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Transportation Security Administration
Office of Intelligence

29 February 2008

(U) Mass Transit System Threat Assessment

ASMT-80132-2008-02-29

(U) Scope

(U) This assessment identifies threats to the United States mass transit system in 2007-2008, which includes passenger rail, buses, and facilities supporting transit systems.

(U) Mass transit includes urban passenger train service (commuter rail), heavy rail (metro, subway, rapid transit, and rapid rail), light rail (street cars and trams), transit buses, and the interconnected facilities and vehicles feeding the transit system. According to the American Public Transportation Association (APTA), there are about 6,500 public transportation providers in the United States and Canada.

(U) Executive Summary

(U//FOUO) ***At this time, there is no credible intelligence regarding specific plans by any extremist groups or individuals to perpetrate an act of terrorism against the U.S. mass transit system***. Extremists, however, remain intent on targeting the U.S. homeland. The volume of previous attacks and recent plotting against mass transit systems overseas demonstrates continued strong terrorist interest in targeting this sector.

(U//FOUO) Previous rail attacks in Madrid (March 2004), London (July 2005), and Mumbai (July 2006) could inspire terrorists to conduct similar attacks in the United States.

(U) Key Findings

- **(U//FOUO)** The U.S. mass transit and passenger rail systems are vulnerable to terrorist attacks because they are accessible to large numbers of the public and are notoriously difficult to secure.

- **(U//FOUO)** Al-Qa'ida and affiliated extremists pose the greatest threat to the U.S. mass transit and passenger rail system. The threat to heavy and commuter rail in the Homeland is greater than the threat to buses and light rail. Attacks on buses overseas tend to be small-scale and are carried out mainly by smaller separatist groups within their own countries.

- **(U//FOUO)** Multiple improvised explosive devices (IEDs) and improvised incendiary devices (IIDs) are the most common means of attacking mass transit targets. Although homemade explosives are more likely to be used, chemical and biological attacks are also possible agents for terrorism.

- **(U//FOUO)** Based on assessments of previous al-Qa'ida and al-Qa'ida-inspired attacks, future attack plotting against mass transit would likely involve small groups of operatives exploding multiple IEDs on rail during rush hour in a major U.S. city.

- **(U//FOUO)** While there have been a number of reported suspicious incidents connected to mass transit, there is no evidence to date linking them to terrorism. Suspicious activity, however, can help law enforcement and security officials identify unusual behavior, trends, patterns, and possible criminal acts.

(U) TSA-OI Modal Assessment: Threats to Mass Transit

(U) Threat Overview

(U//FOUO) Previous attacks and current reporting indicate that al-Qa'ida and affiliated terrorist groups remain the greatest threat to the U.S. mass transit system. Mass transit operates on an advertised schedule and has less physical security than aviation or other hard-target infrastructure, making it easier for terrorists to both plan and carry out attacks. TSA-OI assesses that the threat to heavy and commuter rail in the Homeland is higher than the threat to buses and light rail. Attacks on buses overseas tend to be small-scale and are carried out mainly by smaller separatist groups within their own countries.

(U//FOUO) Multiple, simultaneous attacks against rail could cause significant economic disruption and psychological impact. Al-Qa'ida and affiliated groups have attacked heavy and passenger rail systems overseas with a variety of improvised explosive devices (IEDs) and improvised incendiary devices (IIDs). These devices are especially effective against subway and passenger rail targets because stations and trains are highly accessible and concentrate large numbers of people in confined spaces. The closed nature of trains, stations, and subway tunnels enhances the blast effect of explosives.

(U//FOUO) Following the March 2004 bombing of commuter trains in Madrid, extremists expressed a strong interest in attacking passenger trains in the United States. Terrorists were specifically interested in striking an above-ground passenger train traveling between two major cities, and considered New York City and Washington, D.C. as possible targets.

(U) Most Likely Actors

(U) Transnational Organizations

(U//FOUO) The Intelligence Community (IC) assesses that the United States will face a persistent and evolving terrorist threat over the next three years. Al-Qa'ida, its affiliated groups, and its sympathizers pose the greatest threat to the U.S. mass transit system. According to the 2007 National Intelligence Estimate, al-Qa'ida will continue to enhance its capabilities to attack the Homeland. Although the group sustained losses from 2001-2004, it regained strength and has recouped much of its core operational capabilities in Pakistan. It is likely to continue to focus on prominent infrastructure targets, including transportation.[1,2]

(U//FOUO) Lebanese Hizballah, which has supporters inside the United States, is less likely to attack U.S. domestic interests unless it perceives the United States has become a direct threat to its leadership, its armed capabilities, or to Iran.

(U) Industry Insiders

(U//FOUO) The insider poses a significant threat to transportation security. Intelligence indicates the desire of terrorist groups such as al-Qa'ida to use individuals with insider knowledge of transportation sectors to help facilitate an attack against the United States.

- **(U)** Asmin Amin Tariq, a security guard at Heathrow International Airport (LHR), was one of 24 people arrested in connection with the plan to blow up aircraft in the 2006 UK-U.S. transatlantic plot. Tariq helped Islamic extremists pose as airport employees so they could conduct surveillance of security procedures at Heathrow. Tariq allegedly provided information about airport security procedures to the would-be bombers.[3]

- **(U)** Turkish citizen Adem Yilmaz, reportedly a member of the Islamic Jihad Union cell targeting Germany, was arrested in September 2007. Yilmaz was employed in the security division of rail operator Deutsche Bahn from 1997 until 2002. During that time he worked in the railway station of Frankfurt airport. The airport was one of several targets his cell that allegedly considered.[4]

(U) Domestic Extremism

(U//FOUO) Although TSA-OI assesses that international terrorist groups pose the greatest threat to U.S. mass transit, it is possible that domestic terrorists could also carry out an attack against this sector. Domestic groups and individuals include, but are not limited to, right-wing militia, animal and environmental activists, disgruntled employees, and lone individuals. There have been numerous examples of domestic terrorism by lone individuals (lone wolves), such as the 1995 bombing of the Murrah Federal Building in Oklahoma City and the 1996 Centennial Olympic Park bombing.

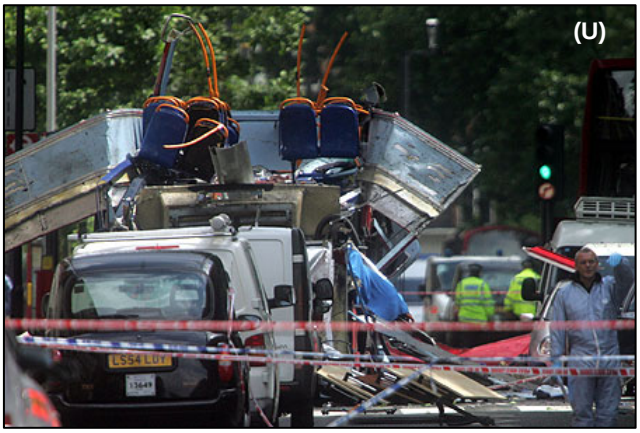
(U) Significant Transnational Mass Transit Attacks

(U//FOUO) Although extremists have yet to mount an attack against U.S. mass transit, a series of significant attacks overseas highlights continuing terrorist interest in attacking these systems. The examples below summarize major terrorist plots:

(U) Spain, January 2008: Spanish authorities arrested 14 suspected terrorists in Barcelona who were allegedly connected to a plot to conduct terrorist attacks in Spain, Portugal, Germany, and the United Kingdom. According to open source reporting, the target of the attacks was the Barcelona metro. Two pairs of suicide bombers were allegedly to attack in separate metro stations. The bombs were supposed to be hidden in backpacks or bags that other cell members would detonate by remote control.[5]

(U) India, February 2007: Kashmiri extremists placed six suitcase IIDs in three cars of the "Friendship Express" passenger train traveling to Pakistan from India. Four of the six IIDs ignited and caused fires in two passenger cars, killing 68 and injuring 13.[6]

(U) India, July 2006: Seven bombs exploded over a span of 15 minutes on the Mumbai Suburban Railway system, killing 187 and injuring more than 700. The railway system is one of the busiest in the world, transporting more than six million commuters per day. The city of Mumbai is a major financial hub and home to the Indian film industry.[7]



(U) United Kingdom, July 2005: Four suicide bombers attacked the London underground subway systems and a double-decker bus during morning rush hour on 7 July. A total of 52 persons were killed and more than 700 injured. Three suicide bombers exploded IEDs within a few minutes of each other on the London underground transit system, and less than an hour later, one bomber exploded an IED on a double-decker bus.[8] Two weeks later, on 21 July, during the noon hour, four young Islamic extremists in London attempted to conduct bombings similar to the 7 July attacks using backpacks containing IEDs made from peroxide-based explosives. The bombings failed when only the detonator caps themselves exploded. This may have been due to the low quality of the hydrogen peroxide used. The failed attempts occurred on subway trains at three different stations and on a double-decker bus in East London.[9]

(U) Spain, March 2004: Near-simultaneous explosions on four Madrid commuter trains during the morning rush hour killed 191 passengers and injured more than 1,800. Ten of 13 "bag bomb" IEDs exploded on the four trains—all within three minutes. Groups linked to al-Qa'ida claimed responsibility for the attack. Some speculate the attacks were timed deliberately to sway public opinion during the elections. The Popular Party, who had previously enjoyed a comfortable advantage in the polls, ultimately lost the elections to the Socialist Party on 14 March, and Spain withdrew its 1,300 troops from Iraq.[10]

(U) Russia, December 2003: An explosion aboard a commuter train near Yessentuki, northwest of Chechnya, killed 41 people and injured more than 150. Russian officials blamed a Chechen suicide bomber for the attack. The Chechen resistance has been responsible for several train attacks, including a 2003 explosion that killed 46 people

aboard a commuter train. The Chechen resistance also attacked the Moscow subway three times between 1996 and 2004. The 2004 explosion killed 39 and injured 110.[11]

(U) Capabilities and Tactics

(U) Improvised Explosive Devices

(U//FOUO) IEDs were used in the majority of recent events against mass transit systems and will likely remain the most common method of attack for the foreseeable future. IEDs can be constructed from common materials, can be contained in inconspicuous bags or packages, and can be placed without attracting attention. Suicide operatives carrying IEDs could easily come aboard undetected, especially at a busy time of day when ridership is high.

(U//FOUO) According to an October 2007 Joint FBI-DHS report, terrorist interest in peroxide-based explosives is growing. Terrorists in the 7 July 2005 London bombings and the subsequent attempted bombings on 21 July 2005 used peroxide-based explosives, which included triacetonetriperoixde (TATP) and hexamethylenetriperoxidediamine (HMTD). The members of the Germany-based Islamic Jihad Union cell were in the process of purchasing large quantities of high-concentrate hydrogen peroxide when they were arrested in October 2007. Hydrogen peroxide is commercially available and easy to purchase, making it ideal for use in homemade explosives.[12,13]

(U) Improvised Incendiary Devices

(U//FOUO) IIDs are designed to cause fires or secondary explosions. Terrorists are aware that attacks with incendiary devices in subway systems cause passengers caught in narrow confines with smoke and fire to panic, causing additional injuries and obstructing rescue attempts. Such an attack would also draw in first responders, who could be the targets of a second-phase attack.

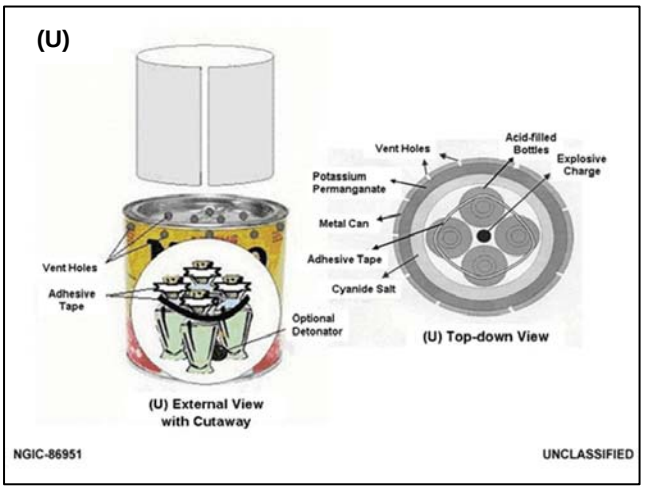
(U) Standoff Weapons and Small Arms

(U//FOUO) Rocket-propelled grenades, light anti-tank weapons, and small arms could be used to attack mass transit. An example is the 1993 incident in which a lone gunman opened fire with a 9mm pistol in a crowded Long Island Railroad commuter railcar.

(U) Chemical Dispersion

(U//FOUO) Terrorists continue to have an interest in developing chemical and biological dispersion devices. Many of the necessary materials are relatively easy to acquire, and some delivery systems can be simple to build. The 1995 chemical attack on the Tokyo subway system was accomplished simply by piercing, with the tip of an umbrella, plastic bags containing sarin, which had been left on subway car floors.

(U) Biological Contamination



(U) Al-Qa'ida is reportedly interested in producing compact chemical dispersal devices. The group developed a small device called a mubtakar for disseminating cyanogen chloride and hydrogen cyanide. The device is considered efficient in enclosed spaces and could be effective if used in subway cars and underground rail stations.[14,15]

(U) Mubtakar (Arabic for "invention") representation found on Internet

(U) Sabotage

(U//FOUO) Technologically-capable terrorists could sabotage the Supervisory Control and Data Acquisition (SCADA) systems used for controlling and monitoring mass transit systems. Although there is no evidence of a specific terrorist threat to mass transit SCADA systems, intelligence reporting indicates al-Qa'ida and affiliated groups have a sustained interest in launching operations against computer networks.[16]

(U) Suspicious Incidents and Activity

(U//FOUO) ***There is no evidence to date linking suspicious mass transit incidents to terrorism;*** however, suspicious activity enables law enforcement and security officials to identify unusual behavior, trends, patterns, and possible criminal acts. There were 171 suspicious mass transit incidents reported to TSA-OI during 2007. Twenty-nine involved Amtrak trains, 45 were related to heavy rail, and 97 involved intercity buses.

(U//FOUO) A review of all-source reporting revealed that approximately 123 actual or possible threats to the U.S.

(U//FOUO) Rail Fans

(U//FOUO) Train spotters (UK) and rail fans (U.S.) are avid fans and hobbyists of railroads and the railroad industry. There are tens of thousands of rail fans worldwide, collecting photographs and documents about trains, engines, rail stations, bridges, and rail yards, which they often disseminate on the Internet. There is no reporting, however, indicating al-Qa'ida or any other threat group is aware of or utilizing rail fan resources. Rail fan websites may contain sensitive information, such as railway office locations, radio operating frequencies, schedules, and pictures of railroad operations. In addition, rail fans in the United States have tracked nuclear waste shipments via rail here and posted this information to Internet websites.

(U) Classified document: Defense Intelligence Assessment, September 2007

passenger rail system were reported since January 2004. None of these threats or incidents preceded an actual attack.

(U//FOUO) Suspicious incidents involving mass transit systems encompass a wide variety of activities—from individuals who may appear to be acting suspiciously or asking suspicious questions to incidents involving suspicious packages. Possible surveillance includes photographing and videotaping trains and/or train stations. People involved in these activities are often rail fans (see pg. x) or tourists taking photographs or video of trains or train stations. On other occasions, criminal activity not connected to terrorism is taking place. There are also instances when railroad employees make mistakes that cause equipment malfunctions or failures, making it appear as though sabotage has occurred.

(U) Predictive Analysis of Possible Future Attacks

(U//FOUO) Based on analysis of available data on previous al-Qa'ida/al-Qa'ida-inspired terrorist attacks on mass transit overseas, TSA-OI assesses that a terrorist attack on U.S. mass transit systems would most likely involve:

- **What:** Terrorists would target mass transit rail systems with multiple IEDs or IIDs.
- **Who:** The cell would be comprised of small groups of males between the ages of 18 and 33. They would likely be either al-Qa'ida members or inspired by al-Qa'ida. Although the cell members may have attended training camp in Pakistan, they may have used false documents for travel to make it more difficult to track their movements.
- **When:** The attack would occur during the rush hour.
- **Where:** The northeast corridor of the United States is likely to be a target because it contains a significant amount of rail infrastructure relative to the rest of the United States and has a higher concentration of U.S. cities that might be considered symbolic targets, like New York City and Washington, D.C.
- **Why:** Attacking Americans on their home soil has the greatest psychological impact. Groups would likely consider an attack on New York City because it represents material success, or Washington, D.C., because it is the seat of the U.S. government. New York also has the most extensive transit system in the country, increasing its odds of being targeted from a purely statistical standpoint. One-in-three users of mass transit in the United States and two-thirds of the nation's rail riders live in New York City.

(U) Conclusion

(U//FOUO) Law enforcement agencies continue to investigate suspicious activities and threats related to the mass transit system. Suspicious activity may be indicative of pre-operational reconnaissance, but the increase in reported incidents could also be the result of an elevated public awareness and more stringent security procedures.

(U//FOUO) TSA-OI has no credible information regarding any specific terrorist plot to attack U.S. mass transit systems; however, previous overseas attacks against mass transit

systems demonstrate the intent and capability of al-Qa'ida, its affiliated groups, and its sympathizers to do so.

[1] (U) National Intelligence Estimate, "(U) The Terrorist Threat to the U.S. Homeland," July 2007, (U)
[2] (U) Director of National Intelligence J. Michael McConnell statement: "(U) Annual Threat Assessment of the Director of National Intelligence for the Senate Select Committee on Intelligence," 5 February 2008, (U)
[3] (U) Open Source Center, "(U) India: Sources Say Jet Airways Security Staffer Among 24 Held for UK Terror Plot," 12 August 2006, (U)
[4] (U) *Spiegel Online*, "Terror Suspect Worked at Frankfurt Airport," 17 September 2007, (U)
[5] www.cnn.com, "Extremists Plotted Attacks Across Europe," 28 January 2008. (U)
[6] www.news.bbc.co.uk, "Dozens Dead in India Train Blasts," 19 February 2007
[7] www.news.bbc.co.uk, "Scores Dead in Mumbai Train Bombs," July 2006
[8] www.news.bbc.co.uk, "London Attacks," August 2007
[9] www.news.bbc.co.uk, "London Attacks," August 2007
[10] www.news.bbc.co.uk, "Madrid Train Attacks," February 2007
[11] www.washingtonpost.com, 4 February 2007
[12] (U//FOUO) *FBI-DHS Intelligence Bulletin No.274*, "(U//FOUO) Peroxide-Based Explosives: Terrorist Interest Growing," 10 October 2007, (U//FOUO)
[13] (U) Hosenball, Mark and Michael Isikoff, *Newsweek,* "(U) Suspects Who Got Away," 10 October 2007, (U)
[14] (U) Salama, Sammy, and David Wheeler, *CNS,* "(U) From the Horse's Mouth: Unraveling Al-Qa'ida's Target Selection Calculus," 17 April 2007, (U)
[15] (U) Suskind, Ron, *Time*, "(U) The Untold Story of Al-Qaeda's Plot to Attack the Subway," 19 June 2006, (U)
[16] (U) Classified document: DHS Special Assessment, "(U//FOUO) Transnational Groups Ability to Compromise Supervisory Control and Data Acquisition (SCADA) Systems," 12 December 2005

(U) Appendix
Mass Transit Overview

(U) Americans take more than 9.6 billion trips annually and 32 million trips per average weekday on mass transit. Mass transit, or public transportation, incorporates systems that carry volumes of people over short distances. Mass transit includes urban passenger train service (commuter rail), heavy rail (metro, subway, rapid transit, or rapid rail), light rail (street cars and trams), transit buses, and the interconnected facilities and vehicles feeding the transit system. The American Public Transportation Association, a U.S. industry group, identifies about 6,500 public transportation providers in the United States and Canada.

(U) Passenger Rail – The U.S. passenger rail system operates on an open interstate system and on the same tracks as freight rail companies. Passenger rail systems include Amtrak, Virginia Railway Express, Maryland Rail Commuter, the Long Island Railroad, the Southern California Regional Rail Authority, and the Alaska Railroad. Amtrak operates more than 22,000 miles of track and serves approximately 24 million people annually at more than 500 station stops. The vast majority of the 22,000 miles on which Amtrak operates are owned by freight railroads. Amtrak owns approximately 750 miles of railroad, primarily from Boston to Washington, D.C.

(U) Heavy Rail/Rapid Transit – Sometimes referred to as subway, underground, elevated, rapid rail, or metro, heavy rail is characterized by high capacity trains operating with high frequency in exclusive rights-of-way. Throughout the United States, there are 14 subway systems consisting of 2,209 track miles, 1,023 stations, and 10,754 subways cars providing 2.7 billion passengers trips annually. Approximately one-half of these subway stations are located underground. New York City hosts the largest and busiest subway system in the country, with more than 6,000 scheduled trains carrying more than 3 million passengers per day, for a ridership of 1,850 billion in 2006.

(U) Light Rail – Sometimes called streetcar, tramway, or trolley, lightweight passenger rail operates in single vehicles on fixed rails in rights-of-way along roads that may or may not be separated from vehicular traffic. Light rail transit service is frequent, but with stops spaced farther apart than for local bus service. The United States has 27 light rail systems consisting of 1,147 track miles, 614 stations, and 1,482 vehicles providing 337 million passenger trips annually.

(U) Transit Bus – The vast majority of scheduled fixed route transit service operates in bus and trolleybus modes on streets and highways using rubber tired vehicles. In all but approximately 50 metropolitan areas and small cities, bus service is the only fixed-route transit service available. Throughout the United States, there are 1,982 bus and 4 trolleybus systems, providing nearly 5.7 billion bus and over 108.5 million trolleybus passenger trips annually.

Source: America Public Transportation Association Public Transportation Fact Book 2005.