarily with Russian support.

Sporadic, limited glimpses of, and at times contradictory information related to the Syrian chemical weapons program have since been reported on for more than 4 decades. An overview of this information can be found in the Syrian Chemical Chronology spanning December 1968 through March 2008.\textsuperscript{6} When more authoritative program information has been provided—such as a declassified Top Secret Central Intelligence Agency intelligence assessment published in November 1985 on this subject (released in November 2011)—it has been so heavily redacted as to be of marginal use only, although it did confirm that Syrian chemical warfare units were fully configured around Soviet military doctrine.\textsuperscript{7}

More substantive clarity of the chemical weapons program related to the Assad regime has only emerged over the last 5 years and is a direct result of the infamous August 21, 2013, Ghouta, Syria chemical attack. Due to a subsequent international fallout with the Western liberal democracies, the Assad regime was forced to accept a deal brokered by Russia, a long-time ally and regime patron. Failure to do so would have meant a certain widening of the Syrian conflict with Western coalition countries—spearheaded by the United States and France—engaging in direct air strikes. As a result of multiparty negotiations, United Nations (UN) Security Council Resolution 2118 was adopted on September 27, 2013, that set the terms of the agreement with the Syrian Arab Republic and guaranteed that coalition air strikes would be averted.\textsuperscript{8} As a result of that deal, Syria both hastily acceded to the 1992 CWC—on October 14, 2013—and accepted the fast track destruction of its chemical weapons program, or at least those components of the program that it openly declared.\textsuperscript{9}

A confidential chemical weapons program declaration provided by the Assad regime to the Organisation for the Prohibition of Chemical Weapons (OPCW) of the UN subsequently took place on October 24, 2013.\textsuperscript{10} Table 1 provides a list of the chemical agents (and pre-cursor agents), chemical sites, and chemical weapons (i.e., delivery systems) declared and then cataloged by OPCW personnel to facilitate their destruction—either on site, as in the case of production equipment and unfilled munitions, or for overseas transport, in the case of agents. It was created by Albert Mauroni, a Department of Defense counter-weapons of mass destruction (WMD) expert, who assembled it from various sources including OPCW documents. This table provides some transparency related to the confidential declaration—none of which has been made public. It also incorporates the October 2014 Assad regime disclosure to the UN Security Council concerning the existence of one additional chemical weapons production and three additional chemical weapons research facilities somehow not disclosed the prior year.\textsuperscript{11}
| CHEMICAL AGENTS | • 580 metric tons of methylphosphonyl difluoride (DF, a precursor for sarin)
• 20 metric tons of mustard agent
• 130 metric tons of isopropyl alcohol
• 310 metric tons of 4 “other category 1 industrial chemicals”
• 260 metric tons of 13 different “category 2 industrial chemicals” including chloroethylamine, phosphorus, trichloride, phosphorus oxychloride, hexamine, hydrogen chloride, and hydrogen fluoride |
| CHEMICAL SITES | • 1 research and development, 10 production (including 27 production facilities), and 12 storage sites |
| CHEMICAL WEAPONS | • 1,230 unfilled munitions (aerial bombs, missile warheads) |

Table 1. Assad Regime Chemical Weapons Program—Declared.  

The information provided in Table 1 can be compared to intelligence estimates of Assad regime chemical warfare capabilities compiled in Table 2. This table principally relies on a declassified and translated French intelligence assessment published on September 3, 2013, with the addition of a few other chemical weaponry estimates. This assessment estimated over 1,000 metric tons of chemical agents and precursor chemicals to exist in the Syrian program. It is impossible to reconcile the Assad regime declaration (see Table 1) and the OPCW audits with the intelligence estimates (see Table 2) due to their different emphases, finite data provided, and limited reliability of the information even when provided. Further, the listing of 130 metric tons of isopropyl alcohol attributed to the Assad regime declaration in Table 1—while a required reactant to methylphosphonyl difluoride (580 metric tons listed) in the production of sarin—is problematic. This common chemical utilized in industrial and other processes thus represents 10 percent of the Syrian chemical agents and precursors with it being given equal weight to CWC schedule 1 and 2 chemicals.  

Many other issues with the chemical weapons program figures—such as the low amount of sulfur mustard tonnage and a low number of munitions declared—also exist.
<table>
<thead>
<tr>
<th>AGENT</th>
<th>TYPE; PERSISTENCY</th>
<th>STOCKPILE; METRIC TONS</th>
<th>DELIVERY METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfur Mustard (H/HD)</td>
<td>Blister Agent; Very High</td>
<td>≥200 tons</td>
<td>Scud C (500 km) M600 (≤ 300 km) SS21 (70 km) Artillery Rockets (&lt;50 km)</td>
</tr>
<tr>
<td>Nitrogen Mustard (HN)</td>
<td>Blister Agent; High</td>
<td>Unknown; Experimental Development Potentials</td>
<td>Assume same as Sulfur Mustard</td>
</tr>
<tr>
<td>Sarin (GB)</td>
<td>Nerve Agent; Low</td>
<td>≥200 tons (Bulk of the Arsenal)</td>
<td>Scud D (600 km) Scud C (500 km) Scud B (300 km) M600 (≤ 300 km) SS21 (70 km) Artillery Rockets (&lt;50 km) Tactical Munitions (&lt;50 km) 250 kg and 500 kg Bomb (via Aircraft)</td>
</tr>
<tr>
<td>Soman (GD)</td>
<td>Nerve Agent; Moderate</td>
<td>Unknown; Experimental Development Potentials</td>
<td>Assume same as Sarin (GB)</td>
</tr>
<tr>
<td>VX</td>
<td>Nerve Agent; Very High</td>
<td>≥20 tons</td>
<td>Scud D (600 km) Scud C (500 km) Scud B (300 km) M600 (≤ 300 km) SS21 (70 km) Artillery Rockets (&lt;50 km); BM-14, Volcano</td>
</tr>
<tr>
<td>Chlorine (Cl); Pure &amp; Mixed</td>
<td>Choking Agent; Low</td>
<td>Industrial Production Capability</td>
<td>Barrel Bomb, Gas Cylinder (via Helicopter)</td>
</tr>
</tbody>
</table>

Italic = Unconfirmed and speculative agents and/or stockpiles

Table 2. Assad Regime Chemical Warfare Capabilities—Estimated.¹⁵

Suffice it to say, the Syrian Arab Republic had—until acceding to the CWC and allowing for its declared chemical weapons program components to be destroyed and whose removal out of the country for subsequent elimination took place between October 6, 2013 and June 23, 2014—well developed capabilities to deliver sulfur mustard, sarin, and VX agents in weaponized munitions against both external and internal enemies.¹⁶ What percentage of the existing chemical weapons program and munitions the Assad regime allowed to be sacrificed in order to stave off Western airstrikes in the fall of 2013 is unknown. What is known is, post-Ghouta, the regime initially kept a low profile in its chemical weapons use and followed a dual track of reconstituting some of the lost components of its chemical weapons production capabilities—which likely included the rebuilding of a fleet of mobile sarin production labs in the back of large nondescript trucks¹⁷ and the acceptance of shipments of North Korean delivery systems¹⁸—as well as exploiting dual-purpose chemicals—specifically chlorine—as low-tech chemical weapons in a new round of attacks against the enemies of the regime.¹⁹ This reconstitution was carried out by the Syrian Scientific Studies and Research Center—the producer of chemical agents for the Assad regime—
in coordination with the little known Syrian Air Force organization termed Unit 450 that controls
the regime’s chemical weapons stockpiles. Some speculation also exists concerning the fate of
2,000 chemical agent aerial type bombs that existed in the regime's arsenal prior to it acceding to
the CWC. While the regime said it converted them over to conventional weapons use, some, if not
the majority, of these nerve agent dispersal munitions could have been secretly retained. As time
passed, the Assad regime then took a calculated risk and attempted to openly revert to the use of
the more deadly nerve agent sarin once again in the April 4, 2017, Khan Sheikhoun attack. This
blatant CWC violation immediately resulted in a military response by the United States in which
59 Tomahawk cruise missiles targeted Al Shayrat Airfield from which the Syrian aircraft that
engaged in the chemical attack originated.

CHEMICAL WEAPONS USE

The earliest allegation of Assad regime chemical weapons use was reported on December 23,
2012. It relates to a Homs, Syria poison gas attack in which at least six people in a rebel-held area
were reported to have been killed. While chlorine was initially suspected in the attack, BZ (3-
quinuclidinyl benzilate) use was also suspected and thought to be more probable, although this has
since been met with skepticism and repudiated—with weaponized commercial pesticide now
suggested as being used. However, this pesticide and sarin may manifest similar victim
symptomology. A month prior to the attack, an indications and warnings event took place in which
Israel reportedly shared satellite intelligence with the United States:

Syrian troops appeared to be mixing chemicals at two storage sites, probably the deadly
nerve gas sarin, and filling dozens of 500-pounds [sic] bombs that could be loaded on
airplanes.

An international diplomatic effort of diverse interests, composed of the United States, Arab
states, Russia, China, Iraq, and Turkey, put political pressure on the Assad regime, ending the
preparation of the sarin-filled bombs. While an international crisis was thought to have been
averted—especially given the Obama administration’s earlier Assad regime “red-line” chemical
weapons use stance on August 20, 2012—the Homs attack a month later and follow-on ones would
prove otherwise.

Since that first use incident, at least half-a-dozen incidents related to nerve agents and a dozen
related to the less deadly choking agent chlorine have taken place. Chlorine agent use is likely well
into the low dozens of incidents, with eight incidents identified as taking place between November
17 and December 13, 2016, and another eight identified as taking place between January 8 and
April 7, 2017. Even such conservative estimates do not go unchallenged. Ongoing disinformation
campaigns were conducted by the Assad regime and their Russian allies, as well as some of the
jihadi opposition groups, related to chemical warfare incidents. Their actions have helped to
obscure whom the actual perpetrators are, with finger pointing on both sides and even at U.S.-
backed forces taking place. Additionally, even U.S. determinations of Assad regime chemical
weapons use are also occasionally in variance with UN fact-finding mission reports. The reason is
that UN teams will at times have to conduct their investigations remotely because of the dangers
inherent in making entry into contested urban areas. Further, due to political considerations, the
UN is allowed to state that chemical weapons were utilized in an incident, but they do not have
the mandate to name the perpetrator of the criminal act. Still, incidents of Assad regime chemical
weapons use can be identified (see Table 3) and are provided below to highlight some of the agents utilized, their patterns of deployment, and effect:

**Khan Al Asal, Aleppo, Syria (March 19, 2013)**

This chemical weapons incident took place in the Khan Al Asal area of Aleppo in the early morning hours. It appears to have been a case of Assad regime chemical fratricide. It resulted in organophosphate poisoning—in all likelihood, sarin gas—resulting in 20 deaths and 124 injuries to regime soldiers and civilians. A barrel bomb type device—that is a commonly used improvised explosive device—was dropped from a regime helicopter on its own controlled part of the city, although alternative reports of a rocket or missile being utilized have also been made. As part of an active propaganda campaign, the Assad regime and the Russian Government claimed that a rocket containing sarin had been fired by rebel forces at the Assad regime position and called in a UN team to investigate the incident. This action was a rather bold gambit given that the Aleppo rebels did have the technical capacity to either produce or utilize binary-type sarin munitions.31

**Sheik Maqsood, Aleppo, Syria (April 13, 2013)**

In the Sheik Maqsood neighborhood of Aleppo, a Free Syrian Army (FSA) fighter was killed along with 23 injured by an Assad regime sarin gas attack. A bomb of some sort was dropped by either a helicopter or an aircraft on the rebel position. Atropine was utilized to treat those injured.32

**Saraqueb, Syria (April 29, 2013)**

FSA controlled territory was attacked in Saraqueb by an Assad regime helicopter that dropped multiple bombs containing sarin on its forces as well as civilians. A trail of white smoke was seen associated with the dropping of the three munitions. One civilian death and 10 injuries subsequently took place. Atropine was provided to those injured to relieve miosis and other nerve agent symptoms. A newer investigative report provided images of the sarin canisters dropped in this incident and brought together discrete pieces of information related to it.33

**Ghouta, Damascus, Syria (August 21, 2013)**

This incident represents the largest Assad regime chemical weapons attack to have taken place during the Syrian civil war. The earlier incidents were in some ways precursors leading up to it, as the regime became emboldened for not being more forcefully sanctioned for its chemical warfare activities. In this attack, the Assad regime released a barrage of surface-to-surface rockets containing sarin into the rebel-held areas of East and West Ghouta, Damascus. The estimated death toll for this incident ranges from no less than 281, provided by French intelligence, to 1,429, based upon a U.S. Government figure. Causality estimates are projected to be in the low thousands.34 Of note is the White House assessment that “the Syrian regime has used chemical weapons over the last year primarily to gain the upper hand or break a stalemate in areas where it has struggled to seize and hold strategically valuable territory.”35 Given the criticality of the Ghouta district to the future integrity of Damascus (its capital city), it is of little wonder that this was the focal point of the Assad regime’s large chemical weapons attack. After the attack, the Assad regime and their Russian allies (and even the Iranians) attempted—to no avail—to place the blame for it on rebel
groups. This disinformation narrative is consistent with the ongoing Assad regime propaganda campaign.36

**Keferzita (Kafr Zita), Syria (April 11 and 18, 2014)**

This post-Ghouta incident begins the Assad regime use of chlorine against opposing rebel fighters and civilians. In 2 attacks that killed 2 and injured 200 in Keferzita, barrel bombs containing chlorine were dropped by regime helicopters, primarily against civilians. The chemical agents utilized in the attacks originated from overseas, “The canisters contain markings with the code ‘CL2’—the symbol for chlorine gas—and ‘NORINCO,’ indicating that the cylinders were manufactured in China by the state-owned company NORINCO. Yellow is the standard industrial gas color code for chlorine.”37

**Kallaseh, Aleppo, Syria (December 9, 2016)**

An Assad regime helicopter dropped a yellow gas cylinder by the al-Hayat clinic in the Kallaseh area of Aleppo in this evening incident. Over 50 causalities resulted from the attack. Numerous chlorine attacks had been taking place since April 2014 by the Assad regime in an attempt to sidestep the CWC it had acceded to.38

**Basimah, Damascus, Syria (January 8-9, 2017)**

This chlorine use incident was conducted over 2 days in three separate attacks by the Assad regime. It took place in the Basimah section of Damascus and resulted in 46 casualties. The type of delivery method was not specified, but for regime chlorine-based agents, typically barrel bombs and gas cylinders are utilized for dispersal. The incident is representative of a large number of other such regime chlorine attacks that have occurred where many individuals were injured but few if any immediate deaths took place.39

**Khan Sheikhoun, Syria (April 4, 2017)**

The Khan Sheikhoun incident represents the second largest chemical weapons attack carried out by the Assad regime during the Syrian civil war. It was an attempt to push the envelope against the Western coalition once again with respect to conducting large-scale nerve agent attacks rather than utilizing less effective chlorine munitions as it had been doing post-Ghouta. In this incident, a Syrian aircraft dropped either KhAB 250 kg or 500 kg bombs containing sarin on rebel-held territory. The early morning attack caused 92 fatalities and over 200 causalities. The attack, as was mentioned earlier, was met with a large-scale U.S. cruise missile attack against the Assad regime base where the attacking Sukhoi SU-22 aircraft originated. Once again, Russia attempted to deflect blame from the Assad regime by stating that the nerve agent release was due to Syrian aircraft hitting a rebel chemical weapons stockpile.40
LESSONS LEARNED

Lessons learned concerning the Assad regime’s chemical weapons program, and their use of chemical warfare agents in Syria, are as follows:

- **The Assad regime has and will continue to view chemical weapons as a strategic resource.** They represent a WMD—albeit a “poor man’s atomic bomb” equivalent—that provides the regime with a deterrent to foreign state incursions and as a means to either hold or acquire strategically valuable territory within Syria for regime survival purposes. However, this has turned out to be a weak deterrent to nuclear-armed states like the United States and Israel that have conducted targeted strikes inside Syria in the past. Chemical weapons use has also been very judicious vis-à-vis the initial and even later regime stockpiles of these agents. The regime’s perspective on chemical weapons is an evolved one—as opposed to the Islamic State’s less sophisticated orientation to these munitions, which is focused more operationally and tactically. This point of view...
may be due to the decades-long association the Assad—father and son—regimes have had with chemical weapons and the fact that the Syrian Arab Republic is an established autocratic state, unlike the Islamic State that was a relatively new proto-state even at its height.

- **Assad regime survival is more important than its chemical weapons program or engaging in chemical warfare.** Even though chemical weapons are of strategic value, they are still considered a bargaining chip if regime survival is ultimately at stake. This is why much of the chemical weapons program was traded away post-Ghouta to ensure the Syrian civil war was not further widened—via increased foreign military aid to rebel groups and Western coalition attacks on regime facilities and military assets. The regime view was that only parts of the chemical weapons program needed to be declared to politically satisfy the CWC conditions placed upon it, and that the program could be reconstituted at a later date. The regime survival imperative would also suggest that under no circumstances would the regime authorize attacks with chemical weapons anywhere near where U.S. personnel were operating in Syria—the immediate blowback potentials would simply be too high.

- **To protect the Assad regime’s chemical weapons program and ability to use chemical weapons, deception and outright lies have been actively utilized by the regime on an ongoing basis.** Further, the regime’s Russian and Iranian allies are also involved in the sustained effort to promote fake news and propaganda narratives that protect the regime and its chemical weapons program. In news broadcasts and social media posts, incidents of regime use of chemical weapons are said either not to have taken place, or blame is instead placed on rebel groups and Western liberal democratic coalition members for carrying out the chemical weapons attacks. This also means that the relationship of the regime with the UN and their chemical weapons inspectors is one in which only the chemical production and storage facilities and delivery systems the regime is willing to bargain away have been shown and, when chemical weapons use incidents do take place, the UN inspectors are only shown sites or provided with information the regime wants them to have.

- **The Assad regime continues to engage in brinkmanship when utilizing chemical warfare attacks on its enemies within Syria.** The Syrian Arab Republic’s intent has been to gain as much military advantage as possible, by their use of chemical weapons, up to the point that international opinion begins to turn against the regime fully, or the regime is immediately threatened by attacks from the United States, France, Israel, and other Western coalition states. This pattern of brinkmanship can first be seen with the initial pattern of sarin attacks in 2013 leading up to the Ghouta incident that ended up being a miscalculation on the part of the Assad regime. The next phase of chemical agent use, beginning in April 2014, was more discrete and subtle, utilizing chlorine while the regime cooperated with the CWC in the destruction of its declared chemical weapons program. Three years later, this was followed by the regime
testing the new U.S. administration (as it had done with the former one) in what was likely to become a new round of sarin gas attacks in April 2017 that was met with an immediate U.S. cruise missile response.

- **Some chemical weapons are more favored for battlefield use by the Assad regime than others.** Reports of chemical weapons use by the regime are clustered around sarin (a nerve agent) and chlorine (a choking agent). For whatever reason, sulfur mustard has not been utilized by the Assad regime in any identifiable quantities that have been reported by the world’s news or social media. Up to 180 metric tons of this chemical agent may potentially exist in regime stockpiles. The identified use of VX has also not taken place. The regime may still have some stockpiles of this agent left, but this is a speculative assumption. VX is far more toxic than sarin, so it is unknown if this agent is being held as a reserve for its deterrence value—possibly against Israel—or if it is considered a chemical weapon of last resort in case the regime had to make a last stand in defense of its controlled areas in Damascus. One reason sulfur mustard may not have been utilized is that the regime can get away with using chlorine with some impunity, but not sulfur mustard. However, sarin is far more effective than sulfur mustard, and it is the lethal chemical weapon of choice when the regime needs to clear or hold key sections of cities.

**CONCLUSION**

At the time of the writing of this Strategic Insights article, a U.S. sponsored UN condemnation of the incident and a fact-finding effort related to it have failed due to a Russian veto. This has resulted in the leaders of the United States, France, and Great Britain now acknowledging the need for a joint allied response to this overt violation of international law, since any option of working through the UN on this incident has been blocked. Such a response will most likely focus on targeting the Assad regime’s still significant chemical warfare capabilities. Additional response options are now also being offered up by various military analysts and international relations commentators—including sustained strikes on Syrian aircraft, artillery, rocket formations, and command and control capabilities. Such military options now exist within the greater context of direct Russian warnings against the United States taking punitive actions against the Assad regime.

Given what we know of the Assad regime’s relationship and past use of chemical weapons (both dedicated and dual-purpose HAZMAT ones), the Douma incident is representative of an ongoing pattern of chemical warfare brinkmanship derived from internal cost-benefit calculations. The incident is further meant to create discontinuities in present Presidential administration policies seeking a withdrawal of U.S. troops from Syria. A proportional U.S. and allied response to this criminal act will likely once again be cruise missile-based against regime chemical weapons and delivery assets, but we should not delude ourselves into believing that it will deter the Syrian Arab Republic from engaging in future chemical weapons attacks. The only way such a clear message can be delivered is to directly and unmistakably threaten the Assad regime’s survival. As of yet, this is something that the United States and its allies have been unwilling to do. Given the escalatory potential of such a policy, and now even that of a more limited punitive cruise missile strike on the Assad regime's military assets with both Russia and Iran threatening to enter into a
widening conflict, the current U.S. administration should well consider its post-Douma response within the larger geopolitical realities of the Middle East. The present “passions of the moment” and the perceived political imperative to do something—like proportionately throwing “lead down range”—should not obfuscate the long-term need for sound and proactive strategic planning to contain and then diminish Syrian, Iranian (and Hezbollah), and Russian influence and military capabilities—including their chemical warfare arsenals—in the Middle East.

ENDNOTES


30. Determining only use and not blame has been a component of the ongoing Organisation for the Prohibition of Chemical Weapons (OPCW) mandate in Syria. See, for instance, “The OPCW’s fact-finding team is supposed ‘to investigate chemical weapons use in Syria, not to determine attribution. Therefore it would seem logical that they only go to the area where the strike hit’,” in Aron Lund, “Commentary: Why Haven’t Chemical Weapons Inspectors Gone to Syria’s Shayrat Air Base?” The Century Foundation, June 28, 2017, available from https://tcf.org/content/commentary/havent-chemical-weapons-inspectors-gone-syrias-shayrat-air-base/.


35. The White House, Office of the Press Secretary.


38. “Syria: Coordinated Chemical Attacks on Aleppo,” Human Rights Watch has reported on numerous Assad regime chlorine use incidents. See the link in this article to their May 2014, April 2015, June 2015, and September 2016 reports.


*****

The views expressed in this Strategic Insights piece are those of the author and do not necessarily reflect the official policy or position of the Department of the Army, the Department of Defense, or the U.S. Government. This article is cleared for public release; distribution is unlimited.

*****

Organizations interested in reprinting this or other SSI and USAWC Press articles should contact the Editor for Production. All organizations granted this right must include the following statement: “Reprinted with permission of the Strategic Studies Institute and U.S. Army War College Press, U.S. Army War College.”

*****

All Strategic Studies Institute (SSI) and U.S. Army War College (USAWC) Press publications may be downloaded free of charge from the SSI website. Hard copies of certain reports may also be obtained free of charge while supplies last by placing an order on the SSI website. Check the website for availability. SSI publications may be quoted or reprinted in part or in full with permission and appropriate credit given to the U.S. Army Strategic Studies Institute and U.S. Army War College Press, U.S. Army War College, Carlisle, PA.