B82   Fire as the Terrorist's Weapon

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Weapons used by terrorists are often thought of as bombs, rockets, and mortars. The attacks of 9-11 have demonstrated that fire can be used as a very effective weapon of mass destruction. This presentation will focus on the potential effects and effectiveness of fire as it could be used against a variety of targets.

Fire has been used as a weapon of war through all of recorded history from the "Greek fire" reportedly used effectively against warships and cities alike, through flaming oil and sulfur (poured or catapulted) rockets, and heated iron shot to flame-throwers, and aerial bombardment. Fires, large and small, were set during wars to destroy crops and other sources of income, deny shelter, deter pursuit, block harbors, interrupt commerce, and dissuade or drive off supporters by intimidation if not outright massacre. The same goals apply to terroristbased warfare and have an even more widespread target base because innocent citizens are deliberately targeted. As a result of recent incidents such as Oklahoma City, many public buildings and monuments have been "hardened" against car bomb type attacks but those same buildings are susceptible to attacks using flammable liquids and incendiary timing devices. The large car bomb attack against the World Trade Center in 1993 failed to destroy the building (although it did induce some structural damage and cause casualties and considerable disruption). The attack of 9-11 resulted in the complete destruction of the complex along with thousands of fatalities.

Accidental fires have demonstrated to fire safety professionals, public officials, and to potential attackers how vulnerable public facilities are to fire. Fire in subways and underground transport (such as Kings Cross, London, 1987) disrupted a major city for weeks. A fire in industrial property closed (and seriously damaged) a major freeway in Philadelphia. Accidental fires in high rises such as First Interstate Bank (Los Angeles, 1988) and Meridian Plaza (Philadelphia, 1991) showed the weaknesses (or total absence) of fixed fire protection systems, critical electrical and fire pump systems, and even the inadequacies of fire suppression tactics. Both fires resulted in major structural damage and financial disruptions that required months to repair.

The materials required to carry out incendiary fire attacks are readily available in bulk (gasoline, paint thinners, wax strippers, and cleaning solvents) and easily and casually transported into the target building. Timing devices can be small and simple, and devices can even be triggered remotely. The flammable liquids need not be the major fuel load to create a destructive fire. Major structural damage to First Interstate and Meridian Plaza was induced merely by the complete involvement of the furnishings of an entire floor of offices. It is also being realized that the sustained heat needed to trigger the collapse of the World Trade Center fires was supplied by the burning of the normal fuel load in the floors involved, ignited by the aircraft's fuel.

Fires can be employed by any stripe of terrorist for any ulterior motive. Large fires in computer, data storage, communications or power distribution facilities could disrupt business across the economic spectrum. Fires set in wild lands could threaten and harass citizens of rural, suburban, and even urban areas (as the Denver area fires of 2002 demonstrated). With the aid of current drought conditions such fires could also destroy massive areas of agricultural and timber crops, pollute waterways, and compromise vital watershed for years into the future. Eco-terrorists have already used fire as a weapon against timber, development, and power companies (fortunately, until now, focusing on the buildings and corporate resources rather than natural resources).

This paper will focus attention on the potential role of fire as a weapon in the hands of foreign and domestic terrorists and on the knowledge that must be cultivated and shred to minimize the threat.

Fire, Death, Terrorism