

OCTOBER 2013

JESSICA D. LEWIS

MIDDLE EAST SECURITY REPORT 15

AL-QAEDA IN IRAQ RESURGENT, PART II



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ABOUT THE AUTHOR

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MAP 1 | IRAQ

MIDDLE EAST SECURITY REPORT 15

AL-QAEDA IN IRAQ RESURGENT, PART II

By Jessica D. Lewis

This report is a continuation of a previous publication entitled “Al-Qaeda in Iraq Resurgent: The Breaking the Walls Campaign, Part I.” Part I of this report put forth the assessment that al-Qaeda in Iraq (AQI) has reconstituted as a professional military force capable of planning, training, resourcing, and executing synchronized and complex attacks in Iraq, in particular waves of Vehicle-Borne Improvised Explosive Devices (VBIED), and combined arms attacks involving VBIEDS, mortars, suicide bombers, and small arms fire. This assessment derives from careful study of the 24 VBIED waves and 8 prison attacks observed during AQI’s “Breaking the Walls” campaign from July 21, 2012 to July 23, 2013. This report will describe these events in detail in order to provide the necessary tactical evidence to support the strategic and operational assessments presented in Part I.

This continuation will focus upon the geography, volume, interval, and selected targets which characterize the individual waves and prison attacks. Careful study of the individual attacks supports the estimation of AQI’s combat power applied to VBIED operations in 2012-2013. Part II will also show how the four phases of the “Breaking the Walls” campaign that are described in Part I were derived and assessed. It will provide further insight into the evolution of AQI’s military organization over the same time period. The primary object of Part II will be to explain AQI’s battle plan and adaptation over the course of the “Breaking the Walls” campaign. The paper observes how AQI employed VBIEDS, its historical signature and current weapon of choice, to increase operational momentum in Iraq and establish the initiative at the expense of the Iraqi Security Forces. Part II will also establish the key indicators of the presence and reactivity of AQI’s VBIED planning cell and its distinction from the force-level planning cell assessed to be responsible for combined arms attacks upon prisons.

Part II uses the definitions and key terms that are established in Part I, including *VBIED*, *VBIED wave*, and *VBIED cell*. A VBIED is distinguished by its design to project explosive power outside of a vehicle. VBIEDS are identified in context either to kill many people outside of the vehicle; as a battering ram to achieve structural damage; or in select instances to assassinate a person in another vehicle. By contrast, car bombs and sticky bombs are small parcel bombs placed on or in a car in order to target its occupants. A VBIED is therefore considered to be a much more sophisticated weapon, requiring

explosives expertise and automotive expertise to re-wire a car as a traveling high-yield bomb.

A VBIED wave is an observed phenomenon often repeated by AQI in 2012-2013, in which many VBIEDS are detonate on the same day. Throughout the “Breaking the Walls” campaign, these waves often struck multiple cities on the same day, which provides insight into the minimum command and control mechanisms in place to direct and coordinate attacks. For the purposes of both Part I and Part II, the threshold for distinguishing a VBIED “wave” as opposed to other groupings of attacks is six VBIEDS in a single day. This serves to isolate the distinction between coordinated VBIED activity at a national level and VBIED activity that may be more decentralized. Likewise the methodology to isolate VBIED attacks and to evaluate VBIED waves presented in Part I applies also to Part II. The methodology described in Part I is re-printed in Appendix A of this report.

Part I of this report described the presence of a national VBIED organization within AQI’s military that designs, resources, and directs VBIED waves. Decentralized components of the national VBIED organization are called “VBIED cells.” VBIED cells are not assumed to have been present for the duration of the “Breaking the Walls” campaign. Rather, a principal object of this more in-depth study will be to observe key indicators that decentralized VBIED cells are active, where they may be active, and when they may have emerged. The disposition of independent VBIED cells, which may correspond with increasingly decentralized VBIED construction, is a measure of the operational depth of AQI’s military

organization. Individual VBIED cells that can operate without guidance but remain responsive to tasking are difficult to defeat corporately. Destroying one cell, or even communication among across echelons, does not destroy their aggregate lethal capability.

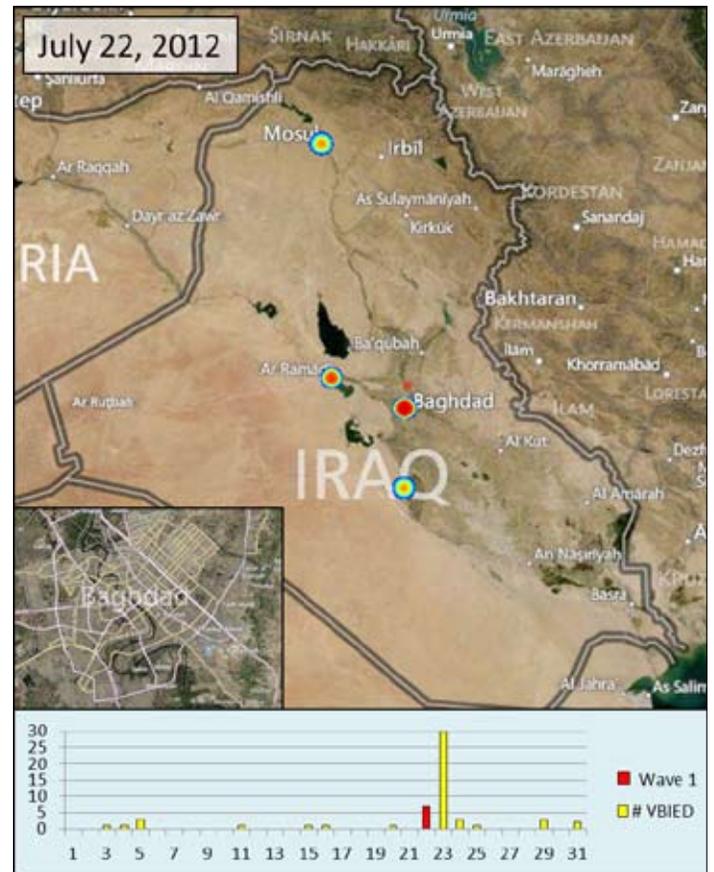
Part II will also discuss indicators of the presence of two echelons of planners within AQI's military, one that specifically pertains to VBIED operations, and one that incorporates VBIEDS into combined arms attacks. This observation yields a key assessment that AQI has reconstituted as a military organization typified by its operational planning, as opposed to a disrupted and leader-centric terrorist organization. The VBIED command, assessed to be a national-level asset within AQI's military structure, is further assessed to possess its own planning capability, its own supply chain, and its own training apparatus to propagate technical expertise. The overarching military command, assessed to design and direct combined arms attacks, appears sometimes to task the VBIED command with support to these complex attacks, for example the prison attacks of 2012-2013. This report will explore the phases of the "Breaking the Walls" campaign for what they indicate of the objectives and planning culture of these two military headquarters.

PHASE 1: PROOF OF CONCEPT AND CAPABILITY

Waves 1 & 2: 22-23 July 2012

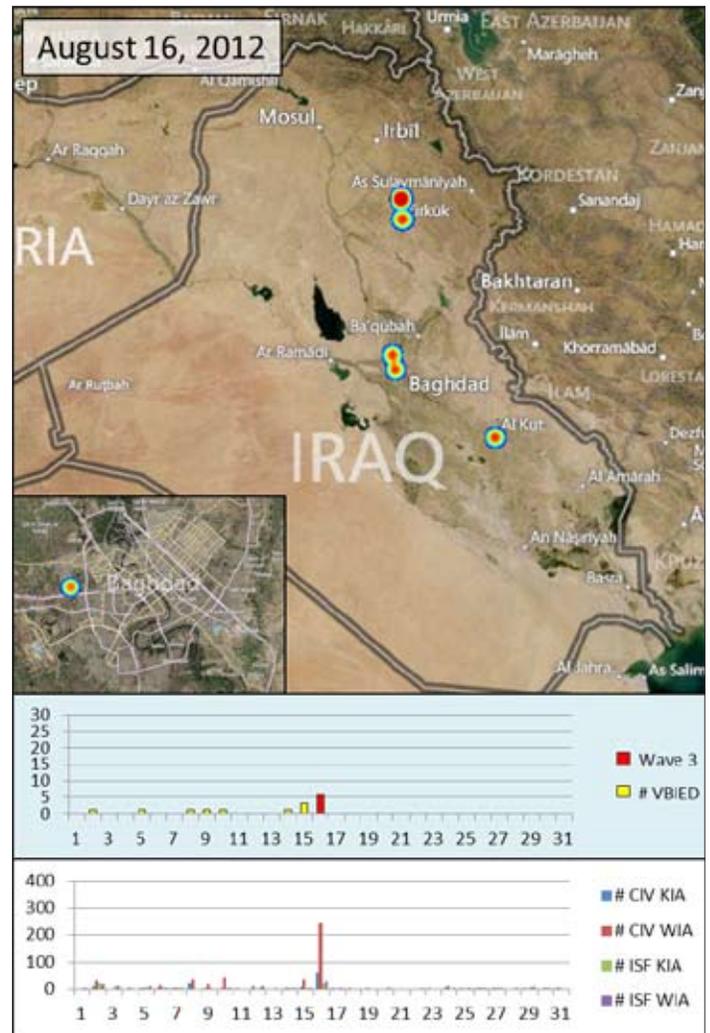
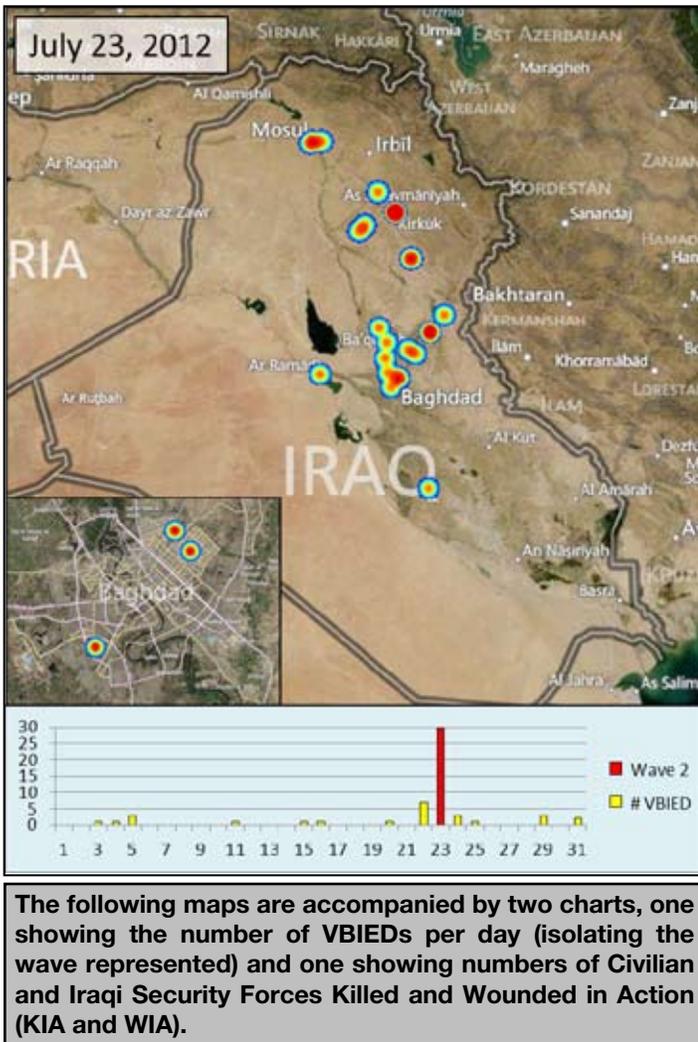
The wave on July 23, 2012 was the first to draw international attention to AQI's "Breaking the Walls" campaign. A wave of seven VBIEDS, however, detonated the day prior, on July 22, 2012 and was actually the first wave of the campaign. This wave consisted of two clusters of events in Mahmoudiyah south of Baghdad and Ramadi and additional singleton VBIEDS in Mosul and Najaf. It is unclear at this time if these two waves were staggered deliberately. Given the assessment offered in Part I that the organizational structure of AQI developed over the course of the campaign, it is possible that the July 22, 2012 wave and the July 23, 2012 wave were meant to be a single wave, but were inadvertently offset in time.

30 VBIEDS detonated on July 23, 2012, striking civilian, ISF, and government targets. Most of the VBIEDS detonated across northern Iraq in Mosul, Kirkuk, Diyala, Salah ad Din, and Anbar. In comparison, only four of the VBIEDS detonated in Baghdad, with one just north in Tarmiyah. Additionally, a simultaneous spike



in other explosive events also occurred on July 23, 2012, and some of these attacks may have been part of a larger coordinated strike by AQI. In particular, two waves of house-borne IEDs (HBIEDs) detonated in Sharqat and Taji.¹ Violent events were not observed to cluster on any other day in July 2012, suggesting that these HBIED events were also orchestrated to occur on the same day as the VBIED wave. Wave 2 may therefore provide an early indication of a force-level planning effort within AQI's military to synchronize disparate lines of operation. It is worth noting that VBIEDS were several times observed to correlate with spikes in other types of attacks during the early months of "Breaking the Walls," but that VBIED waves began to occur independently and generally to assume their own character and focus in February 2013 in conjunction with the start of Phase III.

The AQI operatives who executed the VBIED wave were likely not the same operatives who executed the HBIED attacks. This assessment is based on several observations. First, VBIEDS constitute a highly technical operation requiring automotive as well as explosives expertise, and the combination is specific to this highly-focused attack type. Second, VBIED preparation sites have niche



requirements, namely a car repair shop than can be converted into a VBIED factory. Third, because this is the largest VBIED wave documented in this study, it is therefore reasonable to regard this wave as an illustration of AQI’s maximal effort applied to VBIEDS. This suggests that other activities occurring outside of this wave were performed by teams with no VBIED capability. It has also lately emerged as an assessment in September 2013 that HBIED attacks are now used deliberately to displace populations from areas where AQI seeks to exert control.² As such, the HBIED attacks on July 23, 2012 may demonstrate AQI’s early push to control terrain in Taji and Sharqat, though more importantly to amplify the effects of a national wave of attacks.

Wave 3: 16 August 2012

An interval of 24 days separated Wave 2 from Wave 3. This wave was much smaller overall, consisting of only 6 VBIEDS, but it appeared to produce a considerably higher

casualty-to-attack ratio than Wave 2.* The effectiveness of the VBIEDS in this wave may indicate that the targets for this wave were more carefully selected, that the smaller wave was easier to control for maximum effect, or that the first wave of VBIEDS and prison breaks had already generated lessons learned that were employed in Wave 3. The limited size also indicates that this wave did not require a full planning effort like the waves on July 23, 2012 and September 9, 2012.

The Wave 3 distribution may serve to isolate the attack zones selected by AQI for emphasis or shaping. Three of the VBIEDS that detonated on August 16, 2013 struck targets in or near Kirkuk. The others exploded in Baghdad, Kut, and Taji. Additional explosions that

* The total casualties recorded by AFP on August 16 exceeded **200 (63 KIA/149 WIA)**. One of the VBIEDS in Kirkuk and two of the IEDs in Baghdad, in Sadr City and Zafaraniyah respectively, appeared most responsible for the fatalities.

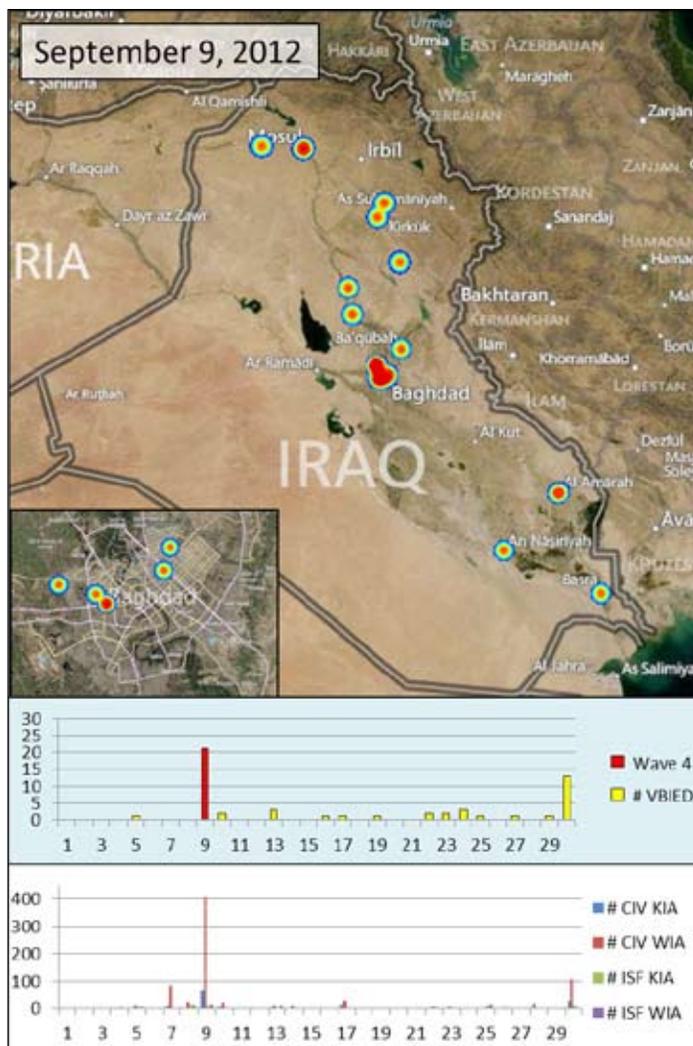
day detonated in Kirkuk, Hawijah, Tuz, Baqubah, Baghdad, Tikrit, and Tal Afar. This spread suggests that AQI maintained operational depth in northeastern Iraq at the beginning of the “Breaking the Walls” campaign. It also suggests that the VBIED logistics and staging effort were also located in the northeast, along with the headquarters of the VBIED command containing the planning cell.

A small cluster of VBIED attacks occurred the day prior, on August 15, 2012, comprised of three VBIEDs in Baqubah and Muqadiyah. The cluster on August 15 may have been planned and executed in conjunction with the August 16 attacks as a two-phased operation. One of the VBIEDs in Muqadiyah reportedly exploded near the house of an Interior Ministry intelligence officer.³ Additionally, gunmen attacked two police checkpoints in Baqubah.⁴ The attacks’ geographical dispersion validates the hypothesis of an eastern headquarters for the early VBIED command, possibly centered on or north of Muqadiyah in the Diyala river valley. Muqadiyah had been the site of one of the longest standing VBIED factories and significant AQI command and control centers in late 2007.⁵

Two prison attacks also occurred in the interim, involving VBIEDs among other attack methods. AQI struck the Baghdad Counter-terrorism Headquarters on July 31, 2012, inflicting 65 casualties and claiming credit on August 13, 2012.⁶ The attack upon the Taji Tasfirat Prison on August 1, 2012 incurred over 30 casualties.⁷ This pair of prison attacks established the relationship between the VBIED campaign and the prison attack campaign. The grand scale of these sequential efforts suggests a strong linkage between the VBIED planning cell and the force-level planning cell at the beginning of the campaign. Accordingly, the VBIED waves and prison attacks, which each required significant prior planning, were likely not planned separately, but together, before “Breaking the Walls” was announced. This coincides with the assessment that a centralized organization is less sophisticated and more vulnerable than one that sub-divides by specialty and develops greater operational depth, which will be observed as a growth step within the VBIED organization in later phases of the campaign.

Wave 4: 9 September 2012

Wave 4 greatly expanded the geography of the attacks. Wave 4 extended attacks to Basra and other southern cities, as well as Tal Afar in the north. This wave stands



out among others in the “Breaking the Walls” set as one that was clearly intended to demonstrate the ability to launch attacks anywhere in Iraq, including southern Shi’a strongholds. An interval of 24 days separated Wave 3 from Wave 4, replicating the VBIED recovery cycle between Waves 2 and 3. Wave 4 consisted of 21 VBIEDS. The total casualties recorded in Iraq that day exceeded 526 (76 KIA, 420 WIA), which is the single highest casualty-yield day within this data set. Wave 4 was a second very large wave and the most deadly, again indicating that target selection and execution improved the lethality of individual VBIEDS as part of a larger wave. The VBIEDS causing the highest casualties were in Maysan province, Kirkuk, Amara, and Sadr City, which are Shi’a majority areas.⁸ The attack in Maysan targeted civilians near the Imam al-Sharqi shrine.⁹

Most of the attacks were again geographically concentrated in close proximity to Muqadiyah, in Baghdad, Baqubah, and Kirkuk. Taji was targeted more prominently than in

the previous wave, though VBIEDS in Taji inflicted more material damage than human casualties. These VBIEDS may therefore have reinforced a push to establish control in Taji. Additionally, this wave sustained VBIED activity within Kirkuk city. In addition to VBIEDS in the city center, a VBIED struck the parking lot outside the state-owned North Oil Company as well as Iraqi Army soldiers west of the city.¹⁰ VBIED attacks upon critical infrastructure targets were not commonly observed during the “Breaking the Walls” campaign, but they signify a critical vulnerability of the state and are as of September 2013 assessed to be a potential objective of the AQI’s new 2013-2014 campaign.

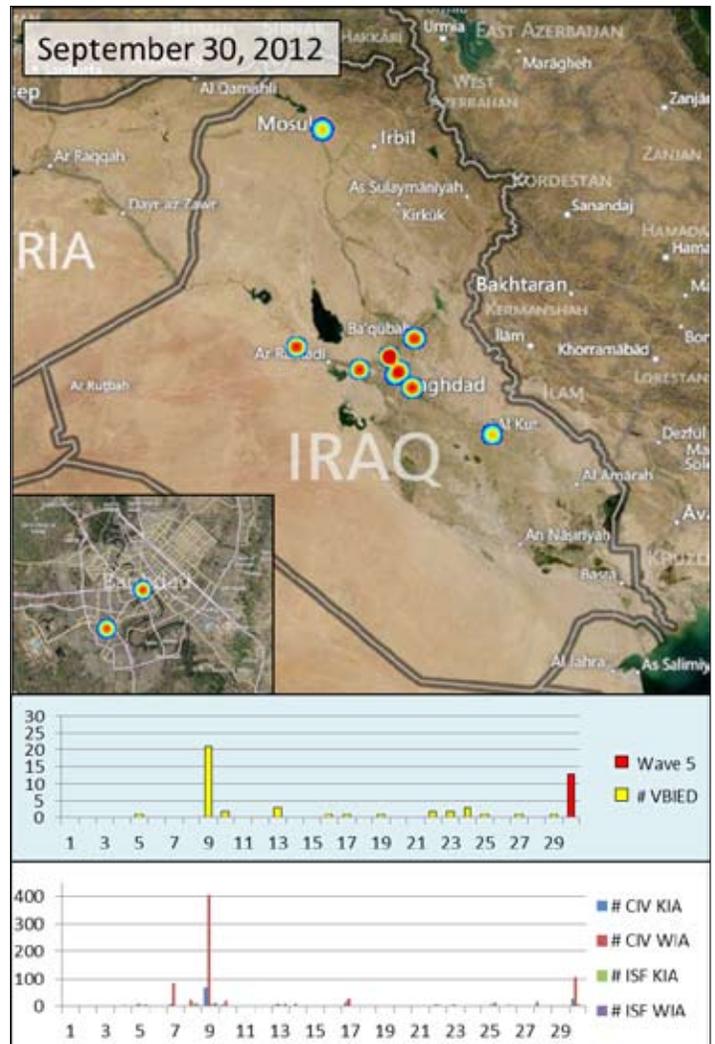
Smaller VBIED clusters followed on September 13 and 24, which appear unconnected to the September 9 wave. These attacks repeatedly struck Fallujah and Ramadi, most often targeting the ISF. In one notable exception, a suicide bomber targeted a primary school in Hit, Anbar, killing 4 children and wounding 8.¹¹ AFP data does not indicate that these attacks otherwise generated significant casualties. These VBIED clusters demonstrate that the AQI campaign in Anbar diverges from that in the east.* Independent activity occurs outside of VBIED waves and in high enough volume during this period to suggest that an independent VBIED cell was already in place in Anbar at this time. Such a VBIED cell would likely involve independent leadership, and possibly also independent VBIED construction, to prepare and execute attacks if not assigned and resourced by a higher command.

Wave 5: 30 September 2012

The significance of Wave 5 is that it occurred immediately after the attack upon the Tikrit Tasfirat prison on September 27, 2012, in which VBIEDS played a supporting role. The attack upon the Tikrit Tasfirat prison was highly successful. Over 60 ISF were killed or wounded and 100 prisoners escaped, including 47 AQI death row inmates.¹² The attack involved VBIEDS, silenced weapons, explosive belts, and hand grenades, and reportedly began from inside the prison. This was a well-planned and well-executed operation in which VBIEDS played only a minor role. AQI claimed credit for this attack.¹³

The Tikrit Tasfirat prison attack occurred one week after

* AFP data additionally points to moderately high casualties on September 7, 2012, which is unexplained by available data on explosive events at this time.



the September 19, 2012 attack on the Hib Hib police directorate, where 10 AQI leaders were reportedly detained. This attack involved suicide bombers and small arms fire.¹⁴ AQI also claimed credit for this attack.¹⁵ The larger attack upon the Tikrit prison involved the integration of VBIEDS as combined arms complements to degrade infrastructure in support of small unit tactics and large scale prisoner ground movements. Wave 5 occurred three days after the Tikrit Tasfirat prison break. Wave 5 consisted of 13 VBIEDS, the majority of which targeted Baghdad and Taji, with additional attacks in Baquba, Kut, Fallujah, Hit, and Mosul. AFP casualty records indicate relatively low total casualties in Iraq that day, and none of the VBIEDS are reported to have inflicted high casualties individually.

Several of the VBIEDS in this wave appeared to target the ISF, in Mosul, Hit, Baghdad, and Kut. The ISF is generally a harder and smaller target than civilians in public places, which may account for the low casualties.

Although it would seem logical that AQI would target the ISF as a defensive reaction to new ISF operations launched in the wake of the prison break, it is unlikely because none of the VBIEDS detonated in the vicinity of Tikrit. Consequently, we should hypothesize instead that the VBIED organization was not able to reset quickly in the Tikrit zone; that this VBIED wave was a diversion to protect prisoner escape; or that the wave is not directly related to the prison break. AQI claimed credit for the wave, indicating that the ISF had been targeted in a “bill of blood” for recent execution of Sunni prisoners.¹⁶

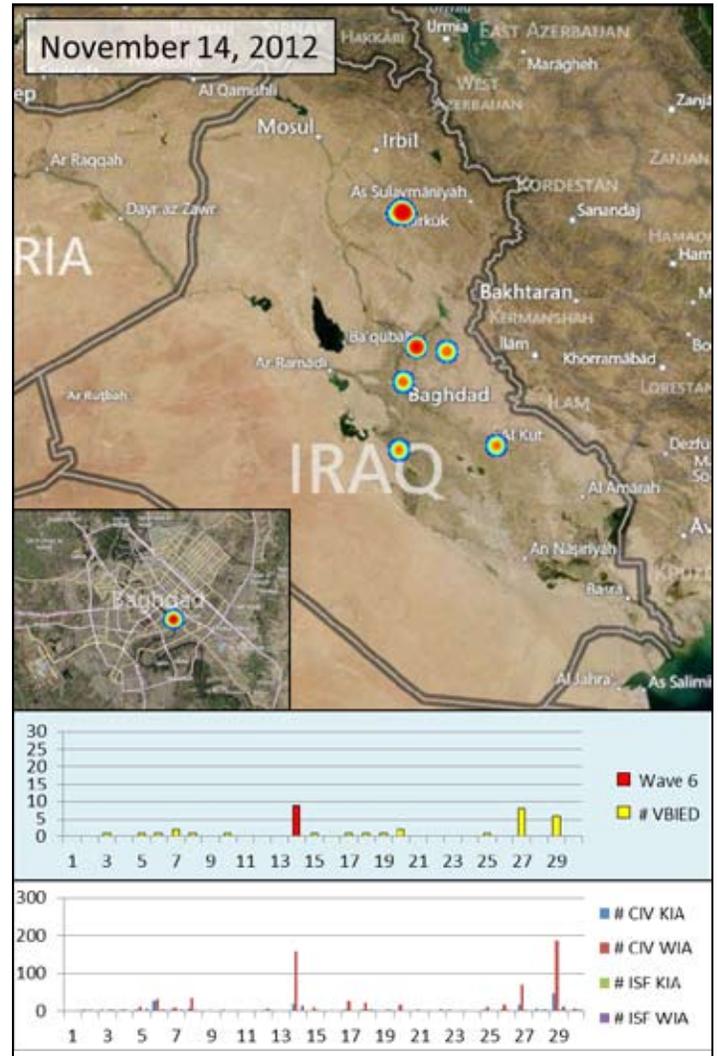
PHASE 2: THE GREEN LINE

Wave 6: 14 November 2012

A 45-day interval separated Wave 5 from Wave 6. Wave 6 was a smaller wave, consisting of 9 VBIEDS detonating in Kirkuk, Baquba, Baghdad, and also the southern provinces. Kirkuk sustained three VBIEDS targeting civilians. One of them reportedly targeted the KPD headquarters in Kirkuk. The VBIED in Baghdad struck the central neighborhood of Karrada, which was the third time this neighborhood near the Green Zone was targeted in the early months of the “Breaking the Walls” campaign.¹⁷ Launching successive attacks upon Karrada demonstrates that AQI can project attacks into the heart of the city despite the presence of ISF. The southern provinces of Wasit and Babel were also struck. This geographic spread suggests that AQI had begun to extend persistent VBIED lines of effort into three regions: Kirkuk, Baghdad, and southern Iraq by November 2012.

Kirkuk appeared to remain the main effort. The targets in Kirkuk were likely selected to exploit ethnic tension, while the Baghdad and southern VBIEDS targeted Shi'a communities to stoke sectarian tension on the eve of the Muslim New Year.¹⁸ Striking targets in southern Iraq, while witnessed during Phase I, was still uncommon during Phase II. This wave contained only the second VBIED to strike Babel during the “Breaking the Walls” campaign. It contained only the fourth to strike in the vicinity of Kut in Wasit province. It is therefore unlikely that separate cells had formed to focus upon southern Iraq targets by this time. It is more likely that AQI operatives dispatched from another location and staged in the southern Baghdad belts to execute this wave.

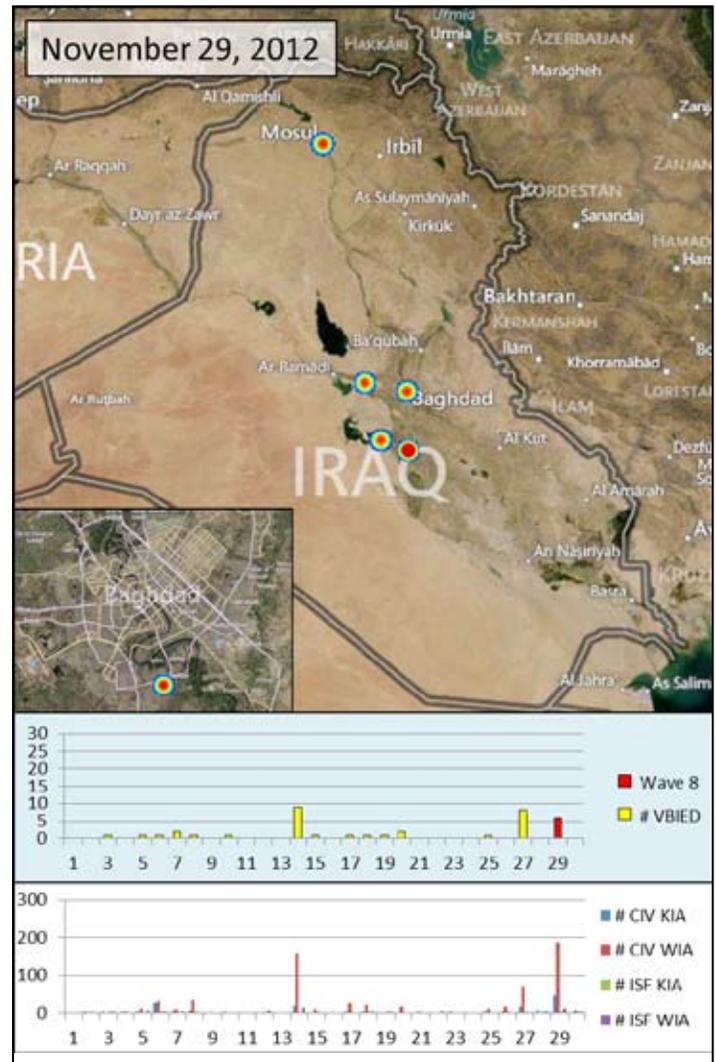
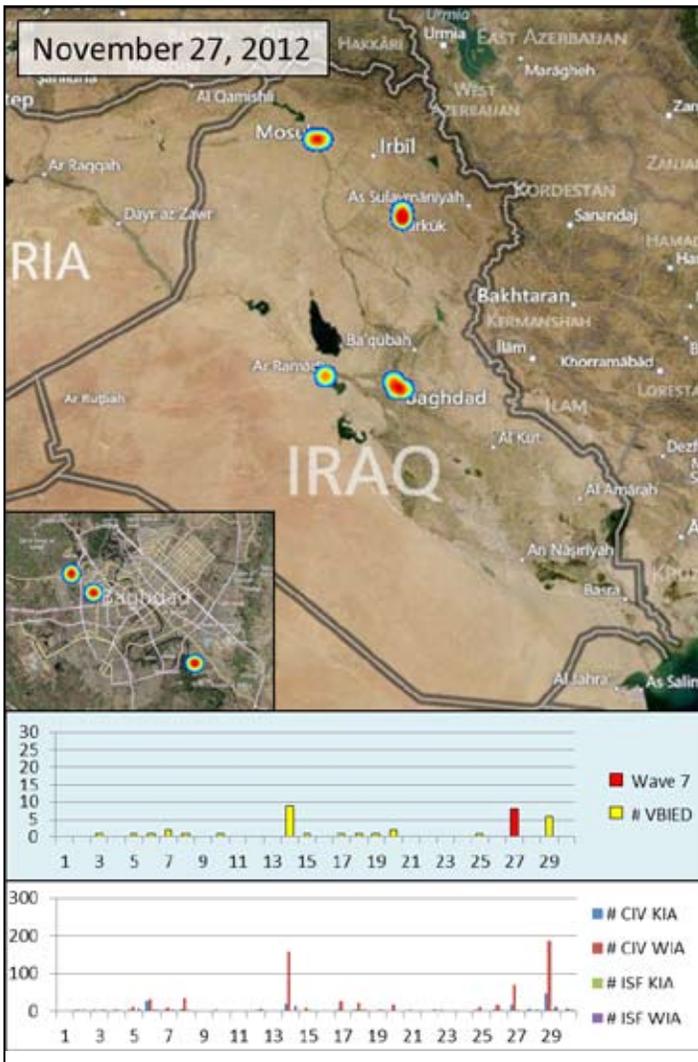
Separately, a very large SVBIED targeted the military installation at Taji on November 6, eight days prior



to this wave. This attack inflicted significant casualties for a single VBIED.¹⁹ The SVBIED targeted a group of Iraqi Army recruits gathering outside the gate to load onto buses. Taji base has sustained several off-cycle independent attacks over the course of the “Breaking the Walls” campaign. Among military installations, it is the hardest and most frequently struck with VBIEDS. This indicates both the significance of Taji base to AQI as a main objective and possibly also its proximity to one or more of AQI’s principal support zones. AQI combined arms operations directed against hardened facilities may be planned at the force-level rather than by the VBIED organization itself, given that they involve other weapon systems besides VBIEDS.

Waves 7 & 8: 27 & 29 November 2012

An interval of 14 days separated Wave 6 from Wave 7. This interval constitutes a dramatic reduction in the recovery time between VBIED waves. It is possible that



smaller elements were assigned primary responsibility for Phase II execution, leading to the false perception of faster recovery. Wave 7 consisted of 8 VBIEDS. Two of the VBIEDS exploded in Kirkuk, one specifically in front of the PUK Youth Union headquarters. Three additional VBIEDS exploded in Baghdad, another two in Mosul, and one in Ramadi. One of the Baghdad VBIEDS targeted the Ali Basha Shi'a mosque and inflicted significant casualties. The Mosul VBIEDS targeted an Iraqiyya MP and an Iraqi Police patrol, on the northeast and northwest of the city, respectively. AQI's attack zones in Mosul therefore shifted geographically. Previously, during Wave I and Wave 3, three attacks per wave focused upon the southwest and southeast quadrants of Mosul.

Once again, only a single VBIED detonated in Ramadi during this synchronized wave. Six other singleton VBIEDS detonated in Ramadi and Fallujah at other times during Phase II. The most organized VBIED effort in Anbar occurred two months prior, four days after Wave

4. On September 13, a small VBIED cluster consisting of four VBIEDS struck civilian and government targets in Fallujah and Ramadi.²⁰ An AQI cell in Anbar was likely executing VBIED attacks during this time; however, this cell does not appear to be effectively synchronized with centrally directed VBIED waves or routinely able to construct and deploy more than one VBIED at a time. With the exception of a complex attack upon a government compound in Ramadi on January 15, 2013 involving VBIEDS, IEDS, SVESTS, and Direct Fire, none of the VBIED attacks in Anbar during Phase II incurred more than 4 casualties.²¹ Most focused upon the harder to target ISF, which may contribute to the low casualty count.

Wave 8 occurred two days later on November 29, 2012, consisting of 6 VBIEDS. AFP data also indicates that more than 250 casualties (50/200) occurred on that day. VBIEDS detonated in Mosul, Baghdad, Fallujah, Hilla, and Karbala. In contrast to previous attacks that

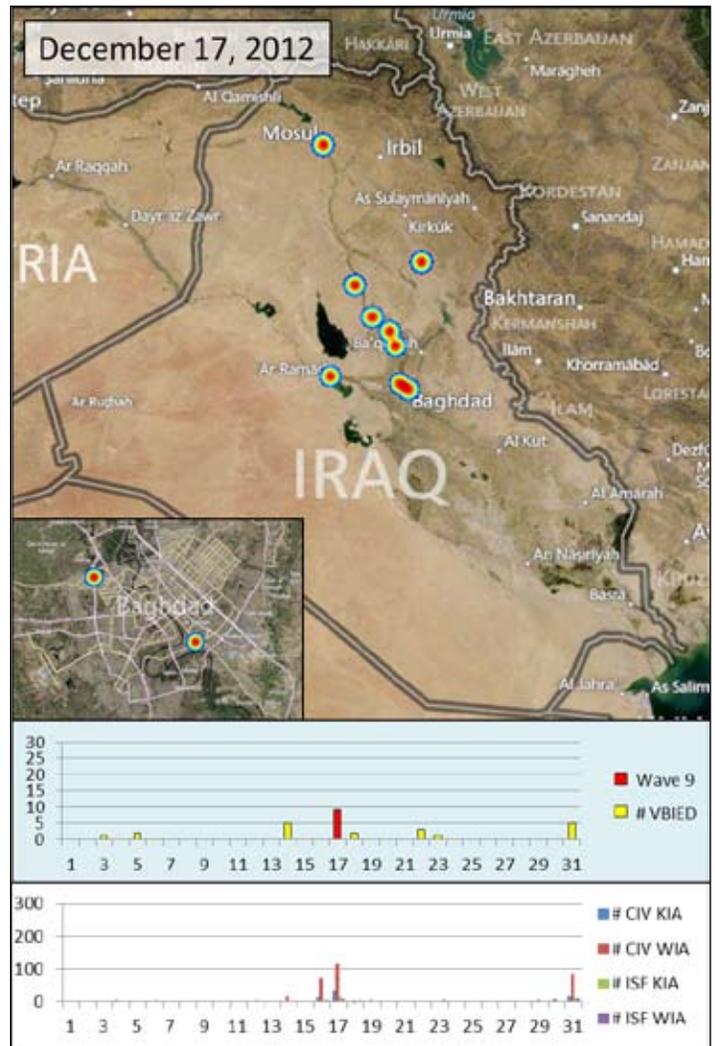
appear to emanate from east of the Hamrin Mountains, this small wave was west-leaning. The VBIED attacks upon Hilla and Karbala drove the casualties up, as they inflicted a combined total of 120 casualties (24/96). This attack pattern is interesting because it suggests several possible configurations of the VBIED organization at this time. It is possible that the VBIEDS in Wave 8 originated with teams gathered at a central location and then dispatched for attacks. It is also possible that the Baghdad, southern Iraq, and Anbar teams were semi-permanently or permanently deployed forward with their own VBIED construction capabilities by this time. We see evidence of this forward-deployed disposition of groups later on, and this is the first VBIED wave in which that disposition is possible. The organizational transition to multiple VBIED construction sites may therefore have occurred during Phase II.

Wave 9: 17 December 2012

An interval of 18 days separated Wave 8 from Wave 9. This interval initially appears to signal a longer recovery time, but it was interrupted by a significant mini-wave on December 16, which included a substantial strike against the PUK headquarters in Jalula, northeast of Muqadadiyah, a contested area along the Green Line.²² The attack upon a satellite PUK headquarters clearly represents AQI's intent to exacerbate ethnic tensions, and it also points back to Hamrin as a principal support zone. It further demonstrates that AQI focused its targeting along the Green Line, characteristic of Phase II, through smaller VBIED clusters as well as synchronized VBIED waves.

Wave 9 consisted of 9 VBIEDs, and AQI claimed credit for this wave.²³ Three of the VBIED attacks occurred in Baghdad, four occurred in Salah ad Din, and additional events occurred in Mosul and western Diyala. The VBIEDS in Balad and Tuz Khurmatu appeared to inflict the highest casualties. Two of the Baghdad attacks occurred to the west of the city for the first time. Three of the Salah ad Din attacks occurred in a deliberate striated pattern, with one VBIED each in Samarra, Balad, and Tikrit. The VBIED attacks along the northern arc likewise occurred at precise and distant intervals, with one VBIED each in Diyala, Tuz Khurmatu, and Mosul. It is difficult to discern a new cell configuration from this pattern, but new and highly defined targeting guidance is visible, almost as if it were drawn on a map.

December presented AQI with several new campaign



opportunities. First, Iraqi President Jalal Talabani suffered a catastrophic stroke on December 17, 2012.²⁴ Talabani had served as a stabilizing force to mollify ethno-sectarian strife in Iraq. His removal from Iraqi politics might have created a genuine opportunity for AQI, but Maliki seized it first. On December 20, 2012, PM Nouri al-Maliki targeted for arrest the Minister of Finance, Rafi al-Issawi, one of the four remaining Sunni national political figures.²⁵ This event ignited a nationwide predominantly Sunni Arab anti-government protest movement that endures past the publication date of this report. It does not appear that AQI fully absorbed these changes operationally until January 2013, after the conclusion of pre-planned attacks upon Kurdish political targets. AQI immediately adjusted its messaging to target Sunni protesters, however.

AQI executed a small VBIED cluster on 31 December 2012, for which it claimed credit while issuing advice

to Sunni protesters to abandon Maliki's government.²⁶ This VBIED cluster dispersed over a wide area, with 5 VBIEDS striking Kirkuk, Balad Ruz, Khalis, Baghdad, and Babel. While this cluster does not meet the threshold for a full VBIED wave, it was likely coordinated at least loosely to target Shi'a populations in these locations. Targeting Shi'a communities in order to stoke sectarian violence that overwhelms the ISF and results in the further disenfranchisement of the Iraqi Arab Sunni community is a principal theme of AQI's "Breaking the Walls" campaign, and it dominates AQI's VBIED wave targeting in 2013. If this VBIED cluster was a reaction to current events rather than a pre-planned attack, AQI was capable of quickly shifting attacks to these specific locations, indicating the enduring presence of an active VBIED support zone in the Diyala area.

SPECTACULAR ATTACKS: 16 JANUARY 2013

A 30-day interval separated Wave 9 from a small cluster of four spectacular VBIED attacks on January 16. This interval stabilizes for the duration of Phases II – III. Between January 2013 and May 2013, there was consistently a 30-day interval between attacks. After May 15, the VBIED waves suddenly became much more frequent. Two of the VBIEDs on January 16 inflicted significantly high casualties. One VBIED struck a KDP motorcade near the KDP offices in Kirkuk, claiming 123 casualties (33/190). The other struck PUK offices in Tuz, claiming 45 casualties (5/40). These attacks correspond with AFP's high casualty daily total, at 289 (49/240). They resonate as the crescendo attacks of the ethnically orientated Phase II. AQI claimed credit for both, taking care to specify that a Libyan fighter targeted the KDP headquarters, and an Iranian fighter targeted the PUK.²⁷ This is a noteworthy message, indicating a desire to demonstrate use of foreign fighters to al-Qaeda core. It is likely that these fighters began in Syria, not only because the fight there has been drawing international attention from al-Qaeda, but also because the foreign fighter ratlines to Iraq ran from Damascus at the height of the Iraq War.²⁸

AQI also claimed credit for the suicide bombing on January 15 that targeted and killed MP Ifan Sa'doun al-Issawi in Anbar. In this statement, AQI celebrated the cooperation among military and security units to accomplish coordinated attacks, highlighting the careful selection of targets and the demonstrated ability to "simultaneously and in a coordinated manner,

[pound] a number of strongholds."²⁹ This artifact validates several core assessments, including the organizational distinction between military elements, such as VBIED cells, and local security battalions; as well as the deliberate planning and command and control functions performed by AQI in order to synchronize VBIED attacks.

Additionally, a separate trend in VBIED attack clusters becomes visible in January 2013. Apart from the small cluster of five VBIEDS that occurred on December 31, there were four other clusters consisting of 4-5 VBIEDS each in January 2013. Each appears to have its own character and its own timing, which indicates the emergence of localized VBIED cell activity that had been indiscernible prior to this point. Furthermore, these VBIED clusters demonstrate the ability of a VBIED cell to synchronize VBIED attacks internally at a small scale. The VBIED cluster on January 5 included attacks in Karbala, Kanaan, Hilla, and Mosul. The attacks in Karbala and Hilla were likely executed by the same cell. Similarly, the aforementioned cluster on January 16 was tightly oriented upon the Green Line, with attacks on Kirkuk, Tuz Khurmatu, and Baiji. These attacks also appear to be the work of a single cell.

In a separate cluster on January 17, five VBIEDS detonated in Karbala, Babel, and Dujail. Dujail is oddly placed geographically in this cluster, but like the other attacks that day, it targeted Shi'a pilgrims. In this case, the pilgrims were en route to the Al Askari mosque in Samarra.³⁰ This attack was actually a VBIED pair, and it is documented as the highest casualty event in this wave. AFP data indicates that this was a second high casualty day with 149 casualties (29/120). In still another small cluster on January 2, three VBIEDS struck in the vicinity of Baghdad. An additional southern cluster occurred on February 8, striking Kadhimiyyah, Karbala, and Babel. In sum, based upon visible separate efforts, it appears that decentralized VBIED capabilities existed in the north, near Baghdad, and in the south at this time.

Comparing this decentralized pattern to the pristinely appointed configuration of Wave 7 demonstrates a core shift in the national VBIED organization. New cells likely deployed forward by this point, and the VBIED cells appeared to contain a level of planning expertise and independent access to VBIED construction sites. This new pattern may also indicate that the national VBIED planning cell went offline for a time, for one of several reasons: either because it experienced some form

of disruption; or because it was further reorganizing; or because it focused on planning future VBIED attacks in Iraq, such as the next pair of prison attacks and the rapidly approaching campaign for Baghdad; or because it was active instead on the Syria front.*

PRISON BREAKS: 3 AND 5 FEBRUARY 2013

Phase II also concluded with a pair of prison attacks. The attack on Kirkuk Tasfirat prison on February 3, 2013 involved an SVBIED painted as a police vehicle and three suicide bombers dressed as police. This attack was unsuccessful, but reportedly inflicted over 130 casualties. AQI claimed credit for this attack, which reportedly involved a team of Iranian, Saudi, and Tunisian fighters.† Again, foreign fighters may have arrived via Syria. The attack on Taji Tasfirat prison incurred 21 casualties. It was also unsuccessful in breaching the prison. This is the second time that Taji Tasfirat prison had been hit with a complex attack in order to free prisoners, and it was at least the third time that the installation has been targeted with VBIEDS.

The most significant aspect of these prison attacks is the application of VBIEDS as a supporting effort to a combined arms attack involving multiple functional teams within AQI. The planning cell for prison attacks likely exists at an echelon above the VBIED organization. The VBIED organization, possessing specific technical expertise, specialized requirements, and a distinctive planning signature, appears to have been tasked by a higher echelon to provide support to prison attacks. This higher headquarters likely leverages information and derives support from various specialized combat teams within AQI. The prison attacks witnessed thus far include VBIED, SVEST, IED, mortars, and small arms fire components. It also evidently recruited and dispatched foreign fighters to support the effort. Outside of support to prison attacks, the greatest incidence of combined arms

* Isolated reports indicated that 26 Army officers defected from the 3rd Regiment, 12th Division forces stationed in Hawija. “26 army officers split in Kirkuk and Dijla Operations Command declined the News,” Shafaq News, January 18, 2013, available online at <http://www.shafaq.com/en/archive/4814-26-army-officers-split-in-kirkuk-and-dijla-operations-command-declined-the-news.html>.

† AQI did not describe this attack as a prison break, but rather as a successful complex attack upon a police headquarters involving VBIEDS, SVESTS, small arms, and hand grenades. “ISI Claims Suicide Bombings, Raid in Kirkuk Among 32 Claimed attacks,” SITE Intelligence Group, March 19, 2013.

attacks recorded in this dataset occurs in June and July 2013, most visibly before, during, and after the final pair of prison attacks on July 21, 2013.

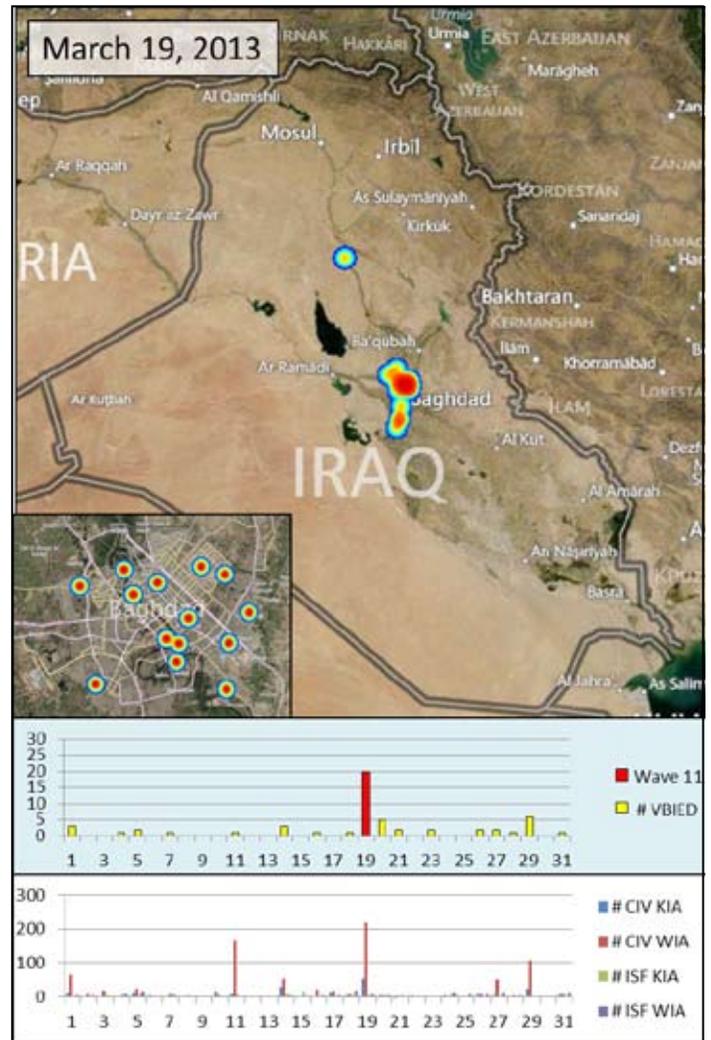
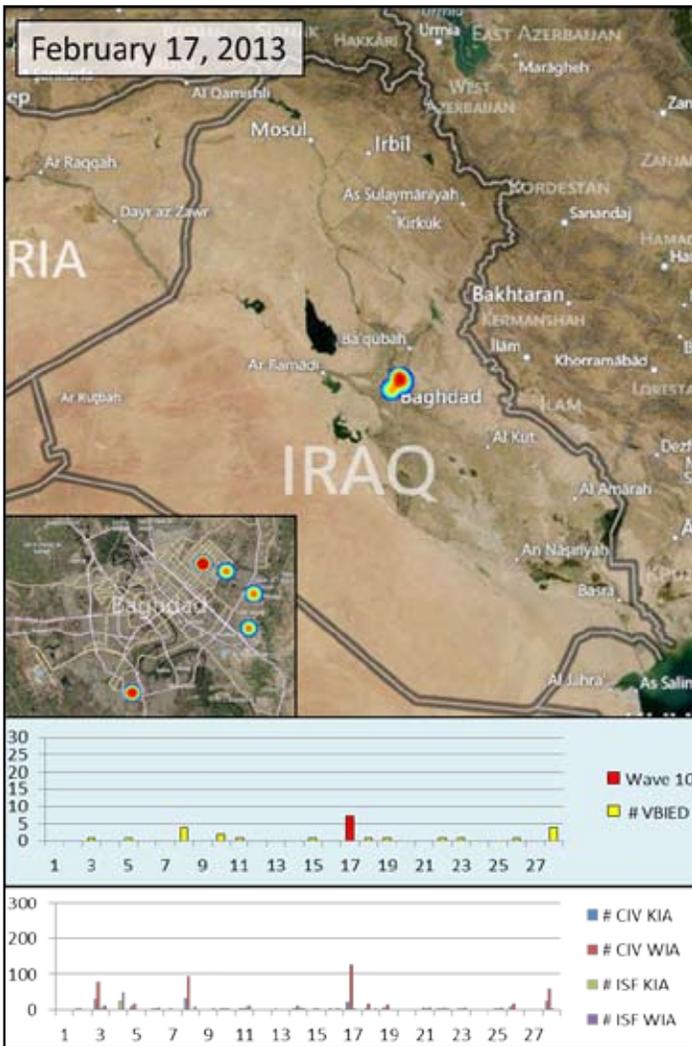
IEDs, IDF, and small arms fire are likely core competencies associated with AQI’s primary maneuver units. AQI named four battalions following the attack upon an IP checkpoint north of Haditha, Anbar in March 2012, so one can assess confidently that they existed from the spring onward.³¹ They are likely geographically based and fixed upon fundamental security objectives to consolidate and expand AQI’s control of territory. This study of the VBIED campaign within “Breaking the Walls” does not explore the operations of these security battalions; however, prison attacks featuring VBIEDS also feature their involvement, and the functional relationship among these units and AQI’s budding governance apparatus warrants future study.³² The terrain defended by these security battalions will become the best indicator of AQI’s physical support zones over time.

PHASE 3: THE PUSH TO BAGHDAD

Wave 10: 17 February 2013

A 30-day interval separated the VBIED events on January 16, 2013 from Wave 10, though this VBIED wave occurred only two weeks after the twin attacks upon Taji and Kirkuk prisons. At least 7 VBIEDS detonated on February 17, 2013, all in Baghdad, which is a first time occurrence within the “Breaking the Walls” campaign. AQI also claimed credit for this wave.³³ These attacks uniformly targeted the capital’s Shi’a and mixed neighborhoods, including Sadr City, Kamaliya, Saidiya, Karrada, Husseiniya, and Amin, confirming the sectarian orientation of the wave. It is difficult to discern from reporting which VBIEDS inflicted the highest casualties, but AFP’s daily casualty total is on the lower bound of the Phase III VBIED waves, with 150 total casualties (23/127), consistent with the relative size of the wave.

The Baghdad VBIED campaign, beginning with this wave, appears to consist of attacks in three distinct geographic groupings, namely, one to the north in Sadr city; one to the south in Saidiyah, and one to the southeast near Jisr Diyala, that likely indicate the presence of three cells. One of these cells also maintains responsibility for attacks in central Baghdad, in Karrada, Sadoun, and the Green Zone. No other explosive events occurred in Baghdad in conjunction with this wave, which is important to note.



This suggests that the VBIED planning effort began to direct wave operations independently of the combined arms and multi-functional force.

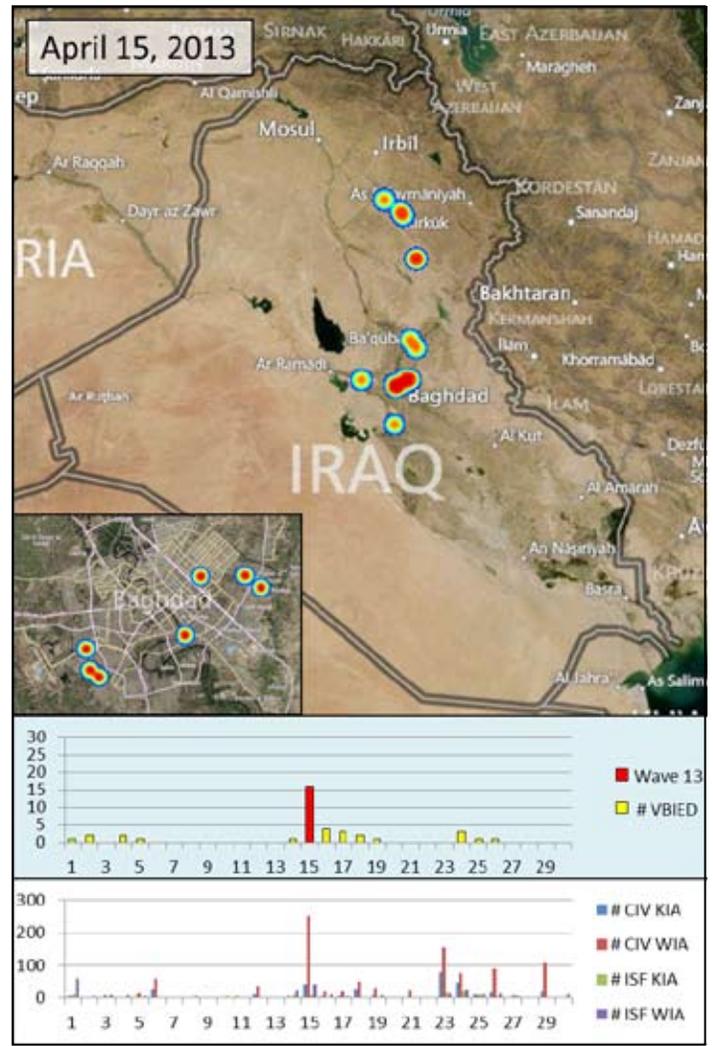
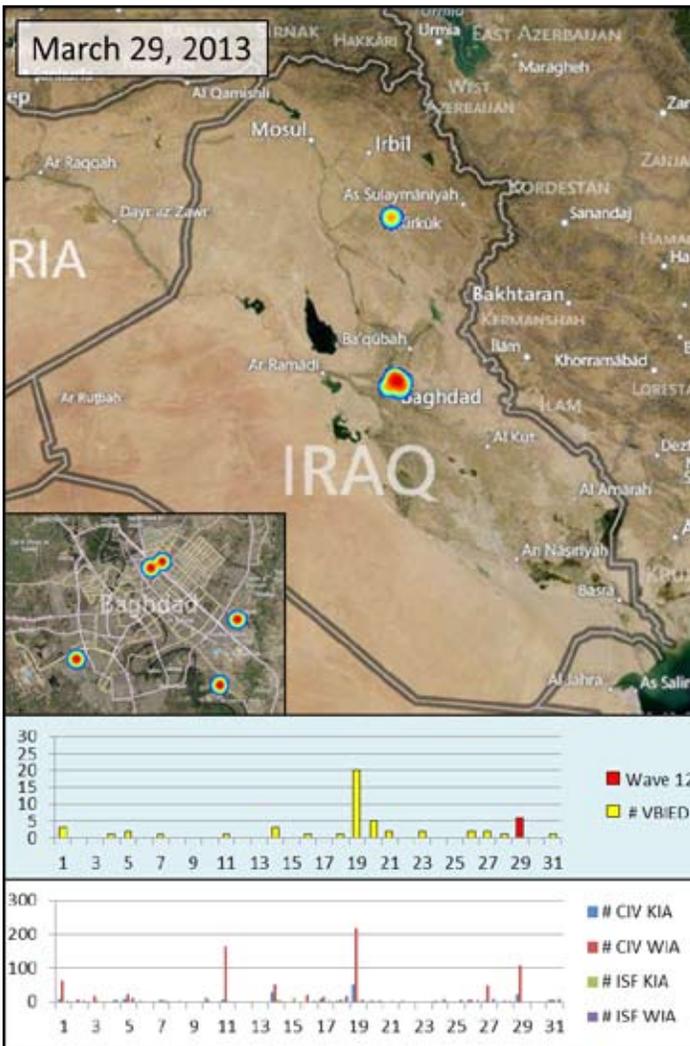
Waves 11 & 12: 19 & 29 March 2013

A 30-day interval separated Wave 10 from Wave 11. At least 20 VBIEDS detonated on March 19, 2013, generating the largest VBIED wave since Phase I.* AFP's daily casualty total exceeds 232 (56/226), but reporting does not point to a particular VBIED or other attack that is chiefly responsible for the high casualties. Rather, all appeared to achieve a small number of casualties that collectively arrived at this total. AQI claimed credit for this wave, associating it as the tenth anniversary of the U.S.-led invasion of Iraq. All but three of the VBIEDS in Wave 11 were placed in Baghdad. Within Baghdad,

attacks occurred across a wide array of neighborhoods, appearing to distract ISF attention from any one neighborhood by striking a maximum number of independent sites. The VBIED attacks in Baghdad formed three clusters along the north, southwest, and southeast of the city. Once again, the geographic spread indicates that multiple VBIED cells acted in unison to project attacks into Baghdad from different points of origin in the Baghdad belts. Two of the attacks outside of Baghdad detonated south of the city in Iskandriyah and Mussayab. These attacks may have been launched from a cell in Mahmudiyah that projected into Baghdad's southwest quarter. Another VBIED occurred in Baiji, north of Tikrit, and it may be attributed to another cell operating farther north. This wave was followed by a small cluster of five VBIEDS which detonated across Baghdad on the following day, March 20, 2013.

* Five of the 20 VBIEDS were interdicted by ISF. Other explosive events also appeared to spike on March 19, 2013.

A significant small wave of six VBIEDS also occurred on 29 March 29, 2013, generating 232 casualties in Iraq



that day (22/110) according to AFP’s daily count.* All of them targeted Shi’a mosques on a Friday, which accounts for the very high casualties. All but one VBIED were located in Baghdad, in the neighborhoods of Zafaraniya, Qahira, Binook, Jihad, and Talabiya. The last mosque VBIED detonated in southern Kirkuk. These are not the only VBIEDS or explosive attacks to target Shi’a mosques during “Breaking the Walls,” but it is the single most deliberate sectarian strike within the campaign. Wave 12 is also the first full VBIED wave to occur on a Friday, indicating that AQI deliberately planned this wave in

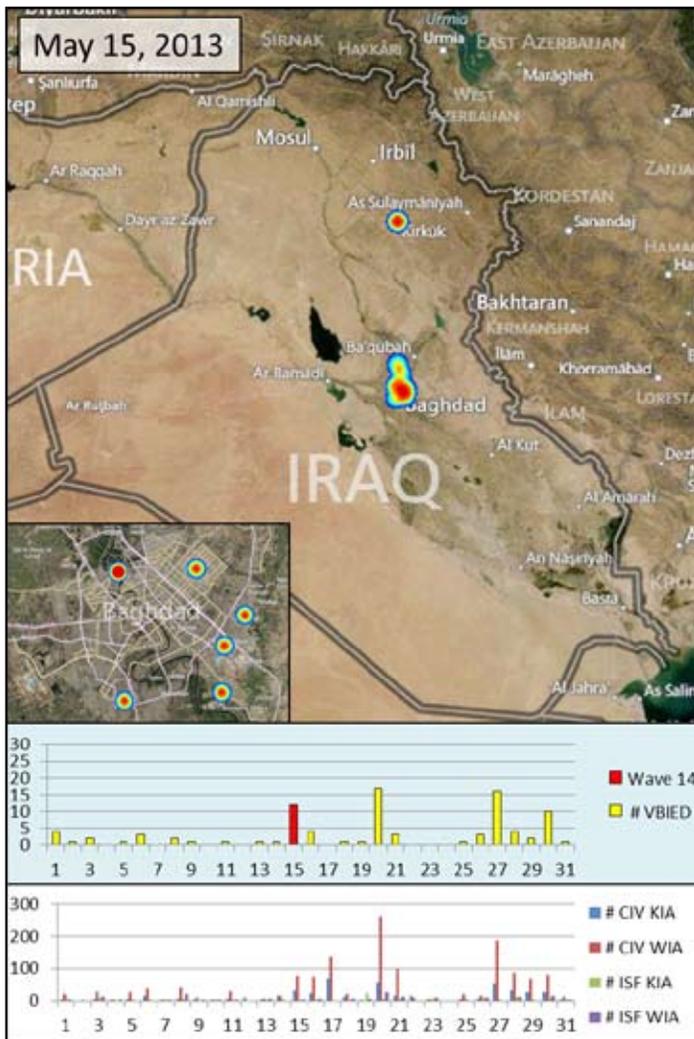
order to maximize effects to stoke sectarian violence.

Wave 13: 15 April 2013

A 27-day interval separated Wave 12 from Wave 13. Wave 13 consisted of at least 16 VBIEDS, corresponding to the highest daily casualty count since September 2012 according to the AFP data. Nine of the VBIEDS detonated in Baghdad, which represents a significant reduction in number from Wave 12. The others occurred along the northern arc tracing the Green Line, as well as in Fallujah. This suggests that various surge elements participating in Baghdad during Wave 12 resumed normal operations outside of Baghdad during Wave 13. Additionally, a single report that the ISF interdicted a team that was building a VBIED in Samarra raises the possibility that additional cells were forming and embedding themselves into new forward locations during this time.³⁴

The VBIEDS along the Green Line arc occurred in Tuz

* AFP data indicates very high casualties on March 11, 2013 that are unexplained by VBIED wave data. It appears that a single SVBIED in Dibis, Kirkuk is the most significant violent event to occur in Iraq on that day. It is not reported to have inflicted the number of casualties tracked by AFP: 177 (12 KIA / 165 WIA). <http://english.al-akhbar.com/node/15203>; <http://www.foxnews.com/world/2013/03/11/officials-suicide-bomber-hits-police-station-in-northern-iraq-killing-5-people/>



Khurmatu, northern Baquba, and Kirkuk, suggesting once again that the VBIED cell had greater freedom of movement and ability to stage attacks in that area. Because the ISF conducted operations into this area in early June 2013, AQI and possibly other violent actors, such as JRTN, had established a strong and detectable presence in the area.³⁵

Attacks into the northern quadrant of Baghdad appear to have paused during this wave, an important anomaly that indicates that the northern VBIED cell near Baghdad was disrupted in some way or that missioned elsewhere during this wave. One can deduce the cell's absence because the Baghdad attack waves normally occur in distinct and repeatable geographic clusters to the north, southeast, and southwest of the city. Sadr City still sustained an attack, which may indicate that this key Shi'a neighborhood was approached from the south, since that neighborhood falls within reach of the Jisr Diyala cell. The Sadr City VBIED in this wave inflicted

the greatest recorded casualties among the set. Another VBIED in this wave targeted Shi'a MP Bahaa al-Araji on Route Irish near Abbas Ibn Firnas Square in western Baghdad.³⁶ VBIEDS are not typically used to conduct assassinations as part of the VBIED waves observed in this study, and the anomaly stands as a reminder that AQI's operational planning also consists of determining how in particular the VBIEDS are used.

VBIEDs persisted in Baghdad after this wave over the course of the following several days. One targeted Iraqi Police in Tarmiyah on April 16 and April 24, supporting a theory that Tarmiyah is a possible launch site for the northern Baghdad cell. Two VBIED attacks occurred in Abu Ghraib on April 17, the first time this location appears in the data set. Given the retrospective insight that Abu Ghraib prison would be attacked on July 21, 2013, this early VBIED clustering provides an early indication of potential pre-conditions. One struck government offices, and another struck an IA patrol, killing 8 Iraqi soldiers. Shortly thereafter, four VBIEDS struck police and Sahwa targets in Fallujah and Ramadi on May 1, 2013, the most cohesive attack upon targets in Anbar in this dataset.

Wave 14: 15 May 2013

A 30-day interval separated Wave 13 from Wave 14. Wave 14 consisted of at least 12 VBIEDS. Nine of the VBIEDS detonated in Baghdad, one detonated in Tarmiyah, and two detonated in Kirkuk. Two of the Baghdad VBIEDS struck in Khadimiyah, where the ISF reportedly interdicted two additional VBIEDS. This is the first in a series of successive VBIED strikes focused upon Khadimiyah in May 2013. Khadimiyah is the site of a premier Shi'a shrine in Baghdad and constitutes key political terrain for the competitive array of Shi'a political and militant factions.³⁷ It had during various phases of the Iraq war represented a sectarian battleground, as Sunnis displaced and Shi'a communities consolidated. It was a premier VBIED target to stoke the revival of Shi'a militias in early 2013.

Asai'b ahl al-Haq (AAH), an Iranian-backed militant offshoot of Muqtada al-Sadr's Jaysh al-Mahdi (JAM), established political offices in Khadimiyah in June 2012.³⁸ This neighborhood has since reemerged a battleground for intra-Shi'a political competition, which has also turned violent as Shi'a militias mobilize further. On June 2, 2013, AAH elements opened fire on Sadrist key leader Hazem al-Araji, killing a member of

his party.³⁹ This event shows that AAH had resumed an armed presence in Khadimiyah by early June. Another sign of AAH's 2013 re-mobilization was a political rally held near Sadr City on May 4.⁴⁰ This event predated Wave 14, but it likely occurred in response to the previous three months of focused VBIED attacks upon Shi'a communities across Baghdad as well as the overt mobilization of Shi'a militant groups for the fight in Syria as Hezbollah's participation in the siege of al-Qusayr intensified.⁴¹ Meanwhile, ISF launched operations on May 16 to pursue AQI in western Anbar⁴² in response to AQI's May 4 assault upon an ISF convoy carrying a platoon of Syrian regime forces that had fled into Iraq via the Rabiya border crossing in order to escape Syrian rebels. AQI claimed credit for this attack, which killed 48.⁴³ These operations mobilized elements of Maliki's new Al-Jazeera and Al-Badia Operations Command, the JBOC, created in February 2013.⁴⁴ Despite AQI's demonstrated security presence in the Jazeera, the ISF chose a poor time to prioritize securing remote areas while Baghdad's security rapidly deteriorated.

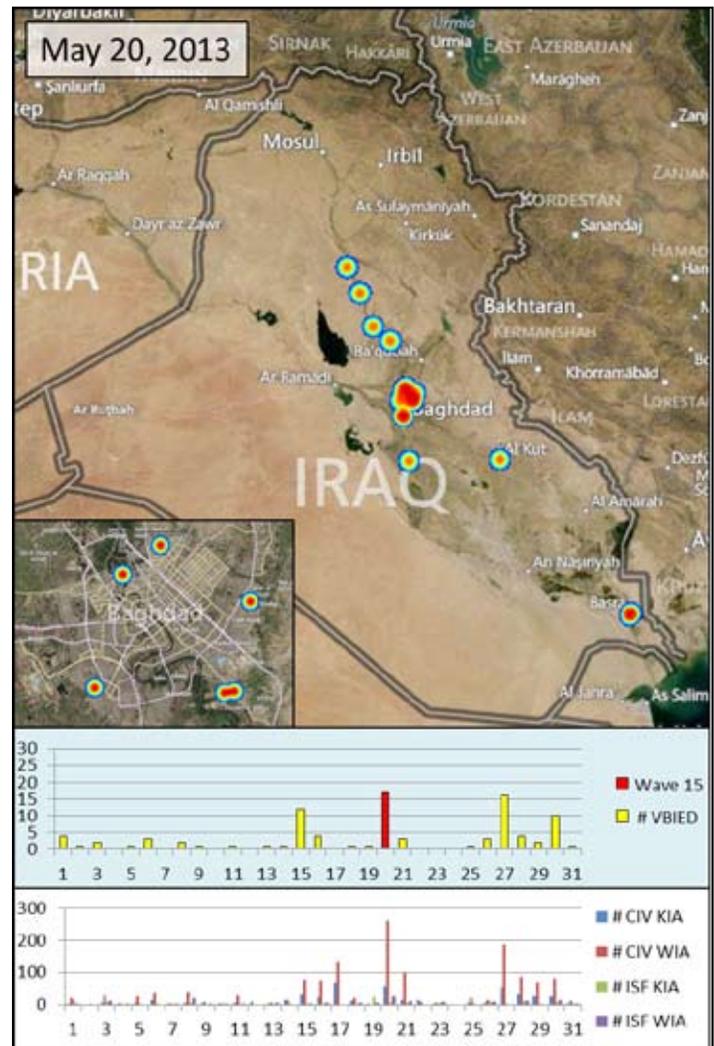
The VBIED wave on May 15, 2013 marked the transition between Phase 3 and Phase 4, generally following the pattern of the Phase III attacks.

PHASE 4: THE AQI SURGE

Wave 15: 20 May 2013

The VBIED trend in Baghdad dramatically escalated the following week and has not abated as of September 2013. A 5-day interval separated Wave 14 from Wave 15. Wave 15 consisted of 17 VBIEDs. Three discrete and localized efforts were synchronized in this wave, pointing to VBIED cells in Baghdad, along the northern zone, and during this wave in Salah ad Din. Seven VBIEDS detonated in neighborhoods across Baghdad, Kadhimiyah among them, clustering in the same three sectors of Baghdad observed in prior waves. The attacks in Baghdad all fell along the outskirts of the city in close proximity to sites that had been struck in the weeks prior.⁴⁵

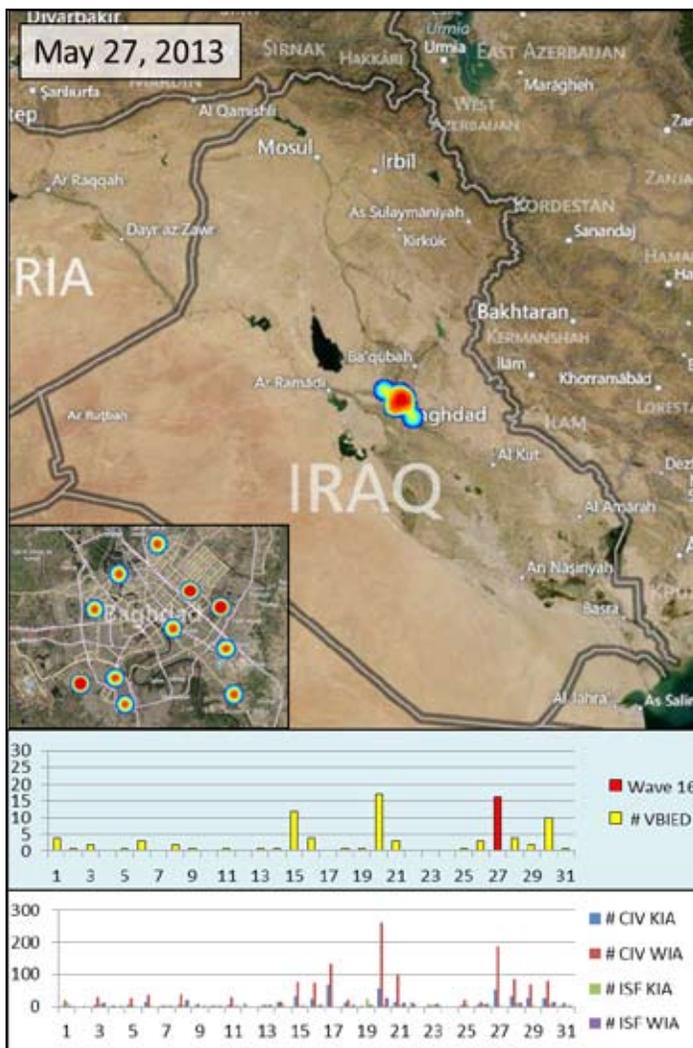
Four of the VBIEDS detonated in towns in Salah ad Din province, including Balad, Samarra, Tikrit, and Baiji, suggesting the presence of an additional cell in the area, whether temporarily or permanently. One of the VBIEDS in Balad reportedly targeted a bus full of Iranian pilgrims travelling to the Shrine of Imam Mohammed.⁴⁶ Four more VBIEDS detonated in the south, in Basra



and Hilla in Babel province. An additional VBIED in Wasit was dismantled prior to detonation. The VBIED in Babel province targeted the Shi'a Wardiya mosque and inflicted high casualties.⁴⁷ The southern wave points to the establishment of a new southern front, with a cell operating out of Iskandariyah, Mussayib, or Salman Pak.

Wave 16: 27 May 2013

A 7-day interval separated Wave 15 from Wave 16. Wave 16 consisted of 16 VBIEDS. 15 of the VBIEDS detonated in Baghdad, and one detonated in Mada'en, just to its southeast. Kadhimiyah was struck for the third week in a row, elevating the stakes for Shi'a militant revival. AFP data indicates that there were 245 casualties (58/187) in Iraq that day. This wave targeted the same neighborhoods that were struck the two weeks prior and additionally hit targets in Sadoun and Sadr City.



Waves 14, 15, and 16 occurred in rapid succession, suggesting that the planning and preparation for subsequent waves began before the preceding wave concluded. This begins to form an image of a VBIED cell with subordinate teams that can alternately plan and attack in successive waves, one firing while the other reloads. This hypothesis is supported by the observation that not all of the teams operating in Baghdad attacked as part of Wave 15; it appears that many more attacked in Wave 16. This further signifies that the VBIED cells in Baghdad had not only become large enough to support alternating teams, but had also each acquired logistical and engineering support to generate at least 5 VBIEDS a week for many weeks. This cellular formation would easily permit the integration of new teams in training, which had likely become a sustained effort by this point in the VBIED campaign.

There also appear to be heavy follow-on VBIED attacks in Baghdad on May 28 and May 29. There were sustained

attacks in Baghdad every day from May 27 - 30. The number of daily VBIED attacks is an important threshold by which to compare present and historic trends; in February 2007, Baghdad was struck with an average of three VBIEDS a day.⁴⁸ Additionally, a VBIED targeting the Samarra Mosque detonated on May 25, 2013.⁴⁹ The Samarra Mosque bombing in February 2006 had been the principal incendiary attack that mobilized the Shi'a militias in Iraq to cleanse Sunni areas.

Wave 17: 30 May 2013

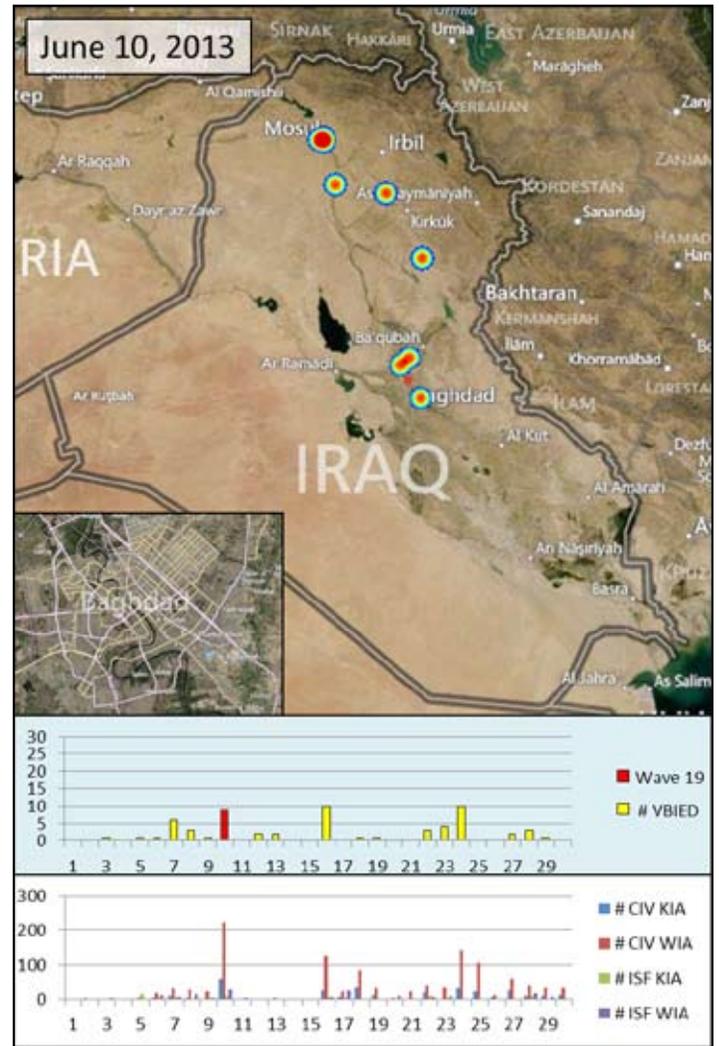
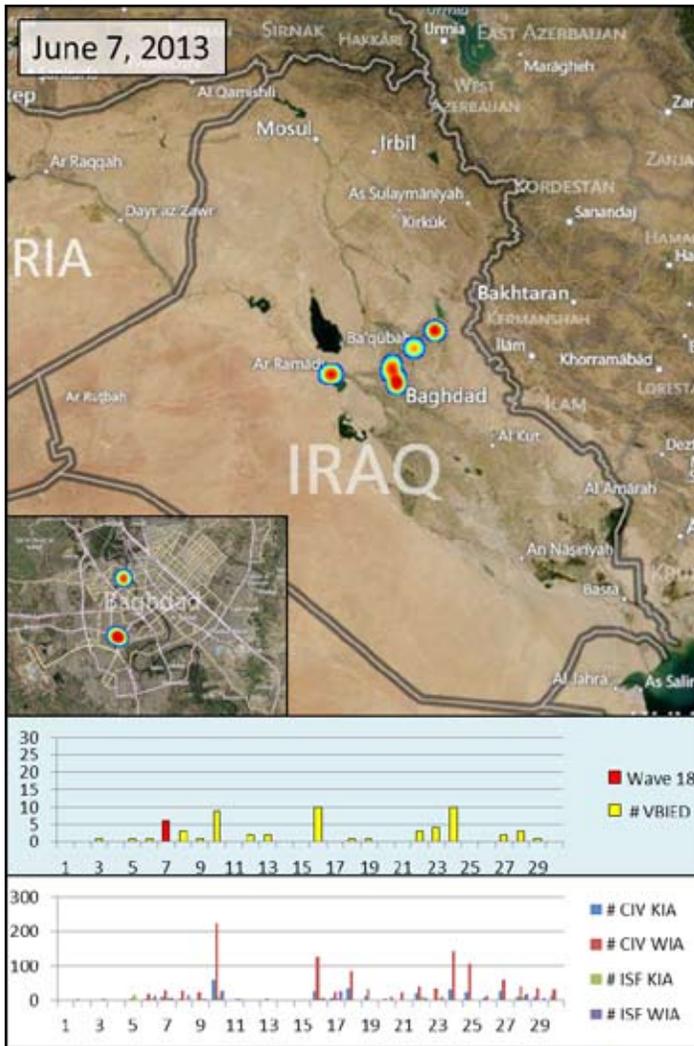
A 3-day interval separated Wave 16 from Wave 17. Wave 17 consisted of 10 VBIEDS, six of which detonated in Baghdad, two in Mosul, one in Kirkuk, and one in Ramadi. AFP data indicates a daily casualty total of 131 (35 KIA/ 96 WIA), which is lower than the other waves in Phase IV. The Baghdad events occurred in the neighborhoods of Sadr City, Binoq, Karrada, Bayaa,, Maghrib, and immediately south of Baghdad.

This wave is most significant because it is the second VBIED wave within a week in Baghdad, which would appear to double the frequency of attacks. However, because no VBIED wave occurred the following week, it appears instead that this wave was essentially an aberration. All three Baghdad cells would normally have conducted this wave on the following Monday, but it was likely accelerated, perhaps to test the organization's capabilities. It did not occur again in Baghdad during "Breaking the Walls."

The appearance of Mosul in Phase IV is important to note, because it persists for several weeks after this wave. VBIEDS in this Mosul cluster targeted ISF and likely reflect AQI's intention to deter Sunni Arab voter turnout. The single VBIED event in Ramadi confirms that the cell there was operating at a different pace, but was perhaps responsive to tasking by the VBIED planning team in this instance. The ISF operations into western Anbar and the Jazeera that started on May 16 evidently did not disturb the VBIED activity in Ramadi.

Waves 18 & 19: 7 & 10 June 2013

A 9-day interval separated Wave 17 from Wave 18. Wave 18 was a coherent SVBIED wave on June 7, with six SVBIEDS detonating in Ramadi, Muqdadiah, Alharoniyah northeast of Baquba, and Baghdad and another non-descript VBIED in Taji. This mini-wave departs even further from the pattern, with only one



attack in Baghdad. In fact, it suggests an independent and event-driven SVBIED operation coordinated outside of Baghdad. This is the first time in the dataset that multiple SVBIEDS were recorded in one day. It is possible that SVBIEDS were more regular prior to this wave and simply underreported as such.

The following attack on Monday, June 10 also occurred outside of Baghdad, nearly uniformly in the north. Wave 19 consisted of 9 VBIEDS and a number of additional explosive events. AFP documents 330 casualties (78/252) that day. VBIEDS detonated in Mosul, Tuz Khurmatu, and Dibis in Kirkuk province. Additionally, another cluster of SVBIEDS occurred in Kirkuk, Mosul, Tanak west of Mosul, and Madaen southeast of Baghdad. The colocation of the VBIED and SVBIED attacks in Mosul and Kirkuk negate the theory of a separate SVBIED cell in either location.

Whether SVBIEDS are conducted by normal VBIED

cells or developed separately is an important question. SVBIEDS are not just VBIEDS with suicide bombers to drive them; they are fundamentally different technical operations involving redundant triggers and more sophisticated support teams. Regardless of whether June 2013 signified an uptick in SVBIED activity or just in SVBIED reporting, it is important to note that the June 7 and June 10 waves involved clusters of SVBIEDS. If it is a genuine increase in SVBIED activity, it may signify that foreign fighters were again routing to Iraq, possibly from Syria.

VBIED and SVBIED attacks in Mosul began to increase significantly at the beginning of June 2013. A number of singleton VBIED attacks are noted in the dataset across several sectors of Mosul. Rescheduled provincial elections in Ninewa and the political vulnerability of leading Arab Sunni politicians such as Osama al-Nujaifi may have drawn particular attention from AQI. The

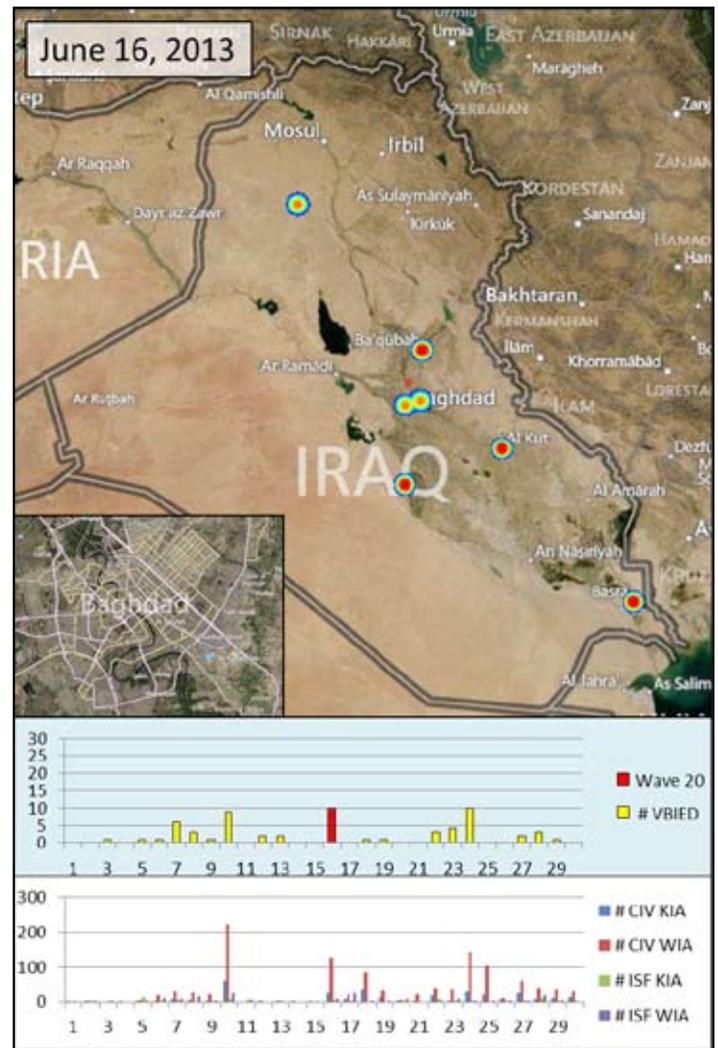
attacks mostly targeted ISF, which might undermine the incumbent provincial council.

Wave 20: 16 June 2013

A 5-day interval separated Wave 19 from Wave 20. Wave 20 consisted of 10 VBIEDS and 4 other explosive events. AFP indicates a daily total of 188 casualties (33/135) that day. With the exception of one VBIED which detonated south of Mosul, all of the VBIEDS in this wave occurred in southern Iraq. They also occurred in pairs: two VBIEDS detonated in Basra; two VBIEDS detonated in Nasiriyah; and two VBIEDS detonated in Kut. Additionally, single VBIEDS detonated in Najaf, Mahmudiyah, Mada'en, and Mosul. This wave confirms that there was a VBIED cell by this time dedicated to attacks in southern Iraq. It also appears that one or both of the southern Baghdad cells supported this wave, which involved no attacks in Baghdad proper.

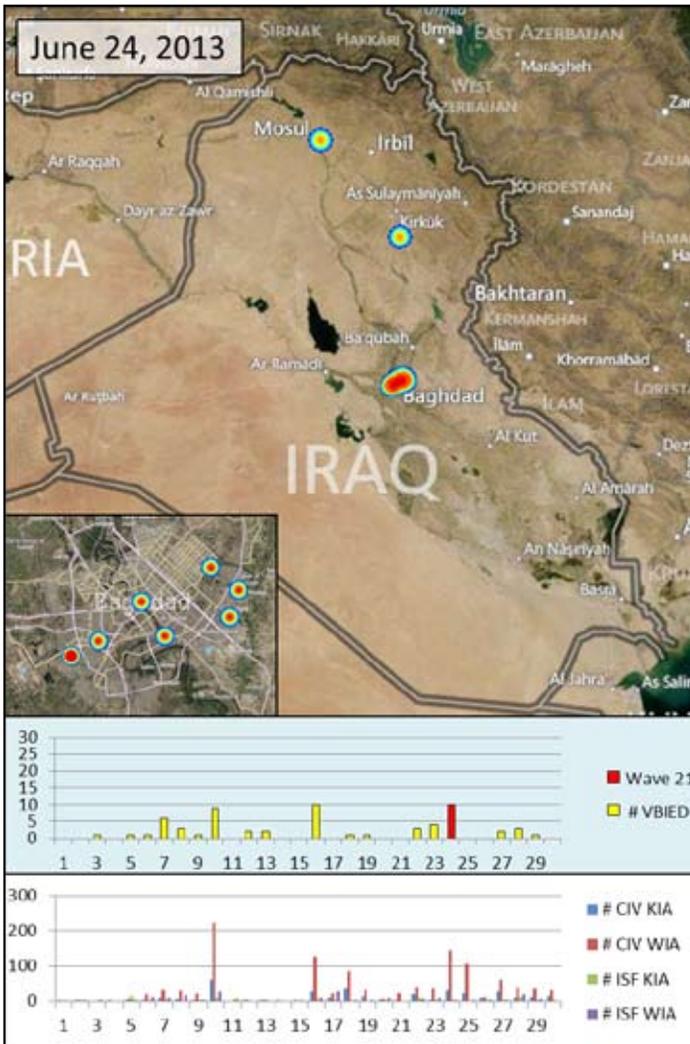
Focusing on southern Iraq during this wave reflects AQI's deliberate intent to target pilgrims during the Shabaniyah festival at Karabala on June 25, 2013. ISF took extensive precautions to protect civilians ahead of this event.⁵⁰ Attacks did not occur in Baghdad and Karbala, which may indicate ISF defenses were successful. Similarly, as ISF reportedly seized an AQI camp northwest of Kirkuk in Dibis district on June 19, it is possible that a portion of the northern VBIED network was also disrupted at this time.⁵¹ The ISF remained in Anbar after operations in the western desert through provincial elections on June 20, perhaps causing similar disruption. Apparent ISF gains began to deteriorate within a month, however. Two VBIEDS struck Dibis and another Tuz on July 11, the same day that another pair of VBIEDS struck Ramadi and Fallujah. The VBIED in Ramadi was a suicide attack.⁵² Tuz was the biggest blast in this wave, killing over 30 Iraqi Police and destroying 12 houses.⁵³ The Dibis VBIEDS wounded 10.⁵⁴

A series of SVEST attacks also occurred June 16-19. The first detonated in an internet café in Amin, Baghdad.⁵⁵ The following day, an SVEST targeted a police station near a polling center in Fallujah.⁵⁶ This event preceded provincial elections in Anbar, rescheduled for June 20, 2013. On June 18, an SVEST targeted a mosque in the al-Qahira neighborhood of Baghdad, with a total of 87 casualties (30 KIA/57 WIA).⁵⁷ The fourth was a targeted assassination of Sheikh Younis al-Rammah in Mosul.⁵⁸ The combined increase in SVEST and SVEST attacks observed in June points to the increasing integration



of foreign fighters into AQI's operations on the Iraq front. Foreign fighters were historically designated for suicide operations in Iraq by al-Qaeda in 2006.⁵⁹ Based upon this precedent, foreign fighters may be viewed as national-level assets that must be organized in transit and dispatched to the field by a central command. Their increasing presence highlights the human resource role of the AQI military command structure.

Meanwhile, Sahwa in Diyala threatened a collective resignation due to irregular salary payments on June 20, 2013.⁶⁰ The salary payments were likely not the issue, as Sahwa withdrawal is a prime indicator of AQI intimidation. Another indicator is the targeting of high-value Sahwa leaders, which had already occurred in Khaneqin on June 7 with the attempted assassination of Sheikh Ahmed al-Karkoshi, the mayor of Saadiya district.⁶¹ Diyala had not been struck with VBIEDS since April 15, 2013, which viewed in light of these other indicators suggests that AQI had developed a strong



presence in northern Diyala well beforehand. Indeed, the Dijla Operations Command conducted operations into Hamrin from June 11-22, further demonstrating that AQI is exerting control over this terrain.

Wave 21: 24 June 2013

An 8-day interval separated Wave 20 from Wave 21. Wave 21 consisted of 10 VBIEDS. One VBIED detonated in Mosul, another in Kirkuk, and the remainder detonated in Baghdad. The VBIEDS in Baghdad resumed their normal distribution, indicating the involvement of three cells projecting into Baghdad from the north, southeast, and southwest. AFP recorded a daily casualty total of 183 (35 KIA / 148 WIA). This wave signifies the reengagement of the Baghdad cells on their primary target set. AQI's operations in Baghdad appeared to have paused for the three weeks prior in June 2013. Meanwhile in Kirkuk, the 12th Iraqi Division under the

Dijla Operations Command arrested Khaleen Mafraji, leader of the anti-government protest sit-in in Kirkuk on June 21, 2013.⁶² AQI executed two VBIED attacks on June 23 in Tuz Khurmatu and central Kirkuk that might have intended to exacerbate the protest movement's opposition to the ISF, evident since the clash that occurred within the protest sit-in near Hawija on April 23, 2013. The VBIED in Tuz Khurmatu incurred 50 casualties (19 KIA/21 WIA).⁶³

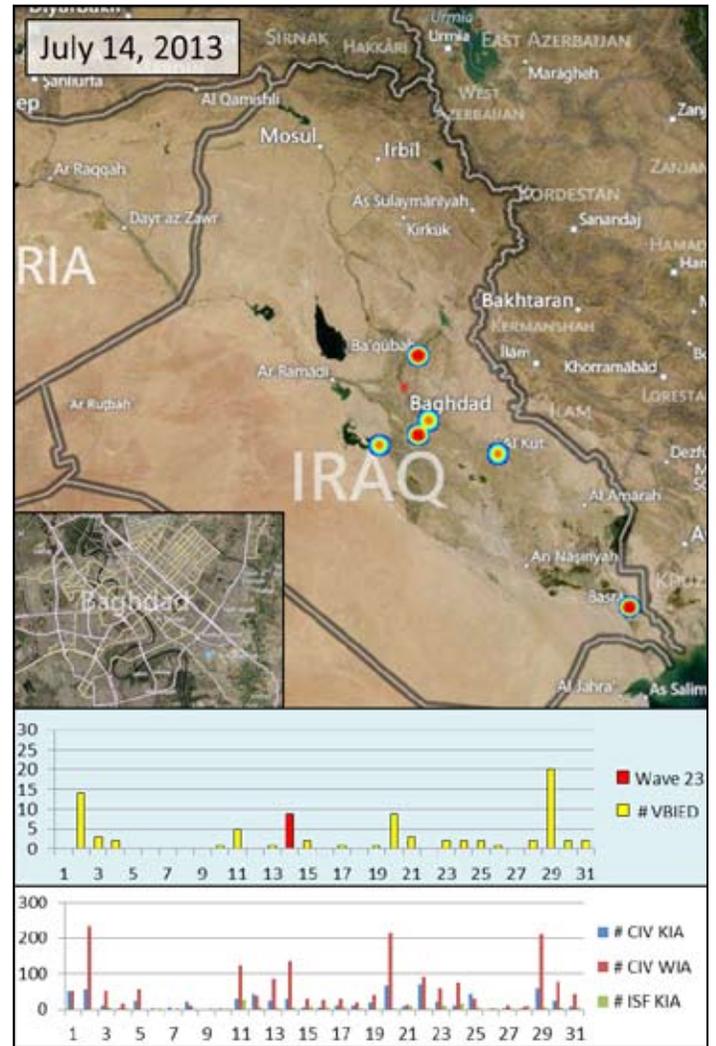
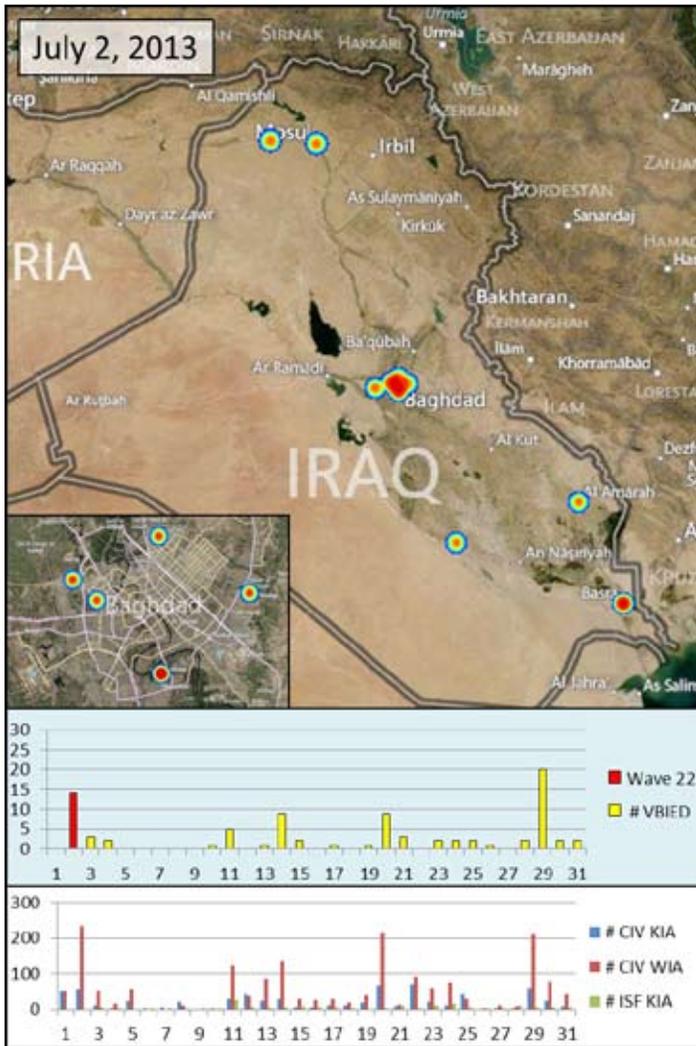
Additionally, AQI executed singleton VBIEDS in Anbar province on June 22-23, in Saqlawiyah north of Fallujah and Qaim. Both attacks targeted ISF. In Saqlawiyah, an SVBIED targeted a police checkpoint, and then additional forces reportedly bombarded the checkpoint with mortars and light weapons for one hour.⁶⁴ The VBIED in Qaim targeted an Iraqi Army convoy.⁶⁵ This attack aligns with the launch of ISF operations on June 22 into Rawa, Anbar to track down those responsible for an IED blast on Rawa bridge the day prior.⁶⁶

Wave 22: 2 July 2013

An 8-day interval separated Wave 21 from Wave 22. Wave 22 consisted of 14 VBIEDS that fell into three regional clusters: Baghdad, Ninewa, and southern Iraq. The wave occurred on a Tuesday, which is off-cycle from the typical Sunday/Monday weekly attack pattern that typified Phase IV. In Baghdad, eight VBIEDS detonated in neighborhoods across the city, including some atypical locales on the western side of the city, such as Shula and Hurriyah. Otherwise, the neighborhoods commonly struck were unfailingly struck again, in Kamaliya, Shaab, and southern Baghdad. AFP recorded a daily casualty total of 293 (57 KIA/ 236 WIA), which is a fairly high casualty rate for a smaller wave.

Three VBIEDS also detonated in Muthanna, Maysan, and Basra provinces in southern Iraq. Muthanna and Maysan were not often struck throughout the campaign. The Muthanna VBIED inflicted more casualties than the rest, but not by much. Generally, each VBIED achieved 30 total casualties. This string of very effective VBIEDS suggests that the same teams that had conducted prior waves in the south were also responsible for these attacks. Two SVBIEDS were also intercepted in Ninewa, one south of Mosul and another near Tel Afar. The SVBIED in Tel Afar reportedly involved a tank.⁶⁷

The new targets and off-cycle hits do not necessarily signify a shift in targeting strategy; rather, they suggest



either displacement from normal attack zones by ISF, attempts to broaden the attack zone ahead of Ramadan, or shaping operations to prepare for impending attacks. Ramadan began one week later on July 8, 2013. AQI’s operations ahead of Ramadan tended to be more deliberate, as we saw at the genesis of the “Breaking the Walls” campaign.

There were also two SVESTS on July 1 in Diyala, one in Baquba and another in Muqdadiyah. These operations validate the observation at AQI had purposefully shifted VBIED attacks away from the Diyala river valley. It is possible that ISF operations, Sahwa activities, and local law enforcement applied enough pressure to reduce VBIED operations, which has historically resulted in a surge in SVEST activity. However, because Muqdadiyah has higher value as a C2 node, and because indicators of intra-tribal rivalry and population displacement were occurring in the area,⁶⁸ it is more likely that the decline in VBIED activity since April 2013 indicates

the reconsolidation of AQI’s stronghold in northern Diyala.

Wave 23: 14 July 2013

A 12-day interval separated Wave 22 from Wave 23. This interval is almost double that of the previous 8 VBIED waves. Wave 23 only consisted of 9 VBIEDS, all of them oriented on southern Iraq. This suggests that the Baghdad VBIED cells were out of play for the third consecutive week. This tidal ebb at the beginning of Ramadan signals an imminent and large attack. Given the retrospective insight that AQI would conduct a dual prison attack on July 21, it is worthwhile validating this observation and assessing whether the Baghdad cells stood down in order to prepare for the capstone operation the following week. VBIEDS detonated in Basra, Karbala, Kut, Suwayra, Jabala, and Nasiriya, which may have exceeded the lethal capability of the southern VBIED cell. This was only the third time in a year that Nasiriya had been struck

with a VBIED, but as it also occurred the week prior, it generated a more direct response by the ISF, which announced the capture of the cell responsible for the Nasiriya VBIEDS on July 22, 2013.⁶⁹ One can conclude, therefore, that the cell in Nasiriya was not a displaced Baghdad cell.

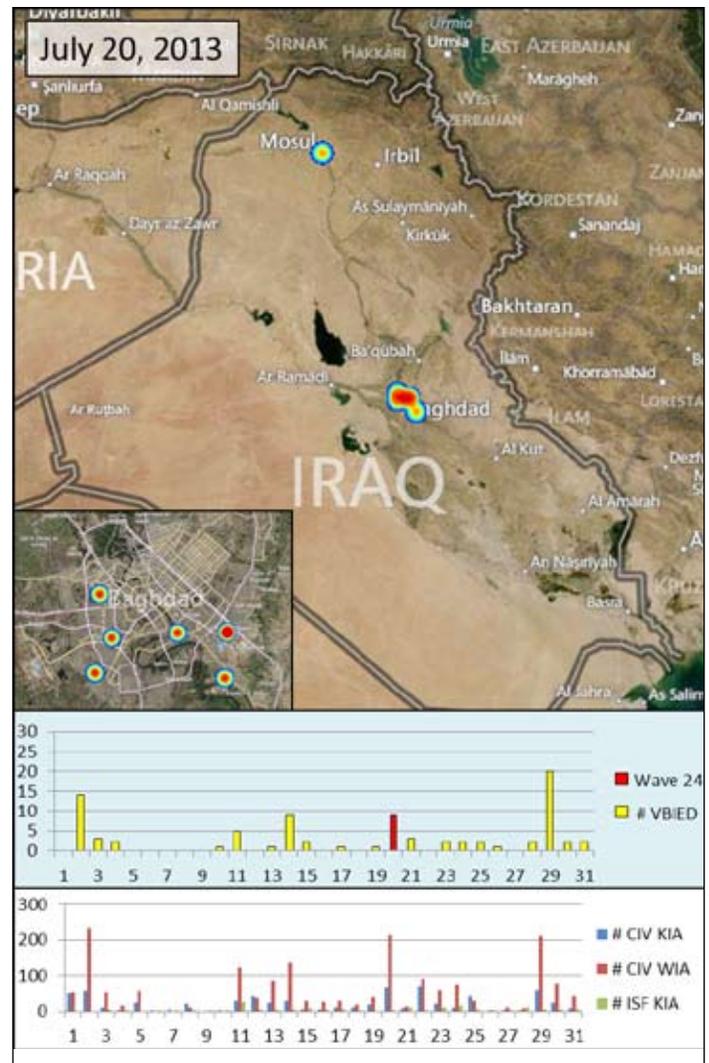
In the meantime, a number of singleton VBIEDS detonated in early July in Mosul. On July 3, one VBIED and two SVBIEDS detonated in Mosul. On July 10, an SVBIED detonated in southern Mosul. This trend of intermittent Mosul VBIEDS continued into the final VBIED wave of the “Breaking the Walls” campaign on July 20 which otherwise struck only in Baghdad. The June 20 VBIED targeted an IA convoy east of Mosul and appears disconnected from the rest of the set, which was focused on the prison attacks. One can conclude from this pattern that the cell acting upon Mosul was operating on an independent program and in response to different stimuli.

A rise in reported SVEST attacks also occurred at the beginning of Ramadan. SVESTS detonated in Muqdadiah on July 11; in Mussayab on July 14; in Mosul on July 15; again in Mosul on July 17; and on July 19 in Muqdadiah, Mosul, and Hilla.

Wave 24: 20 July 2013 & Twin Prison Attacks

A 6-day interval separated Wave 23 from the final wave, Wave 24. Wave 24 consisted of 9 VBIEDS, all of which struck targets in east and west Baghdad, principally in the same places previously observed. But the attacks largely avoided the northern zone of the city. This omission likely indicates that the northern Baghdad VBIED cell engaged in the Abu Ghraib or Taji prison attacks, though there may also have been VBIED cells in Anbar and Salah ad Din in close proximity that could have supported those events. The VBIED wave on July 20 may reasonably be assessed to complement the prison breaks on July 21. First, they inflicted a heavy total casualty count. Second, they occurred on a Saturday, which is atypical for the Phase IV pattern. The VBIED wave was likely choreographed as a diversion from the twin prison breaks upon Abu Ghraib and Taji prisons, which would occur the following night.

On Sunday evening, July 21, 2013, AQI attacked the hardened facilities at Abu Ghraib and Taji prisons with combined arms tactics.⁷⁰ The perimeter at Abu Ghraib was breached by VBIEDS,⁷¹ assaulted by AQI’s



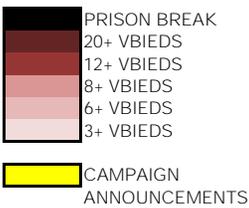
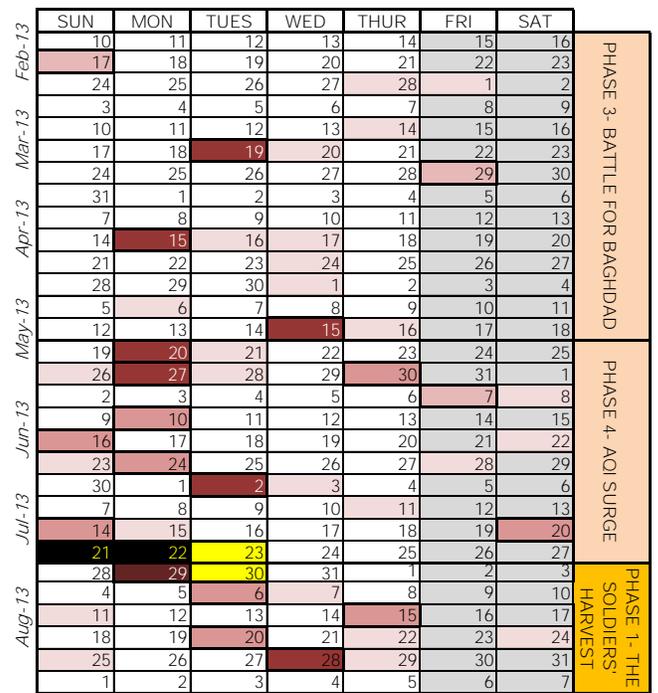
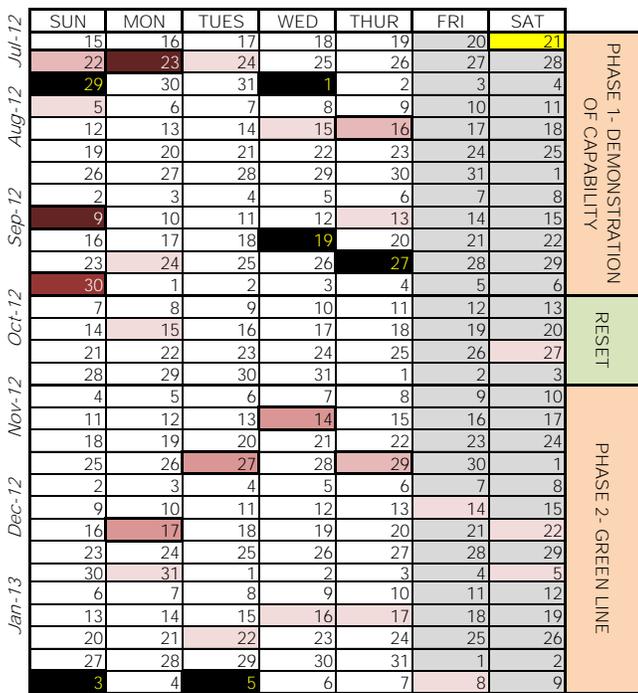
ground battalions bearing small arms and mortars,⁷² interior-breached by SVESTS, and reinforced by synchronous riots inside the prison.* ISF returned fire into the morning, killing an unknown number of AQI fighters and 71 prisoners and incurring 68 casualties of their own.† Despite their efforts, over 500 prisoners escaped Abu Ghraib that night.⁷³

An estimated 12 VBIEDS were used between the two prisons, Abu Ghraib and Taji.⁷⁴ The perimeter at Taji was

* Several reports indicate that the prisoners inside Abu Ghraib were in contact with the AQI organization on the outside prior to the attack. Suadad al-Salhy, “Insight- Iraq security forces outmatched as ‘open war’ returns,” Reuters, July 30, 2013, available online at <http://uk.reuters.com/article/2013/07/30/uk-iraq-security-jailbreak-insight-idUKBRE96ToX420130730>.

† AFP indicates a combined daily casualty total covering July 21-22 of 214 (95 KIA/ 119 WIA).

PHASES OF THE 'BREAKING THE WALLS' CAMPAIGN



This graphic showcases the different character of the VBIED operation throughout the four phases. Waves 1 and 3 include very high volume VBIED waves at long and regular intervals. Waves 2 and 4 involve rapid fire attacks oriented on specific key terrain. While VBIEDS outside of waves occurred throughout the set, they became much more frequent over time, such that there are very few days without documented VBIEDS as of August 2013. This data visualization is sensitive to VBIED reporting behaviors. Apparent gaps in VBIED activity on this graph may be due to reporting anomalies. Multiple VBIEDS striking on the same day are reported with high confidence.

not breached, and no prisoners escaped, though some sources indicate that more VBIEDS were used there than at Abu Ghraib.⁷⁵ The total number of VBIEDs implies that more than one VBIED cell supported the Abu Ghraib and Taji operations, very likely a total of three cells. The operation obviously required coordination of subordinate cells by the central VBIED planning cell. This is particularly true, given the assessment that two additional cells perpetrated the VBIED wave on July 20, 2013.

Most importantly, the operation demonstrates the necessary presence of the force-level planning cell, which tasked VBIEDS to support a complex, specialized, and atypical operation. The Abu Ghraib prison attack was a full-fledged military operation, conducted by an organization that had reconstituted as a military force rather than as a militant network. Moreover, it was a planned operation orchestrated to conclude the year-long “Breaking the Walls” campaign and free the prisoners who could provide cadre to the AQ organization.

CONCLUSION

Taking inventory of VBIED attacks in this way enables a tactical review of AQI’s application of available combat power to maximize the effects of planned attacks. At an operational level, it is necessary to evaluate the planning thought process behind the attacks that have been documented over the 2012-2013 period. VBIED waves are not an environmental condition, nor a disorganized and frenzied attack phenomenon, but a highly organized and meticulously planned military operation with forensic signatures that can be tracked. Part I of this report places this observation in the context of AQI’s expressed strategic goal to establish a transnational caliphate in Iraq and Syria. Part I also explores the possibility that the tactical footprint of AQI in Iraq relates directly to its operations in Syria.

Within Iraq, it is possible to use this material in order to track, observe, and counter AQI’s national VBIED campaign. Destroying the VBIED organization will not destroy AQI’s military capability in Iraq or Syria,

but it may provide vital opportunities for the Iraqi government to consolidate its forces and overturn AQI's present operational momentum. The location of VBIED construction sites, the method of communication from the national VBIED organization to VBIED cells, and AQI's steady explosives supply chain are critical requirements that may be targeted to great effect. Targeting the military headquarters of the VBIED command that generates plans for VBIED waves will not degrade independent VBIED cell activity at this point, but it may degrade access to suicide bombers, finance, and other resources. It may also be measured in the disruption of the VBIED wave phenomenon. It is advisable for Iraqi Security Forces first to protect Baghdad by clearing possible VBIED construction sites in the Baghdad belts north and south of the city.

It is also possible to evaluate future VBIED waves by comparing them to those observed in 2012-2013 to determine if the frequency or lethality is increasing, if the targeting strategy or geography apparently shifts, or if the patterns described in this study shift in other ways. August and September 2013 have witnessed the continuation of VBIED waves as well as the introduction of VBIED attacks against critical infrastructure, such as the Um Qasr port facility, as described in Part I. Part I expresses the requirement to determine what new operational objectives AQI has identified for its new campaign, the "Soldiers' Harvest." While this campaign may not be principally defined by VBIED waves and prison attacks, as the "Breaking the Walls" campaign is assessed to have been, it will clearly continue to involve AQI's weapon of choice as a means to maintain the initiative against the ISF and to stoke sectarian violence. It may become apparent that AQI's efforts to establish territorial control in parts of northern and central Iraq diverge from the VBIED trend, such that AQI's efforts to displace populations occur in different regions from those where they conduct VBIED attacks. It is important to recognize that the VBIED campaign directly supports this effort to control ground, and by continuing VBIED attacks, AQI's opportunity to establish control of terrain increases.

This conclusion points back to the assessment of a force-level military command that incorporates VBIEDs into a broader military strategy. It may become visible over the course of further study that the VBIED command in Iraq is tasked at times to support VBIED attacks and combined arms attacks in Syria, both of which

have been observed and referenced in Part I. VBIEDS have been observed in Syria since December 2011.⁷⁶ It may also become apparent that the Iraq VBIED waves of 2012-2013 correspond to events in Syria as well as Iraq, and that the mutual rear support provided to AQI by its presence in both countries directly enabled the exponential growth of the VBIED supply chain observed in 2012-2013.

How AQI is fighting in Iraq provides critical insight into what capabilities it may yet bring to bear in Syria. Three of the signature capabilities that now are hallmarks of AQI's contemporary military force include deployable VBIEDS; combined arms attacks; and VBIED waves. While deployable VBIEDS and combined arms attacks involving VBIEDS have been observed in Syria, VBIED waves have not yet been documented, though this is another subject for further study. VBIED waves are not expected to present themselves to the same degree in Syria for several reasons. First, the principal objective of the 2012-2013 VBIED campaign in Iraq was to stoke sectarian violence by targeting vulnerable Shi'a civilians who were otherwise living in peace. In Syria, Alawite and Christian communities have long been actively engaged in a civil war and therefore targeted by other means. In this wartime context, al-Qaeda affiliated groups are optimizing their VBIED firepower by focusing upon regime military and government targets. Second, the conflict in Syria already has a sectarian dimension and therefore al-Qaeda groups do not need to stoke it in order to create space for the kinds of chaos and authority vacuums on which they customarily capitalize. Rather, the loss of regime control especially in the northern and eastern provinces has allowed al-Qaeda groups to enter existing vacuums. Consequently, AQI has attempted to establish governance in rebel held areas of northern Syria, sponsoring social services and expressing its vision for the Islamic State in Iraq and Sham in more palatable terms. VBIED waves would be counter-productive to this messaging and governance strategy.

AQI is unmistakably brutal, and its influence and control within rebel-held zones is challenged, not only by Syrian opposition elements, but also potentially by Jabhat al-Nusra, the Syrian al-Qaeda affiliate. Miscalculations in the use of vicious tactics like population-focused VBIEDS have the potential to alienate AQI from the Syrian opposition and thus erode their opportunity to control terrain and

populations. However, if AQI perceives that it is losing influence with the population to competing groups, AQI may attempt to reverse these developments through VBIED waves comparable to those observed in Iraq. The application of VBIED waves, either against pro-regime minority elements or against anti-regime or neutral populations, would undercut the legitimacy of the moderate opposition and maintain conditions of violence that enhance AQI's position. AQI may begin to consider this requirement after the latest formation of an alliance among influential rebel groups on September 25, 2013, which may be viewed as an attempt by opposition groups to limit AQI's potential to establish control near Aleppo.⁷⁷

This forecast leads to an important final conclusion about the operational utility of VBIED waves. VBIED waves are designed to start a war. If necessary during war, they have the potential to separate the population from the insurgency. The Assad regime's population-centric counterinsurgency strategy, typified by its year-long aerial bombardment campaign against the Syrian population, has generally driven the wedge between the population and the government. In this context, AQI's potential to use terrorism against the population generates a grave hypothetical issue for the Syrian opposition. The most dangerous scenario for the U.S. in Syria is for the Syrian moderate opposition to face two enemies both bent on alienating them from the Syrian population. If Assad continues his aerial bombardment campaign, and if AQI concurrently launches VBIED waves against any population in Syria, they will collectively decimate the moderate opposition and strengthen each other as opposing forces in the process. The fact that AQI has not yet done so suggests that they are not threatened enough by the moderate opposition to resort to VBIED waves in Syria. In order to maintain the possibility that relatively moderate forces will prevail in Syria, it is necessary to preclude AQI's ability to target the population.

It is therefore vital to the prosecution of a U.S. strategy for Syria to understand AQI's VBIED tactics and organization in Iraq, from which the organization may launch VBIEDS into Syria. AQI will use VBIEDS to cultivate a protracted war because this condition is essential to its growth as a military organization protecting an emerging al-Qaeda emirate. AQI adds capacity to the broader al-Qaeda network in the process. The VBIED command is a strategic-level asset

within AQI's military, but it can be defeated tactically by targeting VBIED construction sites and command and control nodes in Iraq. This is extremely difficult because AQI now likely has many such sites and can shift to new locations when pursued. The U.S. military has, however, succeeded in this mission before. Destroying AQI's VBIED capability presently rests squarely on the shoulders of the Iraqi Security Forces, whose recent desert operations and urban search and raid operations have failed to achieve this effect. It is imperative for U.S. national security objectives in Iraq, Syria, and in its counter-terrorism campaign to advise and assist the Iraqi Security Forces in this effort with precise information and oversight. The Maliki government is proceeding with mass arrests and Shi'a militias are mobilizing. The United States has only a narrow window to provide precise assistance to and leverage the Iraqi Security Forces before the security problem becomes one not only of destroying VBIED factories, but also managing the instability generated by the spiraling escalation and interaction of Iranian-backed Shi'a militias and AQI. Otherwise, the United States will lose permanently the gains it made in Iraq in 2007, and Iraq will become a front in an increasingly regional conflict.

APPENDIX : METHODOLOGY

Detecting AQI's Signature

Estimating the combat power and organizational culture of secret organizations such as al-Qaeda in Iraq (AQI) may be approached through detailed analysis of the attacks they perpetrate. This study considers the violent events in Iraq that are documented in unclassified sources for what they indicate about AQI's renewed organizational capacity. Closely examining the public record of violent events, particularly the use of "spectacular attacks" in Iraq in 2012-2013, enables us to draw conclusions about AQI's broader operations.

AQI executed a wide array of attack types from July 2012 to July 2013 during the "Breaking the Walls" campaign. These attack types include small arms fire, indirect fire (IDF) via mortars and rocket-propelled grenades (RPG), improvised explosive devices (IED), suicide bombers (SVEST), vehicle-borne improvised explosive devices (VBIED), and a subset, suicide vehicle-borne improvised explosive devices (SVBIED). VBIEDs are the most complex attack type within this set, characterized by the rewiring of a vehicle into a traveling high-yield bomb rather than the placement of an explosive parcel within or outside of a vehicle.⁵³ All of these attack types were used for combined arms effects during the July 2013 Abu Ghraib and Taji prison attacks, and all of them appeared in dispersed fashion across Iraq throughout the course of the previous year.

A blanket study of attacks in Iraq is difficult because violent events are habitually underreported. Attribution is another challenge, as AQI was not the only group conducting attacks in Iraq during this time period. Other groups operating in Iraq today include Ansar al-Islam, Shi'a militias, and very likely Jaysh Rijal al-Tariqah al-Naqshabandia (JRTN), a Ba'athist militant organization.⁵⁴ All of these organizations are known to use small arms, IDF, and IEDs, and in some cases they are also suspected of suicide attacks and car-borne explosions.

Violent events in certain locales, furthermore, might be attributed to popular uprising rather than AQI.⁵⁵ This becomes a legitimate consideration in light of

the anti-government protest movement, which began in December 2012 after Prime Minister Nouri al-Maliki attempted to arrest Rafia al-Issawi, a leading Sunni national political figure. The protest movement continued at least through September 2013, when this report was published. As more violent actors take up arms in Iraq, attack patterns of established groups become obfuscated, as the groups begin to overlap and react to one another. Nevertheless, it is possible to isolate coherent attack signatures for AQI within the available data. This study will focus specifically upon one of AQI's classic signatures, waves of vehicle-borne explosive improvised devices (VBIED). The VBIED waves of the "Breaking the Walls" campaign are identified and characterized in Part II of this report. Once attributed, these attacks may be used to evaluate AQI's operational capacity, depth, and targeting strategy.

Spotting VBIED Waves

VBIEDs constitute the most useful AQI fingerprint for several reasons. First, VBIEDs are generally the most lethal attack type, and therefore the most consistently reported publically.* Second, VBIEDs are the most complex attack type, which best illustrates the full capacity of AQI's supply chain. Third, VBIEDs have historically been assessed as AQI's signature attack type.⁵⁶

Although it is likely that AQI bears sole responsibility for all VBIEDs in Iraq, it is worthwhile to challenge and re-prove this assessment, particularly given that Ansar al-Islam, another Salafist group, claimed credit for SVBIED attacks in Iraq over the course of 2012.⁵⁷ Although VBIED attacks are a core competency for AQI, other groups can adopt this technique,

* VBIED identification from public sources involves a qualitative assessment of each incident and the context in which it occurred. Not all attacks that are reported in news media as "car bombs" are technically VBIEDs. For example, an Adhesive Explosive Device (AED), or sticky bomb, is not a VBIED, but an assassination technique designed to target the occupants of a vehicle. A genuine car bomb, likewise, is a bomb that is placed in a vehicle in order to target the occupants. By contrast, even though they are often reported as car bombs, VBIEDs direct explosive power externally, usually to inflict mass casualties or significant structural damage. This requires thoughtful design, which is why VBIEDs are characterized as a highly technical operation.

APPENDIX : METHODOLOGY

and therefore each VBIED attack by itself is only a moderate signal that AQI is responsible.

A stronger signal emerges in the detection of multiple coordinated VBIED attacks. AQI's signature massing of VBIEDs over the course of the "Breaking the Walls" campaign will be referred to here as a "VBIED wave," and defined for the purposes of this study as the detonation of six or more VBIEDs on a given day in Iraq.* AQI has claimed credit for several such VBIED waves since the launch of the campaign, beginning with a wave of 30 VBIEDs that detonated on July 23, 2012, just two days after the announcement of the "Breaking the Walls" campaign.⁵⁸

This study will examine the "Breaking the Walls" campaign in detail, particularly the VBIED waves that characterize this campaign. These waves can be broken down for the purposes of analysis into four "Phases" of the campaign. These phases were not announced, but rather assessed by observing qualitative and quantitative differences in attack patterns over time. The waves of VBIED attacks across these phases will be evaluated for their geographic spread, target selection, overall volume, and lethality. The VBIED waves will be considered in the context of individual VBIEDs that occurred outside of the 24 VBIED waves as well as other explosive events, such as IEDs and SVESTS, in order to refine an overall characterization of their complementary use by AQI. Part I of this report will address these waves in aggregate to describe phase changes that illustrate organizational growth within AQI, and a detailed examination of the individual waves is available in Part II.

In order to estimate lethality, the volume of the VBIED waves will be compared to daily casualty records maintained by Agence France-Presse (AFP).⁵⁹ AFP data provides a conservative and specific estimate for casualties, and as compared to other casualty data

sets, represents a cautious minimum bound. The AFP dataset begins to provide daily casualty records from violent events in August 2012. Casualty insights prior to this date will be drawn from Iraq Body Count database, whose records begin in 2003.⁶⁰ The principal data set for the violent events considered in this study is proprietary and derives solely from open sources, including *National Iraqi News Agency*, *al Sumaria News*, *al Mada Press*, *All Iraq News Agency*, and the online *Iraq Body Count* (IBC) database.

* The threshold of six VBIED attacks was chosen through holistic assessment to be the minimum volume of a VBIED cluster that otherwise bore characteristics suggestive of orchestration by a central VBIED command. Clusters of five or less VBIEDs, by contrast, appeared to be feasibly organized by a single VBIED cell assigned to a particular geographic area, or alternately a co-occurrence of singleton VBIEDs that were not necessarily synchronized.

NOTES

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