

SENSITIVE BUT UNCLASSIFIED

U.S. Department of State,
Bureau of Diplomatic Security

Terrorist Tactics



Attack re-enactment

When broken down vehicles go boom!



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Introduction

“At 11:46 a.m., a man pulled his car into a bus stop located about 50 meters from the entrance to the USAID facility. He locked the car, placed a warning triangle near the vehicle, and departed the area...The police were warned about the vehicle, but they did not think that the vehicle was out of place to warrant police interdiction. [sic]”

SIMAS Event 76428

(SBU) Parked and broken down vehicles at or near U.S. diplomatic facilities are everyday occurrences. These events -- because they occur in the “Red Zone” -- are entered into the Security Incident Management and Analysis System

(SIMAS) surveillance detection database for analytical, investigative, and operational review.

(SBU) To date, these types of incidents have been benign. (In the aforementioned SIMAS Event, the vehicle’s owner returned two hours later, fixed his car, and drove off.) However, these instances might have been attempts to test the security of U.S. diplomatic facilities. This edition of Terrorist Tactics explores how terrorists used the ruse of a broken down vehicle to carry out a car bomb attack against the motorcade of Colombian Senator German Vargas-Lleras in Bogotá. The second part of the article is a basic primer on vehicle-borne improvised explosive devices (VBIEDs).

Continued on Next Page.



Re-enactment photos of explosives and remote detonator

(SBU) After Senator Vargas finished his weekly radio program “Hora 20” at the Radio Caracol offices in northern Bogotá at approximately 10:15 p.m. on October 10, he departed for his residence in a three-car motorcade. As the motorcade drove down a one-way street, a red Chevrolet Corsa sedan parked along the route exploded just as the motorcade was approaching. Vargas was in the second vehicle, a fully armored Toyota Land Cruiser, and escaped injury. The first vehicle in the motorcade received the brunt of the blast. Two police bodyguards in the vehicle along with a number of pedestrians were injured in the attack. This is the second attempt on Vargas’ life. In December 2002, he lost three fingers on his left hand while opening a letter bomb sent to his congressional office.

(SBU) A crime scene investigation revealed the car bomb consisted of approximately 50 kilograms of a mixture of ammonium nitrate and fuel oil, or ANFO. The device was placed under the left rear seat of the vehicle. The car bomb was parked by a lone individual minutes prior to the attack, who acted as if he had mechanical trouble. After a few minutes, he took the spare tire from the trunk of the car bomb and left the area in a taxi. It is believed the device was remote-detonated by someone with line of sight access to the attack site. The Colombian terrorist group FARC is most likely responsible for the attack.



Continued on Next Page.



Prepared by Russ Norris, DS/PSP/PSD

(SBU) VBIEDs are far and away the weapon of choice for terrorist attacks. While they are typically deployed against stationary targets, their use against motorcades is becoming increasingly prevalent. The VBIED, especially when operated by a suicide bomber, is the “poor man’s cruise missile.” They are relatively easy to assemble in a secure location and the vehicle provides not only concealment for the bomb, but the delivery method as well. The VBIED is the most likely terrorist device to cause mass casualties.

(SBU) The explosives used to assemble VBIEDs varies widely, but can be generalized in two major classifications. Commercial and military grade high-order explosives such as C4, Semtex, and TNT are the most powerful on a pound for pound basis. Improvised explosives manufactured by terrorist groups, such as ANFO, or compounds featuring ammonium nitrate with aluminum, sugar, or potassium chlorate with TNT, sulfur, or sugar are widely employed. Due to the difficulty in acquiring large quantities of commercial/military grade explosives, smaller VBIEDs are more likely to be comprised of these products whereas larger bombs typically feature improvised explosives. Military and commercial explosives weigh about 100 pounds per cubic foot. Concealing a 200- to 500-pound bomb in a sedan is relatively easy.

(SBU) The vast majority of injuries resulting from blast events are due to flying glass and structural collapse. It is important to understand that healthy

Continued on Next Page.

POTENTIAL IED CONTAINERS & CAPACITY

| TYPICAL CONTAINER | POSSIBLE WEIGHT OF EXPLOSIVE CONTENTS |
|--|---------------------------------------|
| Book (large) Cigar box School box Pipe bomb (2 inch x 1ft long) Small lunch pail Pipe Bomb (4 inch x 1 ft long) | 1/2 to 3 lbs. |
| Shoe box Workmen's lunch pail | 6 lbs. |
| Pipe bomb (4 inch x 1.5 ft long) | 8 lbs. |
| Women's handbag | 10 lbs. |
| Mechanic's tool box | 15 lbs. |
| Pipe bomb (6 inch x 1.5 ft long) | 20 lbs. |
| Box (1 foot x 1 foot x 6 inches high) | 25 lbs. |
| Brief Case | 30 lbs. |
| Deluxe Special Service Bag | 40 lbs. |
| Suitcase (small) | 50 lbs. |
| Suitcase (2 suiter) | 75 lbs. |
| Suitcase (pullman) | 100 lbs. |
| Automobile | 400-1000 lbs. |

Charts for this article courtesy of the Bureau of Alcohol, Tobacco, and Firearms

individuals can withstand blast forces that would destroy conventionally constructed buildings typically found in urban locations. For example, a 500-pound car bomb, which can easily be secreted in a compact sedan, will demolish conventional, commercial buildings out to well beyond 100 feet. An individual out in the open would be knocked to the ground and would suffer eardrum rupture if exposed to comparable blast forces, but in all probability this would not be fatal.

(SBU) Another threat posed by these weapons is shrapnel from the vehicle itself and fragments from adjacent structures. A common technique employed to enhance the effectiveness of a VBIED is to pack metal objects (ball bearings, nuts, washers, scrap metal, etc.) in contact with the explosive as is common with suicide vest bombers. This debris field, while localized, can throw a piece of steel hundreds of yards at velocities sufficient to be lethal.

Technical Support Working Group

(SBU) The Technical Support Working Group (TSWG), which is an interagency consortium for coordinating research and development of security related issues published a study of VBIEDs entitled, *Vehicle Borne Improvised Explosive Devices in Worldwide Terrorism*. This "For Official Use Only" document is an open source examination of approximately 200 incidents from January 1, 2000 until December 31, 2003. An annex of the report specifically addresses and tracks the VBIED phenomena in Iraq through February 2004. While this study may not capture all salient developments related to the significant ramp up of VBIED attacks in Iraq that have occurred in the last 20 months, it does offer insights into the tactics, trends, and techniques employed in VBIED attack. Specific points stated in the report include:

- 75 percent of VBIED attacks employ sedan-style vehicles.
- 70 percent of the attacks utilized explosive charges ranging from 10 to 100 Kg.
- 20 percent of VBIED attacks employ charges ranging from 100 to 1000 Kg (Recent reporting from Iraq indicate that while this trend generally holds true, there is an increasing number of attacks employing larger bombs).
- 80 percent of the time the VBIED is concealed in the trunk.

(SBU) Detonation of the VBIED is also addressed in this report. There are three general methods of detonation. The most difficult to defeat and rapidly becoming the statistical leader is the suicide bomber. The prevalence of this delivery

method reinforces the need for sound physical and procedural security measurers. There is no time to adapt to this tactic on the fly. Many law enforcement and military communities are changing firearms training doctrine away from shots to the center of mass to headshots as a response to the suicide bomber threat.

(SBU) The next most likely triggering devices are mechanical timers. These are especially effective against static

MINIMUM SAFE DISTANCES FOR EXPLOSIVE FRAGMENTATION

| Explosive Weight (lbs) | Safe Distance (ft) |
|------------------------|--------------------|
| 1-27 | 900 |
| 30 | 930 |
| 35 | 980 |
| 40 | 1020 |
| 45 | 1070 |
| 50 | 1100 |
| 60 | 1170 |
| 70 | 1240 |
| 80 | 1290 |
| 90 | 1330 |
| 100 | 1390 |
| 125 | 1500 |
| 150 | 1590 |
| 175 | 1680 |
| 200 | 1750 |
| 225 | 1820 |
| 250 | 1890 |
| 275 | 1950 |
| 300 | 2000 |
| 325 | 2070 |
| 350 | 2100 |
| 375 | 2160 |
| 400 | 2210 |
| 425 | 2250 |
| 500 | 2400 |

For charges over 500 lbs., distance in ft = 300 x (lbs. Of explosives)^{1/3}

Continued on Next Page.

targets like U.S. embassies. The TSWG study revealed that mechanical timers typically do not allow, or are not configured to provide, delays exceeding 60 minutes. This feature of the mechanical timer also forces the hand of local EOD teams to ensure that render safe procedures can be implemented rapidly. If the EOD render safe procedures takes more than a couple of minutes they're likely to be ineffective. This drives home the critical need to have standard operating procedures and "decision tree" events clearly defined and to have staff well versed in each person's role and responsibility in reacting to a potential VBIED threat.

(SBU) The most difficult VBIED triggering system to defeat is the command-detonated system. Cell phones, garage door openers, and command wire systems have been among the dozens of methods employed. It is not uncommon to design VBIED's to detonate from multiple sources and/or to incorporate mechanical timer back up systems. This tactic has traditionally been used to facilitate selectively attacking first responders and EOD assets.

(SBU) The best VBIED is the one that looks innocent. As stated above, a significant portion of the VBIED attacks involve small- to mid-sized sedans. These innocuous vehicles are readily available, accommodate sufficient payload, and blend in easily with their surrounding environs. Recent al-Qa'ida attacks have employed taxis, ambulances, and police cars. An ambulance was used to attack the Red Cross building in Baghdad on October 27, 2003. Another tactic employed is to secrete explosives within the frame or body of "empty" flat bed trucks. A Provisional IRA VBIED harboring 6,000 pounds of improvised explosives in the bed was apprehended in November 1992 before it could be used. The lesson here is that there are no inherently safe vehicles and that sound security procedures need to be enforced no matter what the vehicle configuration may be.

(SBU) Another troubling development is the increase in VBIED attacks that employ multiple vehicles and/or are combined with small arms fire support. This was a common element in the attacks on three housing compounds in Riyadh in May 2003. Here again, sound physical and technical security equipment and practices, combined with maximizing the effectiveness of a layered security approach are essential.

Remnants of the car bomb in the Vargas attack.

