



LEGAL CONTROLS ON EXPLOSIVE MATERIALS

**Report for the United States House of Representatives
Committee on Homeland Security Democratic Staff**

JUNE 9, 2005

**Leah Kane
Andrew Lee
Yuta Maeda
Chrissy Okereke
Matt Scott**

INSCT INSTITUTE FOR NATIONAL SECURITY AND COUNTERTERRORISM

SYRACUSE UNIVERSITY

Executive Summary ¹

Nuclear, biological and chemical weapons are not the only tools in the terrorist arsenal. Less complex devices, filled with materials legally available for sale throughout the United States, have been and continue to be used to horrible effect against government and civilian targets worldwide. This report provides a summary of federal, state and international laws regulating the importation and domestic handling of military-style and fertilizer-based explosives.

State laws on military-style explosives vary widely, but recent federal legislation compensates for the differences. Well-regulated states require all potential users of explosives to obtain a permit or license and submit to a criminal background check. Poorly-regulated states require no government oversight. Federal law, since passage of the 2002 Safe Explosives Act, requires interstate and intrastate distributors and users of explosive materials to apply for a handling permit and to undergo a criminal background investigation through the Department of Justice. International law, in the form of treaties already entered into force through federal legislation, currently applies narrowly to the identification of specific chemical compounds.

Explosive materials included in the Department of Justice's definition of "explosives" appear to be well-regulated. The federal definition, however, does not include substances whose primary purpose is not to explode, but can be made to explode through steps found readily on the Internet. The most well-known of these substances is ammonium nitrate-based fertilizer, which terrorists have combined with fuel oil to produce violent and deadly bombs. Fertilizer bombs detonated outside the Oklahoma City Federal Building in 1995, outside a night club in Bali, Indonesia in 2002, and in Istanbul in 2003. Despite repeated use by terrorists, ammonium nitrate-based fertilizer can still be purchased in the U.S. without identification in all but four states.

The conclusion of this report includes three courses of action the federal government could take to lower the risk of fertilizer-based attacks in America: (1) amend U.S. law to define ammonium nitrate fertilizer as an explosive; (2) adopt at the federal level existing state laws and regulations requiring identification for purchases of potentially dangerous fertilizers; or (3) promote technology-based solutions using different formulas or coatings for ammonium nitrate-based fertilizer to reduce the material's utility in bomb making.

¹ This report was written as part of the MPA Workshop, a required capstone course in the Master's in Public Administration program at the Maxwell School of Citizenship & Public Affairs. Direction and supervision were provided by William C. Banks, Professor of Law and Public Administration and Director of the Institute for National Security and Counterterrorism at Syracuse University.

Recent Terrorist Attacks Using Conventional Explosives

Conventional explosives and the materials necessary to construct them are easier to acquire than nuclear, biological, and chemical weapons. The conventional explosives most commonly used in recent terrorist attacks are military-style explosives, including plastic explosives such as Semtex and C-4, and fertilizer-based explosives, primarily those constructed with ammonium nitrate-based fertilizer. Attacks using explosive materials have inflicted devastating losses on human life, commerce, and governmental and military interests.

Attacks Using Military-Style Explosives

In December 1988, a Libyan intelligence officer killed 270 people aboard Pan Am Flight 103 using approximately 350 grams of plastic explosives.² Scientists determined that residues left by the explosion showed traces of PETN and RDX, two components of Semtex, the plastic explosive favored by terrorists because it was, until recently, extremely difficult to detect, easily obtained, and as little as 250 grams could destroy an airliner.³ Semtex is a general purpose plastic explosive used in commercial blasting and demolition and in certain military applications.

Reportedly, 400-700 pounds of C-4, a military plastic explosive, were used by Al-Qaeda in the October 2000 attack on the USS Cole, which killed 17 people and injured 39 others.⁴ C-4 was also suspected in the 1996 bombing of the Khobar Towers military housing complex in Saudi Arabia, in which 20 people were killed and 372 injured.⁵ C-4 is more expensive and harder to obtain than Semtex.⁶ Although C-4 is primarily manufactured in the U.S., forms of C-4 are made in Austria, Iran and other countries.⁷ Authorities have not confirmed that C-4 was in fact used in these attacks, but the explosives used were likely military-style.

In March 2004, 191 people were killed and 1,800 injured in ten explosions aboard commuter trains in Madrid, Spain. Forensic analysis of unexploded devices indicated the explosive used was Goma-2 ECO,⁸ a nitroglycerin-based explosive manufactured for industrial use by the Union of Spanish Explosives of Paramo de Masa in northern Spain.⁹

Attacks Using Fertilizer-Based Materials

² BBC News, *High Explosives "Missing in Iraq"* (October 26, 2004), available at http://news.bbc.co.uk/1/hi/world/middle_east/3950493.stm; BBC News, *Lessons from Lockerbie* (December 21, 1998), available at http://news.bbc.co.uk/1/hi/special_report/1998/12/98/lockerbie/235632.stm.

³ Rodney Wallis, *Lockerbie: The Story and the Lessons* 43 (Praeger 2001).

⁴ CNN, *C-4 Explosive Used in USS Cole Attack* (November 1, 2000), available at <http://archives.cnn.com/2000/US/11/01/cole.investigation/>.

⁵ CNN, *Flight Forced To Land; Explosives In Shoes Suspected* (December 23, 2001), available at <http://archives.cnn.com/2001/US/12/22/plane.diverted/index.html>.

⁶ CNN, *C-4 Quantity May Be Clue in USS Cole Bombing* (November 3, 2000), available at <http://archives.cnn.com/2000/US/11/03/c-4.cole/>.

⁷ CNN, *C-4 Explosive Used in USS Cole Attack* (November 1, 2000), available at <http://archives.cnn.com/2000/US/11/01/cole.investigation/>.

⁸ CNN, *Bombs Were Spanish-Made Explosives* (March 13, 2004), available at <http://www.cnn.com/2004/WORLD/europe/03/12/spain.blasts/index.html>; CNN, *Suspected Madrid Bombing Ringleader Killed* (April 4, 2004), available at <http://edition.cnn.com/2004/WORLD/europe/04/04/spain.bombings/>.

⁹ Sydney Morning Herald, *Feud May Hinder Madrid Bombing Investigation* (March 19, 2004), available at <http://www.smh.com.au/articles/2004/03/18/1079199367607.html>.

Ammonium nitrate-based fertilizers are cheap, widely unregulated, readily available, and become powerful weapons when combined with fuel oil. In April 1995, Timothy McVeigh used a truck bomb composed of ammonium nitrate and nitromethane, a highly volatile motor-racing fuel, to kill 168 and wound 800 in the Alfred P. Murrah Federal Building in Oklahoma City.¹⁰ McVeigh's bomb consisted of approximately two tons of ammonium nitrate-based fertilizer purchased from a farmers' cooperative in Kansas in late 1994.¹¹

Traces of ammonium nitrate and fuel oil were also found at the scene of the 1998 U.S. Embassy bombing in Nairobi, Kenya, in which 213 people were killed and 4,000 injured.¹² However, early speculation claimed Semtex was the explosive material employed in the Embassy bombings, and conclusive findings have not yet been made available to the public.

In October 2002, Jemaah Islamiyah, an Islamic group reportedly linked to the Al-Qaeda, killed 202 people and injured 209 others outside nightclubs in Kuta, on the Indonesian island of Bali. Investigators determined fertilizer-based explosives were used in the Bali attack.¹³

In November 2003, an Al Qaeda cell killed 57 and wounded 700 in four bombings in Istanbul, Turkey. Each of the four pickup trucks used was packed with an estimated 5,060 pounds of explosives¹⁴ that were reportedly ammonium nitrate-based.¹⁵

Ammonium nitrate is not the only potentially dangerous agricultural material. For the February 1993 bombing of the World Trade Center, which killed 6 and injured 1,040, Islamic terrorists constructed a 1,500 pound urea-nitrate bomb.¹⁶ Urea-nitrate is another commonly used, inexpensive commercial fertilizer.

Federal Legal Controls

Under federal law, the Attorney General is empowered to issue user permits and licenses to import, manufacture, or deal in explosive materials, which are defined at least annually by the Department of Justice.¹⁷ The Attorney General is responsible for issuing the appropriate authorizations after applicants submit the proper information and fees.¹⁸ The Attorney General is also authorized to revoke any permit or license if the user is determined to be in violation of any Department of Justice regulation or U.S. law pertaining to explosives.¹⁹

¹⁰ Tony Clark for CNN, *The Worst Terrorist Attack on U.S. Soil: April 19, 1995* (December 30, 1995), available at <http://www.cnn.com/US/OKC/daily/9512/12-30/index.html>.

¹¹ Spencer S. Hsu & Sari Horwitz, *Truck Bombs Remain Threat Despite Efforts*, Journal – Gazette (August 8, 2004), 2004 WLNR 15201499.

¹² CNN, *Traces of Ammonium Nitrate, Fuel Oil Found at Nairobi Bomb Site* (August 14, 1998), available at <http://www.cnn.com/WORLD/africa/9808/14/embassy.fbi.01/>.

¹³ Maria Ressa for CNN, *Uncovering Southeast Asia's Jihad Network* (February 26, 2004), available at <http://archives.cnn.com/2002/WORLD/asiapcf/southeast/10/29/asia.jihad.1/index.html>.

¹⁴ CBS News, *Fertilizer Used in Terror Bombs* (April 14, 2004), available at <http://www.cbsnews.com/stories/2004/04/14/world/printable611898.shtml>.

¹⁵ BBC News, *Terror Police probe "Bomb Plot"* (March 31, 2004), available at <http://news.bbc.co.uk/go/pr/fr/-/1/hi/england/3584009.stm>.

¹⁶ Phil Hirshkorn for CNN, *New York Remembers 1993 WTC Victims* (February 26, 2003), available at <http://archives.cnn.com/2002/WORLD/asiapcf/southeast/10/29/asia.jihad.1/index.html>.

¹⁷ 18 U.S.C. § 841(d); 27 C.F.R. § 555.23.

¹⁸ 18 U.S.C.A. § 843(b). 31A AM-JUR §9.

¹⁹ 18 U.S.C.A. § 843(d), referring to 18 U.S.C.A. § 842(d). 31A AM-JUR §9.

The Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) is the primary body governing the sale, distribution, storage, and use of explosives.²⁰ Among the ATF's chief responsibilities are regulating interstate and foreign commerce in explosive materials, issuing licenses and permits, and marking plastic explosives.²¹

Federal law defines explosives as any substance or combination of substances which, upon rapid decomposition or combustion, cause an explosion.²² Generally, the term applies to any chemical compound mixture or device, the primary purpose of which is to function by explosion.²³ The ATF further defines the following categories annually.²⁴

- *High Explosives*, such as dynamite, flash powders and bulk salutes, are detonated by blasting caps when unconfined.
- *Low Explosives*, such as black powder, safety fuses, igniter cords, fuse lighters, and display fireworks, ignite when confined.
- *Blasting Agents* include most materials and mixtures consisting of fuel and oxidizer intended for blasting and not otherwise defined as an explosive. Ammonium nitrate-fuel oil mixtures and certain water gels are considered blasting agents.
- *Detonators* include any device containing a detonating charge that is used for initiating detonation in an explosive.
- *Explosive Materials*, for the purpose of federal criminal statutes, means explosives, blasting agents, and detonators.

Pure ammonium nitrate is included on the ATF's list of high explosives, but ammonium nitrate-based fertilizers are not.

Any individual interested in purchasing and using explosives must submit an application, photo identification, and an FBI fingerprint card to the ATF. An applicant may request a limited permit, which allows six purchases and uses over the course of twelve months, a user permit, which allows unlimited purchases over three years, or a user-limited permit, which allows one purchase and use. Licenses and permits generally take 60 to 90 days to process.

In 2002, Congress passed the most recent major amendment to U.S. law on explosives. The Safe Explosives Act transferred supervision of the ATF from the Treasury Department to the Justice Department, and expanded the jurisdictional reach of federal authorities to include all activities "affecting" interstate commerce. This expansion allows the Department of Justice to require permits of all explosive handlers, including those operating solely within one state's borders.²⁵ The Safe Explosives Act also: requires employers to list employee information on applications for permits, and instructs the ATF to conduct background checks on both employers and

²⁰ 27 C.F.R. § 555.

²¹ 27 C.F.R. § 555.1.

²² *Com. v. Bristow*, 185 Pa. Super. 448, 138 A.2d 156 (1958). 31A AM-JUR §2.

²³ 18 U.S.C.A. § 841(d), referring to 18 U.S.C.A. § 844(d) to (j). 31A AM-JUR § 5.

²⁴ 27 C.F.R. § 555.202.

²⁵ Implementation of the Safe Explosives Act, Title XI, Subtitle C of Public Law 107-296, 68 Fed. Reg. 13769 (March 20, 2003) (to be codified at 27 C.F.R. pt. 555).

employees; increases ATF inspections; stiffens penalties for not reporting the theft of explosives; and adds to the list of persons prohibited from obtaining explosives.²⁶

It is unlawful for:

- Any person to transport, ship, or receive explosive materials in interstate or foreign commerce without a user permit, or receive explosive materials within his state of residence without a limited permit;²⁷
- Any person to store any explosive material in a manner not in accordance with regulations by the Attorney General;²⁸
- Any person to manufacture or deal in explosive materials without a license;²⁹
- Any person to knowingly withhold information or to make any false or fictitious oral or written statement or to furnish or exhibit any false, fictitious, or misrepresented identification for the purpose of obtaining explosive materials or a license, permit, exemption, or relief from disability;³⁰
- Licensed importers or domestic manufacturers of explosive materials to fail to identify by marking all explosives for sale or distribution with the identity of the manufacturer and the location, date, and shift of manufacture;³¹
- Any licensee or permit holder to willfully purchase or distribute explosive materials without keeping the records required by the Attorney General or to make false entries in such records;³²
- Any licensee to knowingly distribute any explosive materials to any person who the distributor has reason to believe will transport the materials to a state where the purchase, possession, transport, or use of explosive materials is prohibited;³³
- Any licensee or permit holder to fail to report thefts of explosives within 24 hours of discovery;³⁴
- Any person to possess any stolen explosives which have at some point been involved in interstate or foreign commerce;³⁵
- Any person to knowingly transfer any explosive materials, knowing or having reasonable cause to believe that such explosive materials will be used to commit a crime of violence;³⁶
- Any person to knowingly distribute explosive materials to any individual who:
 - is under twenty-one years of age,
 - has been convicted or is under indictment in any court of a crime punishable by imprisonment for a term exceeding one year,
 - is a fugitive from justice,
 - is an unlawful user of or addicted to any controlled substance,

²⁶ *Id.*, 13768, 13772, 13773, 13776.

²⁷ Implementation of the Safe Explosives Act, Title XI, Subtitle C of Public Law 107-296, 68 Fed. Reg. 13769 (March 20, 2003) (to be codified at 27 C.F.R. pt. 555).

²⁸ 18 U.S.C.A. § 842(j). 31A AM-JUR §174.

²⁹ 18 U.S.C.A. § 842(a)(1). 31A AM-JUR §175.

³⁰ 18 U.S.C.A. § 842(a)(1); 18 U.S.C.A. § 842(a)(2). 31A AM-JUR §186.

³¹ 27 C.F.R. pt. 555.

³² 18 U.S.C.A. § 842(f); 18 U.S.C.A. § 842(g), referring to 18 U.S.C.A. § 847. 31A AM-JUR §186.

³³ 18 U.S.C.A. § 842(c). 31A AM-JUR §186.

³⁴ Implementation of the Safe Explosives Act, Title XI, Subtitle C of Public Law 107-296, 68 Fed. Reg. 13,776 (March 20, 2003) (to be codified at 27 C.F.R. pt. 555).

³⁵ 18 USC § 842(h). 31A AM-JUR §177.

³⁶ U.S.C.A. § 844(o), referring to 18 U.S.C.A. § 844(h); 18 U.S.C.A. § 924(c)(3), (4). 31A AM-JUR §185.

- has been adjudicated a mental defective,
- is an illegal alien (with limited exceptions),
- has been dishonorably discharged from the military, or
- has renounced their United States citizenship;³⁷
- Any person to teach the making or use of an explosive or destructive device or to distribute information pertaining to the manufacture or use of such items with the intent that the information be used in furtherance of an activity that constitutes a federal crime of violence;³⁸
- Any person, with some exceptions, to possess any plastic explosive that does not contain a detection agent.³⁹

Federal law generally exempts from regulations on explosives:

- The use of explosive materials in medicines and medicinal agents in the forms prescribed by the official United States Pharmacopeia, or the National Formulary;
- Small arms ammunition and components thereof;
- Commercially manufactured black powder in quantities not to exceed fifty pounds, percussion caps, safety and pyrotechnic fuses, quills, quick and slow matches, and friction primers, intended to be used solely for sporting, recreational, or cultural purposes in antique firearms, or in antique devices; and⁴⁰
- The manufacture, distribution or storage of explosive materials for the military or naval services or other agencies of the United States under the regulation of the military department of the United States; or to establishments owned by, or operated by or on behalf of, the United States.⁴¹

In addition to the ATF, several other federal agencies regulate the manufacture, transport, use, and trade of explosives. Within the Department of Labor, two primary divisions govern explosive materials. The Occupational Safety and Health Administration (OSHA) has jurisdiction over ensuring the safety of workers who manufacture explosive material⁴² and the Mine Safety and Health Administration (MSHA) reinforces safety standards for workers who use explosives in mining.⁴³

Two divisions of the Department of Transportation oversee the transportation of explosive materials. The Pipeline and Hazardous Materials Safety Administration (PHMSA) gives approval for interstate transportation of explosives.⁴⁴ The Federal Motor Carrier Administration (FMCA) is responsible for transporting and routing of explosive materials.⁴⁵

³⁷ 18 U.S.C.A. § 842(d)(1-6); Implementation of the Safe Explosives Act, Title XI, Subtitle C of Public Law 107-296, 68 Fed. Reg. 13,769 - 13,774 (March 20, 2003) (to be codified at 27 C.F.R. pt. 555).

³⁸ 18 U.S.C.A. § 842(p)(2)(A); 18 U.S.C.A. § 842(p)(2)(B). 31A AM-JUR §7193.

³⁹ 18 U.S.C.A. § 842(n)(2). 31A AM-JUR §7177.

⁴⁰ Black powder, a low-order explosive also known as gunpowder, is sold mainly for the reloading of ammunition and for use in muzzle-loading firearms. Black powder, although used by the Unabomber and in the bombing at the 1996 Atlanta Olympics, accounts for a relatively small number of injuries and deaths and less destruction of property when compared with high explosives⁴⁰. Black powder is also easily detectable by specially trained dogs, and the thick container walls necessary to make black powder bombs effective can be seen by X-ray devices.

⁴¹ 18 U.S.C.A. § 845(a)(2-6). 31A AM-JUR §7198.

⁴² 29 C.F.R. pt. 1910.109.

⁴³ 30 C.F.R. pts. 15, 56, 57, 78, 77; 30 C.F.R. pt. 1910.109.

⁴⁴ 49 C.F.R. pts. 106, 107, 110, 171-180.

⁴⁵ 49 C.F.R. pt. 397.

The Department of Homeland Security is responsible for ensuring the safety of Americans and their property within the United States. The Transportation Security Administration (TSA) coordinates with the Department of Transportation in ensuring safety and security during transportation of explosives. The Coast Guard has jurisdiction over the transportation of explosive materials in U.S. waters.⁴⁶

The Environmental Protection Agency (EPA) sets environmental standards for manufacturers of explosive materials,⁴⁷ ensures safety in the transportation of dangerous and hazardous materials,⁴⁸ and regulates the use of substances that may harm the environment.⁴⁹

The Department of Commerce regulates the importation of explosive material.⁵⁰

International Legal Controls

The only treaty on conventional explosives to which the United States is a State party is the Convention on the Marking of Plastic Explosives for the Purpose of Detection, done at Montreal on March 1, 1991, and entered into force June 21, 1998. The United States and fifty other countries have signed this treaty. The Convention requires nations that produce plastic explosives to mark them at the time of manufacture with a substance to enhance their detectability by commercially available mechanical or canine detectors, and to ensure that controls over the sale, use and disposition of marked and unmarked plastic explosives are implemented.

The agreement defines explosives as “explosive products, commonly known as ‘plastic explosives,’ including explosives in flexible or elastic sheet form.” Each State party must take measures to prohibit and prevent the manufacture, import, and export of unmarked explosives (those that lack detection agents), and to destroy stockpiles of unmarked explosives. The Convention does not establish international criminal provisions for its violation.⁵¹

Congress passed the Antiterrorism and Effective Death Penalty Act of 1996 to comply with the Convention. The Act changed federal law to define “detection agent” and “plastic explosive” exactly as they are defined in the Convention. It is unlawful to manufacture, import, export, ship, transport, transfer, receive or possess unmarked plastic explosives. Violation of the law is punishable by a fine, up to 10 years in prison, or both. The Act allows the same exceptions to the law that the Convention provides, such as the use of unmarked plastic explosives for duly authorized research purposes.⁵²

State Laws and Regulations

⁴⁶ 33 C.F.R. pts. 6,126; 46 C.F.R., pts. 146-148.

⁴⁷ 40 C.F.R. pts. 1500-1517, 1700.

⁴⁸ 40 C.F.R. pts. 260-265, 271.

⁴⁹ 40 C.F.R. pts. 1-799, 1500-1517, 1700.

⁵⁰ 15 C.F.R. pts. 700-799.

⁵¹ Convention on the Marking of Plastic Explosives for the Purpose of Detection, March 1, 1991, S. Treaty Doc. No. 103-8

⁵² Antiterrorism and Effective Death Penalty Act of 1996, Pub. L. No. 104-132, 110 Stat 1214.

States vary considerably in their guidelines regarding explosives. Almost all states require dealers of explosives to apply for licenses. The 25 most highly regulated states also require all purchasers of explosives to apply for a license from the state:

- California
- Colorado
- Connecticut
- Delaware
- Florida
- Georgia
- Hawaii
- Illinois
- Louisiana
- Maine
- Maryland
- Massachusetts
- Michigan
- Minnesota
- New Hampshire
- New Jersey
- New York
- Oklahoma
- Oregon
- South Carolina
- Vermont
- Virginia
- Washington
- West Virginia
- Wisconsin

The middle tier of states require licenses only of those who use explosives industrially, primarily construction and mining blasters, or require sellers of explosives to keep records of transactions to varying degrees of thoroughness:

- Alabama
- Alaska
- Arizona
- Indiana
- Iowa
- Kentucky
- Mississippi
- Montana
- Nebraska
- Nevada
- North Carolina
- North Dakota
- Ohio
- Pennsylvania
- Rhode Island
- South Dakota
- Tennessee
- Texas
- Utah

The least regulated states do not require licenses of those who purchase explosives, nor do they require sellers of explosives to keep records of transactions:

- Arkansas
- Idaho
- Kansas
- Missouri
- New Mexico
- Wyoming

California's certification process appears to be the most stringent in the country: licenses are issued only for the particular purpose requested by the applicant, only for a specific time period, and expire as soon as that purpose is achieved.

The purchase of ammonium nitrate-based fertilizer, which is not included in the federal definition of explosives, is unregulated in 46 states. States require manufacturers of fertilizers to register their product and submit samples, and to report the tonnage of fertilizer sold in the state on a regular basis. A few states include pure ammonium nitrate on their list of defined explosives, but many explicitly exclude from that list ammonium nitrate-based fertilizers. Only in New Jersey, Nevada, South Carolina and Oklahoma is the purchase of ammonium nitrate-based fertilizers regulated. California has pending legislation that would require dealers of ammonium nitrate-based fertilizers to keep the same transaction records required in those four states.

Summary of the 50 States

Alabama

The state's Fire Marshal regulates the storage, sale and use of explosives.⁵³ Licensing requirements for using explosives apply to blasters.⁵⁴ The state has no laws regarding ammonium nitrate. In *State v. Bankhead Min. Co.*, 279 Ala. 566, ammonium nitrate was found to be a chemical compound of multiple uses, and therefore could not be classified as a fertilizer or an explosive.⁵⁵

Alaska

The state Department of Labor and Workforce Development issues certificates of fitness to those who work with explosives in construction projects.⁵⁶ The Department of Natural Resources has authority to adopt regulations regarding the use of explosives in surface coal mining operations.⁵⁷ The Department of Natural Resources also has authority to regulate fertilizers.⁵⁸ Though it is illegal to possess⁵⁹ or furnish⁶⁰ explosives for criminal purposes, no limitations exist on the individual purchase of explosives or fertilizers. No statutes or administrative code mention ammonium nitrate specifically.

Arizona

The state Mine Inspector has authority to prescribe and promulgate rules pertaining to storing, transporting and using explosives and blasting agents in mining operations,⁶¹ and requires those manufacturing, storing, selling, transferring or in any manner disposing of explosives or blasting agents to keep an accurate record of all such transactions.⁶² Arizona's administrative code contains numerous prescriptions for how ammonium nitrate should be stored and handled, but none limiting its purchase.

Arkansas

Arkansas does not regulate the manufacture, sale, transportation, and possession of explosives. The Director of the Department of Labor establishes minimum standards for the qualifications of those individuals performing blasting,⁶³ except in surface coal mining operations and seismic operations.⁶⁴ The state does not limit the purchase of ammonium nitrate fertilizers.

California

Without permission from an issuing authority under the authority of the state Fire Marshal, no one may manufacture, sell, furnish, give away, receive, store, possess, transport or use explosives.⁶⁵ A permit shall remain valid only until the time when the act or acts authorized by the permit are performed, and permits do not constitute authorization for the performance of any

⁵³ Ala. Code § 36-19

⁵⁴ Ala. Code § 8-17-240

⁵⁵ 188 So.2d 527 (Ala.1966)

⁵⁶ Alaska Stat. § 08.52.010 et seq.; Alaska Admin. Code tit. 8, § 62.020 et seq.

⁵⁷ Alaska Stat. § 27.21.940

⁵⁸ Alaska Stat. § 03.05.010

⁵⁹ Alaska Stat. § 11.61.240

⁶⁰ Alaska Stat. § 11.61.250

⁶¹ Ariz. Rev. Stat. § 27-323

⁶² Ariz. Rev. Stat. § 27-321

⁶³ Ark. Code Ann. § 20-27-1102(a)

⁶⁴ Ark. Code Ann. § 20-27-1103

⁶⁵ Cal. Health and Safety Code § 12101

act not stipulated in the permit; in no event shall a permit remain valid beyond one year from its date of issuance.⁶⁶ Permits are generally not to be issued before a one-week period elapses,⁶⁷ and a copy of each permit issued is forwarded to the State Bureau of Criminal Identification and Investigation in Sacramento.⁶⁸ State law does not mention ammonium nitrate. However, Assembly Bill 924, introduced on February 18, 2005, would require manufacturers and distributors of ammonium nitrate fertilizer to obtain a license from the Secretary of Food and Agriculture. Licensees would be required to maintain specific information about each sale of ammonium nitrate-based fertilizers.

Colorado

To manufacture, sell, purchase, store, transport, or use explosives, a permit from the division of Oil and Public Safety in the state Department of Labor and Employment is required.⁶⁹ Applicants must submit fingerprints to the Department, which conducts criminal history record checks.⁷⁰ No permit is required for the occasional purchase of explosives for normal agricultural purposes, if the buyer is personally known by the seller.⁷¹ No laws regulate the purchase of ammonium nitrate fertilizers.

Connecticut

A license from the Department of Public Safety is required to procure, transport, use, manufacture, keep, store, sell, or deal in explosives.⁷² Applicants must submit to a criminal background check. Connecticut's definition of explosives does not include manufactured articles containing explosives in such limited quantity, of such nature or in such packing that it is impossible to produce a simultaneous or a destructive explosion by fire, friction, concussion, percussion or detonator.⁷³ Fertilizers containing ammonium nitrate meet the exclusionary requirement.

Delaware

It is unlawful to purchase, receive or possess explosive materials without obtaining a license from the State Fire Marshal.⁷⁴ Criminal background checks for licenses are required. Fertilizers are specifically exempted from the state's definition of explosives.⁷⁵

Florida

The state's definition of explosives includes pure ammonium nitrate.⁷⁶ Each manufacturer, dealer, distributor, and user of explosives must obtain a license or permit from the state Fire Marshal.⁷⁷ Applicants must pass a competency exam.⁷⁸ All sellers and users of explosives must keep accurate records of the explosives sold or used.⁷⁹ No person may transport explosives into

⁶⁶ *Id.*

⁶⁷ Cal. Health and Safety Code § 12105.1

⁶⁸ Cal. Health and Safety Code § 12105.2

⁶⁹ Colo. Rev. Stat. Ann. § 9-7-106(1)

⁷⁰ Col. Rev. Stat. Ann. § 9-7-108(2)

⁷¹ Col. Rev. Stat. Ann. § 9-7-106(5)

⁷² Conn. Gen. Stat. Ann. § 29-349

⁷³ Conn. Gen. Stat. Ann. § 29-343

⁷⁴ Del. Code Ann. § 7104

⁷⁵ Del. Code Ann. § 7102

⁷⁶ Fla. Stat. Ann. § 790.001

⁷⁷ Fla. Stat. Ann. § 552.091

⁷⁸ Fla. Stat. Ann. § 552.093

⁷⁹ Fla. Stat. Ann. § 552.111 – 552.112

or within the state without a license or permit.⁸⁰ Licensed fertilizer distributors may not distribute to nonlicensees.⁸¹

Georgia

State law lists 227 materials that qualify as explosives, including ammonium nitrate explosive mixtures and ammonium nitrate-fuel oil (ANFO).⁸² Persons manufacturing, selling, transporting, using or storing explosives must obtain a license.⁸³ Fertilizer distributors are required to file a quarterly report of tonnage of fertilizer sold to nonlicensees.⁸⁴

Hawaii

It is unlawful to use, store, or deal in explosives without a certificate of fitness from the state Department of Labor and Industrial Relations. Certificates of fitness may be limited to specific explosives or the use of explosives for specific purposes.⁸⁵ Hawaii has no statutes, administrative code, or pending legislation that mention ammonium nitrate.

Idaho

Aside from laws limiting the sale of explosives to youth and prescribing the marking of explosives,⁸⁶ Idaho places no limitations on the purchase of explosives. Pure ammonium nitrate is included in the state's list of explosive substances.⁸⁷ Though Idaho has passed many laws concerning fertilizer, none mention or limit the sale of ammonium nitrate-based fertilizers.

Illinois

The state's list of explosives does not include ammonium nitrate.⁸⁸ State residents must apply for a license to sell, use, dispose of, and purchase explosives.⁸⁹ Applicants must submit fingerprints for background checks by the Department of the State Police and must submit to an oral and written examination by the Department of Natural Resources.

Indiana

The state's list of regulated explosive materials includes pure ammonium nitrate.⁹⁰ Residents must apply to the State Fire Marshal for licenses and continuing education is required for relicensure.⁹¹ Indiana does not regulate the purchase of fertilizer.

Iowa

The state's definition of explosives does not include ammonium nitrate. The state Fire Marshal is responsible for issuing commercial licenses for the use of explosives.⁹² Training, examination, and certification of blasters is required and blasters must submit a blasting plan.⁹³ Pending

⁸⁰ Fla. Stat. Ann. § 552.12

⁸¹ Fla. Stat. Ann. § 576.021

⁸² Ga. Code Ann. § 16-7-81

⁸³ Ga. Code Ann. § 25-2-4.1

⁸⁴ Ga. Code Ann. § 2-12-8

⁸⁵ Haw. Rev. Stat. § 396-9

⁸⁶ Idaho Code § 39-2101 et seq.

⁸⁷ Id. APA § 11.11.01.241

⁸⁸ 225 Ill. Comp. Stat. 210/1003

⁸⁹ 225 Ill. Comp. Stat. 210/2000

⁹⁰ Ind. Code § 35-47.5-3-1

⁹¹ Ind. Code § 35-47.5-4-4.5

⁹² Iowa Code § 101A.2

⁹³ Iowa Code § 207.6

legislation would require sellers to record personal information for every sale of ammonium nitrate-based fertilizers.

Kansas

The state fire marshal regulates the keeping, storage, use, sale, handling, transportation and other disposition of explosives.⁹⁴ Although all contractors operating in the state must obtain explosive storage site permits before moving, storing or using any explosives or blasting agents at any job site within the state, there are no restrictions on the sale or purchase of explosives.⁹⁵

Kentucky

Explosives are not regulated except for their manufacture and use for blasting in mines, which is regulated by the Department of Mines and Minerals.⁹⁶ The state has no laws on ammonium nitrate.

Louisiana

State law requires a license issued by the Department of Public Safety and Corrections to acquire, sell, possess, store, or engage in the use of explosives.⁹⁷ Manufacturer-distributors and dealers must keep accurate accounts of all sales of explosives.⁹⁸ Manufacturers and sellers of fertilizer must submit reports indicating the tonnage and kind of fertilizer sold prior to sales.⁹⁹

Maine

No one may possess, use, store or transport explosives without a permit.¹⁰⁰ The Commissioner of Public Safety issues permits to individuals who, among other requirements, must maintain liability insurance in an amount not less than \$500,000.¹⁰¹ A criminal background check for permits is required. The state's definition of explosives excludes ammonium nitrate.¹⁰²

Maryland

The state's definition of a "destructive device" includes petroleum-soaked ammonium nitrate, and "explosive material" includes ammonium nitrate.¹⁰³ The State Fire Prevention Commission regulates the storage, sale, and use of explosives.¹⁰⁴ A license is required to manufacture, sell or possess explosives.¹⁰⁵ Each manufacturer and dealer must keep records of the names and addresses of every buyer, the dates of purchases, and the amounts and descriptions of explosives sold.¹⁰⁶ The state legislature recently repealed legislation authorizing an Explosives Advisory Council composed of explosive experts and members of the public who advised, assisted and recommended explosives regulation to the Department of State Police and reviewed new developments in the explosives industry. The repeal takes effect October 1, 2005. The Maryland

⁹⁴ Kan. Stat. Ann., § 31-133(a)(1)

⁹⁵ Kan. Admin. Regs. 22-4-2(a)

⁹⁶ Ky. Rev. Stat. Ann. § 351.310

⁹⁷ La. Rev. Stat. § 1472.2.(6.1), § 1472.3.A.(1)

⁹⁸ La. Rev. Stat. § 1472.5.B

⁹⁹ La. Revised Stat. § 1313.C.(2)(a)

¹⁰⁰ Me. Rev. Stat. Ann. tit. 25, § 2471

¹⁰¹ Me. Rev. Stat. Ann. tit. 25, § 2473

¹⁰² Me. Rev. Stat. Ann. tit. 25, § 2471

¹⁰³ Md. Code, Criminal Law, § 4-501

¹⁰⁴ Md. Code, Public Safety, § 6-305

¹⁰⁵ Md. Code, Public Safety, § 11-105

¹⁰⁶ Md. Code, Public Safety, § 11-112

Port Administration may regulate the storage, handling and transportation of explosives in its jurisdiction.¹⁰⁷ The state does not limit the sale of fertilizer.

Massachusetts

No person may keep, store, mix, manufacture, use, handle, or sell explosive material without a license granted by the State Fire Marshal, which requires proof of at least \$1,000,000 in liability insurance.¹⁰⁸ A criminal background check for permits is required. The state's definition of explosives does not include ammonium nitrate.¹⁰⁹

Michigan

The state's definition of explosives does not include ammonium nitrate.¹¹⁰ Applications for explosives permits are handled by the Department of the State Police¹¹¹ and require a written statement of intention for the use of explosives. Mining explosives permits are issued by the Department of Environmental Quality and require a blasting plan.¹¹²

Minnesota

The Commissioner of Public Safety in the Office of the Fire Marshal distributes licenses and permits to individuals who handle, use, sell, store, or transport explosive devices.¹¹³ Issuing authorities may require a certificate from applicants proving knowledge of safety procedures, use, and handling of explosives. Prior to use, applicants are required to notify local officials.

Mississippi

Sellers of explosives must keep accurate records of all purchasers' names and addresses, the quantity of explosives sold and the purposes for which they were bought, and it is unlawful to sell explosives to a person the seller does not know.¹¹⁴ All sales of explosives must be reported to the county sheriff within 24 hours, and every person transporting explosives into the state must report to the sheriff at the county of entry and tell the sheriff his identity, destination and inventory.¹¹⁵

Missouri

The state does not regulate the manufacturing, sale, purchase, or transportation of explosives. However, owners and operators of facilities where one hundred pounds or more of explosives are stored shall file reports whenever explosive materials are stored in a particular facility for more than fifteen days and each time explosive materials are relocated to a new site for storage of more than fifteen days' duration.¹¹⁶ The law also prohibits the storage of more than one day's

¹⁰⁷ Md. Code, Transportation, § 6-206

¹⁰⁸ Mass. Regs. Code tit. 527, §13.04

¹⁰⁹ Mass. Regs. Code tit. 527, §13.00, 13.04

¹¹⁰ Mich. Comp. Laws § 29.42

¹¹¹ Mich. Comp. Laws § 29.43

¹¹² Mich. Comp. Laws § 324.63516

¹¹³ Minn. Stat. Ann. § 299F.73

¹¹⁴ Miss. Code Ann. § 45-13-101

¹¹⁵ Miss. Code Ann. § 45-13-103; Miss. Code Ann. § 45-13-109

¹¹⁶ Mo. Ann. Stat. § 292.617.1

supply of explosives by those engaged in mining.¹¹⁷ There are no limitations on the individual purchase of fertilizer.

Montana

Montana only regulates explosives used in construction blasting. No one may engage in the practice of construction blasting unless licensed or under the supervision of a person licensed as a construction blaster by the state Department of Labor and Industry.¹¹⁸ In order to obtain a license as a construction blaster, an applicant must complete a department-certified training program and have at least two years of experience with construction blasting.¹¹⁹ Montana's Administrative Code specifies storage requirements for anhydrous ammonia and nitrogen fertilizer solutions, including ammonium nitrate-based fertilizers, but does not limit sales of fertilizer.¹²⁰

Nebraska

Permits are issued by the Nebraska State Patrol for the purchase, storage and use of explosive materials only by business enterprises.¹²¹ Applicants must pass a qualifying examination and demonstrate adequate knowledge, training, and experience in the use of explosive materials.¹²² Applicants' fingerprints are submitted to the Nebraska State Patrol for a criminal history record check.¹²³ Permit holders must maintain an accurate inventory of all explosives in his or her possession and maintain records of transfers of explosives to other persons.¹²⁴ Permits are required for transportation of explosive materials into this state or within the boundaries of this state.¹²⁵

Nevada

Dealers of dynamite, nitroglycerine, gunpowder and other high explosives must keep a record of all sales, showing the purpose for which the explosives sold are to be used and to whom sold.¹²⁶ The state Fire Marshal is responsible for issuing certificates of registration for blasting, and applicants must pass a background check and a written or oral test.¹²⁷ Nevada has extensive laws prescribing the storage of explosives, particularly ammonium percholate.¹²⁸ The Nevada Department of Agriculture requires those who sell ammonium nitrate-based fertilizers to record the name, address and government-issued identification number of each purchaser along with information about every sale.¹²⁹

New Hampshire

It is unlawful to purchase, store, or transport, or attempt to purchase, store or transport any high explosive without first obtaining a license from the Director of State Police.¹³⁰ A criminal check

¹¹⁷ Mo. Ann. Stat. § 293.270

¹¹⁸ Mont. Code Ann. § 37-72-101 et seq.

¹¹⁹ Mont. Code Ann. § 37-72-302

¹²⁰ Mont. Admin R. 4.12.701 et seq.

¹²¹ Neb. Rev. Stat. § 28-1229(1)

¹²² Neb. Rev. Stat. § 28-1229(5)(d)

¹²³ Neb. Rev. Stat. § 28-1229(5)(e)

¹²⁴ Neb. Rev. Stat. § 28-1233(1)

¹²⁵ Neb. Rev. Stat. § 28-1235

¹²⁶ Nev. Rev. Stat. 476.010

¹²⁷ Nev. Admin. Code ch. 477, § 710

¹²⁸ Nev. Admin. Code ch. 618, § 5279

¹²⁹ Nevada Restricted Fertilizer Guidance (January 19, 2005). Available at <http://agri.nv.gov/fdealfaq.pdf>.

¹³⁰ N.H. Rev. Stat. Ann. § 158:9-a

for licenses is required. Ammonium nitrate is not considered an explosive unless it has been mixed or stored with any substance which, when mixed with ammonium nitrate, creates an explosive.¹³¹

New Jersey

Any person wishing to deliver, give away or otherwise dispose of any explosives, or manufacture, sell, store or transport explosive materials must obtain a permit from the state Department of Labor.¹³² A criminal check is required for a blaster's license/permit. The state's definition of explosives is restricted to materials "commonly used or intended for the purpose of producing an explosion."¹³³ Ammonium nitrate-based fertilizer, while not regulated as an explosive, is sometimes considered a "restricted commercial fertilizer." Restricted commercial fertilizers have been determined by the State Chemist, in consultation with the Domestic Security Preparedness Task Force, as having the potential to be used in a "destructive device."¹³⁴ All distributors and manufacturers of such fertilizers must record information on every buyer of potentially dangerous substances and may refuse sale to suspect customers.¹³⁵

New Mexico

New Mexico does not regulate the manufacturing, sale, or purchase of explosives. The state does, however, require that explosives be properly marked.¹³⁶ Sellers of commercial fertilizer must report sales to the state Department of Agriculture¹³⁷ which may issue "stop sale, use or removal" order when it finds the commercial fertilizer is being offered for sale in violation of the law.¹³⁸

New York

New York requires every person who purchases, owns, possesses, transports, uses, manufactures, sells, deals in, gives away, or disposes of explosives to obtain a license from the State Department of Labor.¹³⁹ Fingerprints and a criminal background check are required of applicants.¹⁴⁰ Ammonium nitrate is not included in the state's definition of explosives. The Port Authority of New York and New Jersey, however, includes ammonium nitrate in its list of dangerous substances regulated under Traffic Regulations.¹⁴¹

North Carolina

Sellers of explosives must be satisfied with the identity of the purchaser or the person receiving the explosives, and the purchaser or his agent must fill out a written application explaining how the explosives will be used. Sellers must retain a record of the quantity of explosives sold and delivered, the names of all purchasers, and the dates of all sales for 12 months.¹⁴² The state has no laws on ammonium nitrate.

¹³¹ N.H. Rev. Stat. Ann. § 158:30

¹³² N.J. Stat. Ann. § 21:1A-132

¹³³ N.J. Stat. Ann. § 21:1A-129

¹³⁴ N.J. Stat. Ann. § 9-15.3

¹³⁵ N.J. Stat. Ann. 4:9-15.43

¹³⁶ N.M. Stat. Ann. § 30-7-7

¹³⁷ N.M. Stat. Ann. § 76-11-11.

¹³⁸ N.M. Stat. Ann. § 76-11-16.

¹³⁹ 59 New York Jurisprudence, Second Edition § 11

¹⁴⁰ N.Y. Laws 2003, Ch 164, § 2

¹⁴¹ N.Y. § 6808, 6831 (McKinney)

¹⁴² N.C. Gen. Stat. § 14-284.1

North Dakota

The state Fire Marshal has jurisdiction over rules for storage, use, and sale of explosives.¹⁴³ Those who use explosives in mining must be trained and certified by the state.¹⁴⁴

Ohio

The state's definition of explosive devices includes sensitized ammonium nitrate.¹⁴⁵ Permits and licenses for the manufacture, use, and sale of explosives are under the jurisdiction of the sheriff of the county, safety director, or police chief of the municipality.¹⁴⁶ Individuals applying for surface mine blaster certificates must be able to read and write English, have at least one year of experience, and have knowledge of safety precautions.¹⁴⁷ Blasting in construction was banned¹⁴⁸ in 1989.¹⁴⁹

Oklahoma

State law regards mixtures of ammonium nitrate and fuel oil as a blasting agent.¹⁵⁰ The state requires any person who manufactures, stores, uses, or purchases explosives to obtain a permit from the Department of Mines.¹⁵¹ In addition, any person who manufactures, sells, transports for hire, or stores for resale explosives must obtain a permit from the State Fire Marshal.¹⁵² However, the State Fire Marshal shall waive the state permit requirement where a valid federal license or permit has been issued.¹⁵³ Any person who wishes to purchase, receive or obtain explosives must furnish to the seller a statement of intended use.¹⁵⁴ An administrative rule requires buyers of ammonium nitrate to show identification and sellers to keep records of all sales, and permits sellers to refuse to sell ammonium nitrate under suspicious circumstances.¹⁵⁵

Oregon

A person may not possess an explosive in Oregon without a valid certificate of possession issued by the state Fire Marshal, or a manufacturer's or dealer's license from the Bureau of Alcohol, Tobacco and Firearms.¹⁵⁶ Certificates are only issued by the state Fire Marshal after the completion of a criminal background check, which includes the submission of fingerprints to the FBI.¹⁵⁷ The state does not regulate purchases of fertilizers.

Pennsylvania

Pennsylvania requires permits for the sale, storage and most uses of explosives, but not by agricultural users.¹⁵⁸ The State Department of Environmental Protection does not conduct its

¹⁴³ N.D. Cent. Code 18-01-33

¹⁴⁴ N.D. Cent. Code 38-14.1-02

¹⁴⁵ Ohio Rev. Code Ann. § 2923.11

¹⁴⁶ Ohio Rev. Code Ann. § 2923.17

¹⁴⁷ Ohio Rev. Code Ann. § 1561.20

¹⁴⁸ Ohio Rev. Code Ann. § 715.60

¹⁴⁹ *Northeast Ohio Regional Sewer Dist. v. Brooklyn* 64 Ohio App.3d 57, 580 N.E.2d 796

¹⁵⁰ Okla. Admin. Code § 460:25-1-5.

¹⁵¹ Okla. Stat. Ann. tit. 63 § §123.2.A , 123.2A.A

¹⁵² Okla. Stat. Ann. tit. 63 § 124.3.A

¹⁵³ Okla. Stat. Ann. tit. 63 § 124.3.A

¹⁵⁴ Okla. Stat. Ann. tit. 63 § 124.3.C

¹⁵⁵ Okla. Admin. Code § 35:30-29-37.1

¹⁵⁶ Or. Rev. Stat. § 480.210

¹⁵⁷ Or. Rev. Stat. § 480.235

¹⁵⁸ Pa. Stat. Ann. tit. 73 § 159

own background checks of permit applicants but does reference ATF checks. Ammonium nitrate is not regulated as an explosive.

Rhode Island

Rhode Island requires permits for any person possessing or having explosives under his or her control.¹⁵⁹ The state Fire Marshal is responsible for issuing permits. The state has not codified a definition for the term “explosives,” and does not regulate ammonium nitrate.¹⁶⁰

South Carolina

All persons who acquire, sell, possess, store or engage in the use of explosives must obtain a license or permit from the state’s Fire Marshal.¹⁶¹ Explosives dealers must keep accurate records of all inventories and sales of explosives.¹⁶² Ammonium nitrate-based fertilizers are considered restricted fertilizers, and sellers must record personal information about every purchaser.¹⁶³

South Dakota

It is unlawful to sell explosives or dynamite unless the buyer is known by the seller or the buyer has been introduced to the seller by someone the seller knows.¹⁶⁴ The seller must keep records regarding sale, quantity, and use. The state Fire Marshal has jurisdiction.¹⁶⁵

Tennessee

The state Fire Marshal regulates explosives,¹⁶⁶ except those used for blasting, which are regulated by the Department of Commerce and Insurance.¹⁶⁷ Fertilizer distributors are required to keep records for three years.¹⁶⁸ The state has no laws on ammonium nitrate.

Texas

The Texas explosives law applies only to the four counties in the state with a population of one million or more.¹⁶⁹ The Commissioners Courts in those counties may authorize their county sheriffs to issue and enforce rules regulating the production, distribution, transport, transfer, use, and possession of an explosive,¹⁷⁰ but may not adopt a rule that authorizes the county fire marshal to regulate the transportation of explosives if the point of origin and the destination are outside the county.¹⁷¹ Rules proposed by the county fire marshal must include the requirement that a person obtain a permit from the county fire marshal before the person may produce, distribute, transport, use, or possess an explosive.¹⁷² Persons who produce or transfer explosives are required to keep records.¹⁷³

¹⁵⁹ R.I. Gen. Laws § 23-28.28-2

¹⁶⁰ R.I. Gen. Laws § 23-28.28-1

¹⁶¹ S.C. Code Ann. § 23-36-40

¹⁶² S.C. Code Ann. § 23-36-60

¹⁶³ S.C. Code Ann. § 46-25-210

¹⁶⁴ S.D. Codified Laws § 34-36-2

¹⁶⁵ S.D. Codified Laws § 34-36-3

¹⁶⁶ Tenn. Code Ann. § 68-102-113

¹⁶⁷ Tenn. Code Ann. § 68-105

¹⁶⁸ Tenn. Code Ann. § 43-11-106

¹⁶⁹ Tex. Local Government Code Ann. § 235.001.(a)

¹⁷⁰ 7 Tex. Jur. Pl. & Pr. Forms 2d § 114:2

¹⁷¹ Tex. Local Government Code Ann. § 235.003.(b).(1)

¹⁷² Tex. Local Government Code Ann. § 235.003.(c).(1)

¹⁷³ Tex. Local Government Code Ann. Code § 235.003.(c).(5)

Utah

Included in Utah's definition of an "explosive, chemical or incendiary device" are ammonium nitrate-fuel oil mixtures.¹⁷⁴ In 2002, Utah added to its criminal code a section on weapons of mass destruction which prescribes penalties for use but not restrictions on the purchase of explosives.¹⁷⁵ Only blasters are required to obtain certification prior to the use of explosives. The state Department of Natural Resources provides strict guidelines for the training, examination and certification of blasters.¹⁷⁶

Vermont

Vermont requires any person wishing to possess, purchase, store, use, transport, give, transfer or sell explosives to first receive a license from the Commissioner of Public Safety.¹⁷⁷ Vermont conducts criminal background checks before issuing licenses for explosives. Ammonium nitrate is not regulated as an explosive.¹⁷⁸

Virginia

The Board of Housing and Community Development, under the Statewide Fire Prevention Code, promulgates regulations for the manufacturing, handling, storage, sale and use of explosives.¹⁷⁹ The Board issues annual permits to persons and businesses dealing with explosives and conducts criminal background checks on applicants.¹⁸⁰ Any person selling explosives must keep records of the types and quantities of all explosives sold, the names and addresses of all purchasers, and the dates of all sales.¹⁸¹ No state laws mention ammonium nitrate.

Washington

The state Department of Labor and Industries has authority to issue licenses for users of explosives.¹⁸² Applicants must demonstrate that they are sufficiently experienced in the use of explosives.¹⁸³ Fingerprints and background checks are required of every applicant.¹⁸⁴ The state does not regulate the purchase of fertilizers.

West Virginia

Permits and licenses for explosive materials are issued by the state Fire Marshal.¹⁸⁵ The Office of Explosives and Blasting within the Division of Environmental Protection has jurisdiction over the use of explosives in mining¹⁸⁶ and is responsible for education, training, and certification of all mining blasters. Blasters are required to submit a written notice of explosive activities to local government and nearby owners and occupants. Ammonium nitrate is not included in the state's definition of explosive materials.

¹⁷⁴ Utah Code Ann. § 76-10-306

¹⁷⁵ Utah Code Ann. § 76-10-401

¹⁷⁶ Utah Admin. Code R645-105

¹⁷⁷ Vt. Stat. Ann. tit. 20 § 3072

¹⁷⁸ Vt. Stat. Ann. tit. 13 § 1603

¹⁷⁹ Va. Code Ann. § 27-97

¹⁸⁰ Va. Code Ann. § 27-97.2

¹⁸¹ Va. Code Ann. § 59.1-138

¹⁸² Wash. Rev. Code § 70.74.380

¹⁸³ Wash. Rev. Code § 70.74.135

¹⁸⁴ Wash. Rev. Code § 70.74.360

¹⁸⁵ W. Va. Code § 29-3-12

¹⁸⁶ W. Va. Code § 22-31-1

Wisconsin

The state's definition of explosives does not include ammonium nitrate. Applications for the use, storage, and purchase of explosives must be submitted to the Department of Commerce's Safety and Buildings Division, and permits must be presented to law enforcement or the fire department two days before use.¹⁸⁷ Users and possessors of explosives must also have a federal explosives license. All blasters, welders, and inspectors who use explosives must be certified by the Department of Commerce.¹⁸⁸

Wyoming

Wyoming does not regulate the sale, manufacturing, transportation, and use of explosives. However, the state imposes storage requirements.¹⁸⁹

Courses of Action

The sale of ammonium nitrate-based fertilizer is not monitored by the federal government or the vast majority of states because it is not included in the federal definition of "explosives." To lower the risk of domestic terrorist attacks using fertilizer-based explosive materials, the federal government may take one or a combination of three courses of action.

1. Ammonium Nitrate Security Act

Rep. Maurice Hinchey of New York and co-sponsors John Conyers, Jr. of Michigan and Edward Markey of Massachusetts have introduced H.R. 1389, the "Ammonium Nitrate Security Act," which would designate ammonium nitrate as an explosive under 18 U.S.C. § 841. The bill would make it unlawful for any person to import, manufacture, receive or deal in ammonium nitrate compound materials without a license. The Attorney General would be responsible for promulgating regulations regarding the storage of ammonium nitrate compounds. The bill was introduced on March 17, 2005 and has been referred to the Subcommittee on Crime, Terrorism, and Homeland Security of the Committee on the Judiciary.

Including ammonium nitrate in the list of federally defined explosives would help prevent terrorists from easily acquiring the material. Farmers, however, would then be required to submit applications to the Department of Justice and undergo background investigations, which would likely increase the administrative burden on the ATF and agricultural workers.

2. Implement Oklahoma and New Jersey legal controls at the federal level

The laws governing sales of ammonium nitrate-based fertilizers in Oklahoma and New Jersey are more stringent than existing federal requirements. In Oklahoma and New Jersey, anyone who sells ammonium nitrate-based fertilizer is required to record the date of sale, quantity purchased, driver's license number or other photo identification, name, address and phone number of every purchaser, and records must be kept. Retailers have the right to refuse to sell ammonium nitrate-based fertilizer out of season, in unusual quantities or under other suspect purchase patterns.¹⁹⁰

¹⁸⁷ Wis. Stat. § 167.10

¹⁸⁸ Wis. Stat. § 101.19

¹⁸⁹ Wyo. Stat. Ann. § 30-2-604(c)

¹⁹⁰ Okla. Reg. 35:30-29-37.1; Email from Larry Rudebusch, Oklahoma Department of Agriculture, to Yuta Maeda (June 7, 2005).

Implementation of these legal controls at the federal level would require fertilizer sellers to keep substantially better records than are currently required, without significantly increasing regulatory costs to the government. Though improved record-keeping alone might deter terrorists from purchasing explosive materials legally, the record-keeping requirement would be more effective in deterring terrorism if the ATF also monitored records and investigated suspicious transactions. However, monitoring would likely increase regulatory costs significantly.

3. Technology-Based Solutions

Specialty Fertilizer Products, a company based in Belton, Missouri, developed a polymer coating that may prevent granules in ammonium nitrate fertilizer from absorbing fuel oil. The company claims the coating prevents hydrocarbons from infiltrating ammonium nitrate, making it more difficult for ammonium nitrate-based fertilizers to be used in bombs. The coating dissolves in water and soil and reportedly does not affect ammonium nitrate's functionality as a fertilizer.¹⁹¹ Specialty Fertilizer Products has applied for U.S. and international patents for the technology.¹⁹² The potential cost of the technology is a drawback.

The European Union lowers the risk of terrorist attacks using ammonium nitrate-based explosives by regulating the formulation of fertilizer. EU rules require that ammonium nitrate fertilizers with more than 28 percent nitrogen be produced with large, dense granules to prevent them from absorbing diesel fuel. While reducing the quantity of nitrogen can help reduce the fertilizer's potency in bombs, limiting the amount of nitrogen may also undermine the fertilizer's agricultural value.

Conclusion

Federal and state legal controls provide a strong framework for preventing terrorists from acquiring military-style explosives, but do not adequately oversee purchases of ammonium nitrate-based fertilizer. The federal government does not regulate ammonium nitrate fertilizers and only four states require sellers to record customer information.

Including ammonium nitrate in the federal list of "explosives," adopting Oklahoma and New Jersey legal controls at the federal level, or promoting technology that reduces the explosiveness of nitrates would help close the regulatory loophole which at present allows terrorists to purchase explosive materials legally. The burden of ensuring that explosive materials stay out of the hands of terrorists would then fall on state and federal law enforcement.

Given their resourcefulness, terrorists would likely then turn to other explosive materials. In Europe, where military-style explosives are more readily available than ammonium nitrate-based fertilizers, terrorists have used military-style explosives. In Asia and the United States, where ammonium nitrate-based fertilizers are more easily obtained than military-style explosives, terrorists have used fertilizer-based explosives. Adaptive security measures, vigilant law

¹⁹¹ *Coating May Thwart Fertilizer Bombs*, Green Markets 28, 13 (March 29, 2004), available at <http://www.specialtyfertilizer.com>.

¹⁹² Anil Ananthaswamy, *Making Bomb-Building Harder for Terrorists*, New Scientist (March 20, 2004), available at 2004 WLNR 3360.

enforcement and quick-responding legislation will continue to be important in safeguarding the U.S. homeland.

Bibliography

Anil Ananthaswamy, *Making Bomb-Building Harder for Terrorists*, New Scientist (March 20, 2004), available at 2004 WLNR 3360.

BBC News, *High Explosives "Missing in Iraq"* (October 26, 2004), available at http://news.bbc.co.uk/1/hi/world/middle_east/3950493.stm

BBC News, *Lessons from Lockerbie* (December 21, 1998), available at http://news.bbc.co.uk/1/hi/special_report/1998/12/98/lockerbie/235632.stm.

BBC News, *Terror Police probe "Bomb Plot"* (March 31, 2004), available at <http://news.bbc.co.uk/go/pr/fr/-/1/hi/england/3584009.stm>.

CBS News, *Fertilizer Used in Terror Bombs* (April 14, 2004), available at <http://www.cbsnews.com/stories/2004/04/14/world/printable611898.shtml>.

Tony Clark for CNN, *The Worst Terrorist Attack on U.S. Soil: April 19, 1995* (December 30, 1995), available at <http://www.cnn.com/US/OKC/daily/9512/12-30/index.html>.

CNN, *Bombs Were Spanish-Made Explosives* (March 13, 2004), available at <http://www.cnn.com/2004/WORLD/europe/03/12/spain.blasts/index.html>

CNN, *C-4 Explosive Used in USS Cole Attack* (November 1, 2000), available at <http://archives.cnn.com/2000/US/11/01/cole.investigation/>.

CNN, *C-4 Quantity May Be Clue in USS Cole Bombing* (November 3, 2000), available at <http://archives.cnn.com/2000/US/11/03/c-4.cole/>.

CNN, *Flight Forced To Land; Explosives In Shoes Suspected* (December 23, 2001), available at <http://archives.cnn.com/2001/US/12/22/plane.diverted/index.html>.

CNN, *Suspected Madrid Bombing Ringleader Killed* (April 4, 2004), available at <http://edition.cnn.com/2004/WORLD/europe/04/04/spain.bombings/>.

CNN, *Traces of Ammonium Nitrate, Fuel Oil Found at Nairobi Bomb Site* (August 14, 1998), available at <http://www.cnn.com/WORLD/africa/9808/14/embassy.fbi.01/>.

Coating May Thwart Fertilizer Bombs, Green Markets Fertilizer Market Intelligence Weekly 28, 13 (March 29, 2004), available at <http://www.specialtyfertilizer.com/media.asp>.

Phil Hirshkorn for CNN, *New York Remembers 1993 WTC Victims* (February 26, 2003), available at <http://archives.cnn.com/2002/WORLD/asiapcf/southeast/10/29/asia.jihad.1/index.html>.

Spencer S. Hsu & Sari Horwitz, *Truck Bombs Remain Threat Despite Efforts*, Journal – Gazette (August 8, 2004), 2004 WLNR 15201499.

Institute of Makers of Explosives, State Explosives License/Permit and Fee Directory, available at <http://www.ime.org/site/statepermitform.asp>.

Lucas D. Martin. *Explosions and Explosives*. 31A AmJur 2nd 374 et seq. (2004).

Edwin P. Przybylowicz, Opening statement to National Research Council on report entitled *Black and Smokeless Powders: Technologies for Finding Bombs and the Bomb Maker*, October 8, 1998.

Maria Ressa for CNN, *Uncovering Southeast Asia's Jihad Network* (February 26, 2004), available at <http://archives.cnn.com/2002/WORLD/asiapcf/southeast/10/29/asia.jihad.1/index.html>.

Sydney Morning Herald, *Feud May Hinder Madrid Bombing Investigation* (March 19, 2004), available at <http://www.smh.com.au/articles/2004/03/18/1079199367607.html>.

Rodney Wallis, *Lockerbie: The Story and the Lessons* 43 (Praeger 2001).