

# Report for Congress

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## **Terrorism: The New Occupational Hazard**

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# Terrorism: The New Occupational Hazard

## Summary

Most of the direct victims of terrorism in the United States in recent years have been people at work. Employers, who have a legal responsibility to provide workplaces that are as free of “generally recognized hazards” as feasible, must consider their exposure to this emerging threat. This report describes how workplace safety programs are being reconsidered in this new light.

The World Trade Center site presented an immediate safety and health challenge for public agencies and on-site workers. OSHA has jurisdiction in most disaster situations but exercises forbearance while local emergency authorities are dealing with rescue and recovery. This period was unusually prolonged in the World Trade case, while workers and the general public were exposed to many toxic substances. Special enforcement and monitoring programs were adopted there incrementally. For the future, measures such as S. 1621 and H.R. 4687 would provide for more thorough study and response to health impacts from such events.

General employer responsibilities that are relevant to the terrorism risk include building and site management, workers compensation and certain aspects of personnel policy (such as those regarding violence). In general, proper attention to these routine matters – as modified for the new range of risks – will help assure that all that can reasonably be done in preparation will be done.

In certain high-risk industries, emergency planning is required by a number of laws. Most facilities that use large quantities of toxic or flammable materials must explicitly assess all potential accident modes, adapt processes to minimize them, and plan their responses to emergencies, including coordination with local emergency agencies.

The spread of anthrax through the mail has posed unique problems for many organizations. OSHA and the Centers for Disease Control have issued guidelines for dealing with this and other bioterror agents in workplaces. Legislation (P.L. 107-188) has been passed to improve overall preparedness for bioterrorism, including a grant program to improve planning and training to protect the health of bioterror response personnel.

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# Terrorism: The New Occupational Hazard

Most of the direct victims of terrorism in the United States in recent years have been people at work, whether those in the federal building in Oklahoma City, in the World Trade Center or the Pentagon, or victims of anthrax transmitted through the mails. In preventing future incidents or mitigating the consequences, people may find their most important roles as employers or employees. A survey shows that 69% of firms had already taken tangible steps to enhance security by the end of 2001.<sup>1</sup> The workplace is, in effect, a key line of defense for homeland security. This is recognized formally by participation of the Department of Labor in the Homeland Security Council established by recent Presidential directive.

Aside from general concern with the welfare of their workers and protection of their property, employers will have a number of practical motivations for reducing their vulnerabilities to terrorism. These consist of governmental mandates and legal liabilities, including workers compensation. Most responsibilities are currently generic, e.g., general fire protection, rather than protections specifically responsive to terrorist threats. This highlights the fact that most of the practical steps businesses can take will be found to be “dual use,” i.e., also yielding benefits in the normal civilian context. As one commentator has suggested, “if businesses are looking for a positive aspect of these unfathomable events, it is that they will finally start doing all the things that ensure the safety of their employees and the continuity of their business that they should have been doing all along.”<sup>2</sup>

This report describes workplace risks and employer responsibilities in a number of contexts. First, there are the immediate challenges of cleaning up disaster sites, particularly the World Trade Center. Then, we consider general standards applicable to the measures needed to respond to terrorist incidents, e.g., building evacuation. Finally, we describe the special risks experienced by certain industries and occupations, such as the postal service, chemical plants, transport of hazardous materials, and emergency response services.

## World Trade Center Site

Occupational hazards abound in rescue and recovery activities at disaster sites. These include immediate dangers associated with falls, burns, cuts and the operation of heavy equipment, as well as longer term health risks from asbestos and toxic

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<sup>1</sup>Safety and Security Issues Move to the Fore after September 11 Terror Attacks. *Daily Labor Report* (Bureau of National Affairs), January 15, 2002. p. C-1,C-2.

<sup>2</sup>Seglin, Jeffrey. Managing Danger Responsibly: How Much Do You Tell? *New York Times*, December 16, 2001. p. 4.

substances. The World Trade Center site (WTC) presents all of these and more, in a context of unprecedented scale, complexity and emotional ramifications.

## Jurisdiction

It is the policy of the Occupational Safety and Health Administration (OSHA) to defer to local authorities in the immediate response to catastrophic events. OSHA will try to play a constructive role of providing technical assistance to the rescue and recovery effort, while also collecting evidence of prior violations that may have caused the incident. Nevertheless, the agency reserves the right to enforce safety standards with regard to workers on site.<sup>3</sup>

Usually, the search and rescue phase will give way to stabilization and clean-up within a couple of weeks. In the WTC case, the end of the rescue and recovery phase was not declared for months. In the interim, OSHA inspectors were on site and advising the clean-up contractors of safety shortcomings, without issuing formal citations. An average of 43 violations were observed per day initially, decreasing gradually to 33 per day by late October. OSHA, labor unions and other groups made respirators, helmets and other equipment available and encouraged its use. The most common problems included absent or inadequate personal protective equipment, improper storage or use of gas cylinders (for cutting torches), and failure to mark off zones subject to falling objects. The most common injuries resulted from inhalation of smoke and dust, cuts and burns.<sup>4</sup> In the first two months there were reported 40 near-miss incidents that could have been fatal.

In view of these dangers, there has been some criticism that OSHA and other agencies did not act more vigorously at an early stage.<sup>5</sup> In any case, on November 20, 2001 a partnership agreement was reached among OSHA, the city government, contractors and unions. Safety hazards at Ground Zero were to be abated immediately; data would be shared on air contaminants and other health-related exposures; and union groups would provide training (with workers getting paid during training time). On January 25, 2002 OSHA launched an additional “local emphasis” enforcement program to oversee clean-up activities in a wider area surrounding the site proper.

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<sup>3</sup>“OSHA has no authority to direct rescue operations. . . . OSHA does have the authority to monitor and inspect the working conditions of covered employees engaged in rescue operations to . . . protect the lives of the rescuers.” OSHA Field Inspection Reference Manual, Chapter II, Section B.2.e.

<sup>4</sup>Lipton, Eric and Kirk Johnson. Safety Becomes Prime Concern at Ground Zero. *New York Times*, November 8, 2001. p. B-1, B-11.

<sup>5</sup>See, for example, Natural Resources Defense Council. *The Environmental Impacts of the World Trade Center Attacks*. February 2002. Available at [www.nrdc.org/cities/wtc/wtc.pdf]. Recommendations are also made in Jackson, Brian et al. *Protecting Emergency Responders – Lessons Learned from Terrorist Attacks*. Santa Monica CA: RAND, 2002. p. 89. Available via [http://www.rand.org/publications/CF/CF176].

## Long-term Health Hazards

A concern frequently expressed at the WTC, by nearby residents as well as workers, is the long-term health hazard of dust and gaseous emissions from the site. Unnatural odors were readily apparent, and many reported respiratory problems like coughing and runny eyes and noses. OSHA, the National Institute for Occupational Health and Safety (NIOSH) and health agencies continuously monitored the outside air and reported, generally, that the levels of asbestos, benzene, PCBs, etc. did not constitute a long-term risk to on-site workers.<sup>6</sup> At the same time, acute respiratory effects were evident among some workers and nearby residents.<sup>7</sup> Preliminary medical examination of firefighters indicated that one out of four had early signs of asthma.<sup>8</sup> Respiratory protection for on-site workers was clearly called for, although not universally implemented.

One of the most critical OSHA standards potentially applicable here is the one dealing with asbestos. In most building demolitions, hazardous materials like asbestos are supposed to be removed before the razing begins. The WTC situation obviously differs from a typical demolition, and many questions arise about how one would comply with the standard. Nevertheless, it appears that regulation 29 C.F.R. Section 1926.1101, the OSHA construction standard, does apply not only to the site itself, but also to surrounding areas in need of repair or just clean-up. Asbestos-containing insulation was used to coat the structural steel in the first 40 stories of the north tower (after which a mineral wool product was used.)<sup>9</sup> Tests of dust in and around the WTC site have generally – but not without exception – shown asbestos content below 1%. That would be the quantitative trigger for application of the most stringent requirements under the OSHA regulation, but the overall standard applies in any demolition job “where asbestos is present”. The standard establishes quantitative exposure limits<sup>10</sup> and a number of specific practices to be followed. These practices include wetting down the material, using vacuum cleaners with high-

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<sup>6</sup> Occupational Exposures to Air Contaminants at the World Trade Center Disaster Site. *Morbidity and Mortality Weekly Report* (U.S. C.D.C.), 31 May 2002. p. 453-456.

<sup>7</sup> For a discussion of offsite impacts and EPA’s response, see CRS Report RL31464. *Federal Disaster Policies after Terrorists Strike: Issues and Options for Congress*, coordinated by Keith Bea, p. 72-89.

<sup>8</sup> Firefighters at World Trade Center Showing Signs of Asthma, Study Finds. *Daily Labor Report*, December 11, 2001. p. A-1,A-2. The Centers for Disease Control has allocated approximately \$7 million per year for ongoing medical monitoring of the firefighters. Some experts advocate a much wider program of screening people who live or work in the area. Herzfeld, John. Medical Screening Sought for Workers at Risk from Trade Center Site Hazards. *Daily Labor Report*, February 22, 2002. p. A-7,A-8.

<sup>9</sup> Half of the original asbestos insulation was later replaced. Glanz, James and Andrew Revkin. Haunting Question: Did the Ban on Asbestos Lead to Loss of Life? *New York Times*, September 18, 2001. p. D2.

<sup>10</sup> Air in workers’ breathing zone is not to exceed 0.1 fibers per cubic centimeter averaged over each 8-hour work shift, with momentary “excursions” not to exceed 1 fiber/cc during any 30 minute period.

efficiency filters, enclosure and ventilation of work areas, provision of respirators, protective clothing and personal decontamination, training and medical surveillance.

A key component of proper work with asbestos involves the use of respirators. The OSHA standard requires their use in all Class I work and specifies the types to be used according to the potential airborne concentrations. In no case are simple dust-type masks adequate, since asbestos fibers are so very fine. The asbestos standard also references OSHA's general industry respirator standard (29 C.F.R. 1910.134), which requires medical evaluations (before the work begins), fit testing, training, and equipment maintenance. Respirators are also called for where first responders may encounter biological agents. (See section on anthrax, *infra*.)

The potential presence of other toxic materials may also implicate environmental laws and regulations. These are discussed below in the section on chemical plants.

## Legislative Response

In recognition of these hazards in disaster areas, a bill – S. 1621 (Clinton et al.) – has been considered and reported by the Senate Committee on Environment and Public Works (S.Rept. 107-114). It would authorize, but not require, the President (through the Federal Emergency Management Agency) to implement programs in disaster areas for “protection, assessment, monitoring, and study of the health and safety of community members, volunteers, and workers.” It authorizes a range of possible activities such as collecting and publicizing information, training workers and volunteers, and studying long-term health impacts.

Another measure – H.R. 4687 (Boehlert et al.) / S. 2496 (Clinton et al.) – would provide for prompt investigation of “building failures” for making recommendations to improve building safety standards and emergency response procedures. (H.R. 4687, as amended by the Science Committee, was passed by the House on July 12, 2002.)

## General Employer Responsibilities

Not only safety measures, but also general personnel policies, have come to be considered a basic part of business planning in an era of terrorism. Some preparations are legally binding, some are merely prudent, but in general all are thought to be of some value in preparing for “normal” emergencies. Corporate interest in these issues is evidenced, for example, by the emergence of a new executive position, the Chief Security Officer.<sup>11</sup>

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<sup>11</sup> Lohr, Steve. In New Era, Corporate Security Looks Beyond Guns and Badges. *New York Times*, 27 May 2002. p. C1,C3.

## Building Management

Many aspects of building design and management will be governed by local building codes, which in turn are commonly derived from private standard-writing organizations such as the National Fire Protection Association. OSHA has added further requirements related to fire safety (29 C.F.R. Part 1910, Subparts 155 to 165), exit routes (Subparts 35 to 38), and first aid (Subpart 151). Recently the Department of Health and Human Services issued advice on protecting building ventilation and other systems in an age of terrorist threats.<sup>12</sup> Many safety planning requirements may seem to be no more than common sense, but unfortunately they are often violated, sometimes with catastrophic results. A fire in 1991 in a North Carolina food processing plant left 25 dead and 54 injured because of inoperable exit doors. On the other end of the spectrum, some businesses are going well beyond legal requirements with such measures as installing shatterproof glass in windows or coordinating evacuation plans with neighboring buildings.<sup>13</sup>

Reviewing such regulations and guidelines will suggest many questions that need to be considered and may not be so obvious at first. For example, if portable fire extinguishers are installed, how shall they be used? Training will be required, but who should receive it? Perhaps only certain employees should be designated to use the extinguishers and receive the training. In which cases should employees attempt to fight a fire – and when should they simply escape? It may be decided that all firefighting be left to the professionals, in which case extinguishers will not be installed (except where required by local ordinance). As to rescue activities, OSHA can cite employers who direct employees to perform rescues without appropriate training and equipment. (29 C.F.R. 1903.14(f))

## Workers Compensation

Under state workers compensation laws (federal laws in the case of federal employees), employers are responsible for covering medical costs and a portion of lost earnings when injury to an employee arises “out of employment” and “in the course of employment.” Employers and insurers at the WTC are honoring claims connected with the September 11 attacks without contesting the applicability of these potentially restrictive terms to the incident, with workers compensation payments estimated to total \$3.5 to \$4 billion, or more than \$1 million per fatality.<sup>14</sup> Still, in such cases insurers could have tenable grounds to contest some of these claims. It could be argued that injury by way of terrorism was not a risk peculiarly related to the employment of the people in the buildings, and this could place the injuries outside the concept of arising “out of employment” as interpreted in some states. In other states, the doctrine of *positional risk* applies, under which there is liability

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<sup>12</sup> *Guidance for Protecting Building Environments*. NIOSH publication no. 2002-139, May 2002. [[www.cdc.gov/niosh/bldvent/2002-139.html](http://www.cdc.gov/niosh/bldvent/2002-139.html)]

<sup>13</sup>Warren, Susan. Tools to Protect . . . Buildings. *Wall Street Journal*, March 11, 2002. p. R6; and Brick, Michael. Disaster Planner has Lessons from 9/11 to Offer, and Boston Listens. *New York Times*, 10 July 2002. p. C8.

<sup>14</sup>Couillard, Lauren. Cost of Insurance May Rise to Compensate for Increased Risk from Terrorist Attacks. *Daily Labor Report*, January 18, 2002. p. A-7,A-8.



whenever a job requires the employee to be at the time and place where an accident occurs. More clearly, liability under workers compensation does extend to business trips undertaken by employees to places where the possibility of terrorism, kidnaping, or ordinary street crime is foreseeable.<sup>15</sup>

Mental problems stemming from incidents at work may also bring eligibility for compensation. Cases of post-traumatic stress disorder among those who escaped from the WTC, rescuers, or even those who merely witnessed the events may be accepted much more readily than mental claims in “normal” times.<sup>16</sup>

The attacks have prompted a reassessment by insurers, who had often not explicitly addressed the risk of terrorism previously. They are raising their premium rates, especially where large numbers of employees are present at one location, e.g., high rise office buildings. Under state laws, insurers are not allowed to categorically exclude losses caused by terrorism (although, as noted, in some states and situations, incidents might fall outside the bounds of general principles such as “arising out of employment”). But while employers and their insurers must bear the risk of terrorism, the insurers’ own back-up partners (“reinsurers”) are not as tightly regulated and have been excluding terrorism coverage. Thus some primary insurers are finding themselves exposed to a potentially serious risk.<sup>17</sup>

Families of police and firefighters are eligible for a special payment from the federal government if they are killed or totally disabled in the line of duty. The “USA Patriot Act” of 2001 (Section 613 of P.L. 107-56, H.R. 3162) increased this benefit from \$150 thousand to \$250 thousand. The program is administered by the Bureau of Justice Assistance in the Department of Justice.

A novel workers compensation issue that has arisen with the appearance of anthrax involves payment for testing and precautionary (prophylactic) treatment. Generally, workers compensation will pay for treatment for a work-related injury or disease if it is known to have happened, but in the case of bioterrorism this may not be known until testing is done. So, at least in the program covering federal workers, the situation is that workers compensation will cover the cost of testing and treatment retroactively if and only if the test is positive. If the test is negative, costs will be borne either by the employee, by his or her health insurer, or, *at its discretion*, by the employing agency.<sup>18</sup>

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<sup>15</sup>On travel, see Harris, Nicole. Tools to Protect Traveling Employees. *Wall Street Journal*, March 11, 2002. p. R8.

<sup>16</sup>Visner, Stephen. The September 11 Disaster: Exposure and Loss Reserving Implications for Insurers. *Ernst & Young LLP*, October 2001. p. 6.

<sup>17</sup>Oster, Christopher and Michael Schroeder. Workers’ Comp Insurance Now Harder to Get. *Wall Street Journal*, January 9, 2002. p. A3,A9.

<sup>18</sup>OWCP Guidance on Filing for Workplace Anthrax Exposure, [[www.dol.gov/dol/esa/public/OWCP\\_Policy\\_Anthrax.htm](http://www.dol.gov/dol/esa/public/OWCP_Policy_Anthrax.htm)]; and Additional Questions and Answers on Potential Exposure to Anthrax, [<http://www.opm.gov/oca/pay/HTML/ANQA2.htm>].

## Personnel Management Issues

**Violence.** Some of the measures that can be taken to protect against terrorism are similar to those to prevent “workplace violence,” a term that can refer to threats or actions coming from employees, employees’ acquaintances, clients, customers or the general public. For most businesses, there are no regulations requiring protection against violence, but many take the threat seriously and private consultants are active in the field. Common measures include background investigation of employees, controlled access to facilities and information, security guards, site surveillance, and detailed planning to respond to threats and incidents. In applying these to terrorism planning, probably the most important will be access control.<sup>19</sup> Depending on the type of operation and the results of a threat and vulnerability assessment, managers might choose to adopt one or more of the following: a limited number of entrances (perhaps only one), staffing of entrances by trained security personnel who perform bag searches, deliveries being accepted only at designated receiving places, and admittance of visitors by pre-arrangement on an access list and with escort by a host throughout their visit. However, security will have to be balanced against the need for access, especially where access is the very *raison d’être* of the facility, e.g., retail stores and many government offices.

**Discrimination and Privacy.** While employers may tighten their screening of new employees – trying, as sometimes is said, to “not hire your problems” – there are limitations on what can be done legally. Categorically not hiring people of particular religious or national origin groups, for example, could constitute unlawful discrimination. Doing various background checks on individuals may require explicit authorization from the applicant. Some factors, including criminal records, may not be considered in hiring decisions under some state laws. On the other hand, in certain critical occupations, such as hazmat transportation, criminal background checks are now required.<sup>20</sup> One might also question whether there is much predictive value in criminal records where terrorism is concerned, as opposed to traditional problems such as pilferage. Indeed, it appears that some firms could be overreacting, barring anyone from any position who may have committed minor offenses at any time.<sup>21</sup>

In a climate of fear engendered by terrorism, general suspicion may settle on certain ethnic groups. Employers should be aware that if harassment occurs on the job, they may bear legal responsibility. On November 19, 2001 the Equal Employment Opportunity Commission and the Departments of Justice and Labor issued a joint statement pledging to vigorously pursue cases of employment discrimination or harassment on the basis of national origin or religious affiliation, practice or manner of dress.

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<sup>19</sup> Dawson, Chip. The Role of the Employer in Domestic Security. *Occupational Hazards*, January 2002. p. 31-32.

<sup>20</sup> Section 1012 of the USA Patriot Act (P.L. 107-56) (implementation pending). Further legislation (S. 1750 (Hollings et al.)), to aid implementation of the program, was reported by the Senate Committee on Commerce and Transportation on 18 April 2002.

<sup>21</sup> Davis, Ann. Employers Dig Deep into Workers’ Pasts, Citing Terrorism Fears. *Wall Street Journal*, March 12, 2002. p. A1,A2.

Employee privacy also presents legal limitations, although employers can preserve broad rights to monitor activities and conduct searches if they clearly inform employees of their policy.<sup>22</sup>

## High Profile Industries and Activities

### Aviation

The airline industry has been a high priority for congressional attention since the terrorist attacks, with the most prominent safety-related bill being the Aviation and Transportation Security Act, P.L. 107-71 (H.R. 3150/S. 1447). There are CRS written products dealing specifically with aviation security.<sup>23</sup> We do not deal further with the issue here, except to note that control of unruly passengers – and the safety of flight attendants more generally – is a related issue that has been under consideration for many years, and is only now being broadly addressed. In accordance with the new law, the Department of Transportation (DOT) on January 18, 2002 issued guidance to airlines for training flight crews. The guidance, according to DOT, “represents a shift in strategy from passive to active resistance by crew members,” and the training will include live, situational exercises.<sup>24</sup>

### Chemical and Nuclear Hazards

There are many programs in place to prevent, mitigate and respond to the accidents that can occur when producing, processing, storing or shipping toxic or radioactive materials. These have primarily been predicated on unintentional scenarios, but industrial and utility facilities may well become a target of terrorists because of the potential for wide dispersion of toxic materials and/or disruption of vital infrastructure. Consequences could be disastrous. A review of risk management plans required by the Clean Air Act (see *infra*) showed that, for more than half of the reporting facilities, more than 1000 people live within the affected range of a worst case release.<sup>25</sup> The terrorist threat prompts renewed consideration of whether existing programs are basically sound and adequately financed, whether they are consistent and coordinated, whether they apply to a wide enough range of facilities, and whether they take into account the possibilities of malicious intent. The President addresses such issues in the “critical infrastructures” section of his

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<sup>22</sup>Orey, Michael. Disaster Raises New Legal Issues in the Workplace. *Wall Street Journal*, November, 20, 2001. p. B10.

<sup>23</sup>See CRS Report RL 31150, *Selected Aviation Security Legislation in the Aftermath of the September 11<sup>th</sup> Attack*, by Robert S. Kirk.

<sup>24</sup>Johnson, Fawn and Heather Rothman. Training for Screeners, Flight Crews Includes Conflict Resolution, Live Situational Practice. *Daily Labor Report*, January 22, 2002. p. A-7,A-8.

<sup>25</sup>U.S. Department of Justice. *Assessment of the Increased Risk of Terrorist or Other Criminal Activity Associated with Posting Off-site Consequence Analysis Information*. April 18, 2000. Available at: [<http://www.usdoj.gov:80/criminal/april18final.pdf>].

anti-terrorism “National Strategy”,<sup>26</sup> where key priorities include collecting much more information about vulnerabilities and coordinating the efforts of public and private sectors.

**Corporate Responsibilities and Activities.** Among the major programs promoting preparedness for industrial-related emergencies are:

- OSHA’s Process Safety Management Standard (29 CFR 1910.119);
- Risk Management Plans required under Section 112(r) of the Clean Air Act (40 CFR, Part 68);
- OSHA’s standard on Hazardous Waste Operations and Emergency Response (HAZWOPER) (29 CFR 1910.120);
- The National Contingency Plan under the Superfund Act (40 CFR, Part 300);
- State and local activities authorized by the Emergency Planning and Community Right-to-Know Act (42 U.S.C. 11001-11050); and
- Diverse programs administered by the Federal Emergency Management Agency.<sup>27</sup>

Covered industrial facilities are required to develop plans including elements such as: hazard assessment, mitigation strategies, maintenance and testing of equipment, training and exercises, alarms and communication systems, and command structures (including coordination with public authorities). Generally speaking, the first three of the above regulations are directed at operators of industrial facilities handling significant quantities of materials that are toxic, explosive, flammable, corrosive or otherwise hazardous to human populations or the environment. The latter three are designed to encourage planning and coordination with public authorities in localities that may be affected. There are public-private overlaps in all of these, however. One of the challenges presented by industrial disasters is that they call for planning and response by so many parties and agencies. An interagency group, led by the Environmental Protection Agency (EPA), has tried to simplify the process for plant operators by issuing a model plan that can be used to comply with many of the laws at once.<sup>28</sup> More broadly, the President’s National Strategy document indicates an intention to consolidate the various government disaster response plans into a unified “Federal Incident Management Plan.”

The private sector has also made efforts to tighten security on its own initiative. For example, the chemical industry trade associations have issued guidelines for site security.<sup>29</sup> Points covered include: assessment of threats and vulnerabilities, hiring and termination practices, perimeter protection, testing and maintenance, backup systems, information security, and collaboration with law enforcement and other

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<sup>26</sup> *National Strategy for Homeland Security*. July 2002. Available at: [[http://www.whitehouse.gov/homeland/book/nat\\_strat\\_hls.pdf](http://www.whitehouse.gov/homeland/book/nat_strat_hls.pdf)] .

<sup>27</sup>See CRS Report RL31285, *FEMA’s Mission: Policy Directives for the Federal Emergency Management Agency*, by Keith Bea. Updated 13 March 2002. 21 p.

<sup>28</sup>Interagency Guidance on the National Response Team’s Integrated Contingency Plan. *Federal Register*, v. 61. p. 28642. June 5, 1996. This and related material available on the website of the National Response Team, [<http://www.nrt.org>].

<sup>29</sup>See the website of the American Chemistry Council, [<http://www.americanchemistry.com>].

community agencies.<sup>30</sup> While the member companies of these associations are committed to using the guidelines, they are not legally obligated to do so. And while the members include the largest firms and account for most of the industry's facilities and capacity, there are numerous facilities of substantial size at other firms that do not participate.

Concern about remaining vulnerabilities prompted the Congress in 1999 (P.L. 106-40) to call for a special study by the Department of Justice of possible terrorist dangers.<sup>31</sup> Since the September 2001 terrorist attacks, S. 1602 (Corzine et al.) has been introduced to require plant operators to consider explicitly the risks of terrorist or criminal action (including theft of hazardous materials), and modify their operations so as to reduce the probability and potential consequences of releases. The unique dangers associated with certain other industries led to much more rigorous and specialized regulatory regimes for them many years ago, most notably those for nuclear energy and hazardous materials (hazmat) transport. These are explained in other CRS reports.<sup>32</sup>

**Emergency Management Systems.** Starting around 1950, federal disaster planning went on two tracks: for natural disasters and for possible nuclear attack (“civil defense”). Over time, concern about nuclear war decreased while a perception grew that there was significant overlap in the requirements for these two types of preparedness. In practice, resources originally developed for civil defense were redirected toward natural disasters.<sup>33</sup> The priority pendulum may now have swung back toward a military orientation but, in any case, the “dual use” concept appears still to be valid.

There is at least one issue in industrial disaster preparedness – public disclosure of information – that highlights a significant difference between civilian and military issues. The risk management plans under the Clean Air Act include lists of toxic chemicals and analyses of “worst case scenarios” of possible releases into surrounding communities. Since at least 1993, when the regulations were under consideration, the concern has been raised that public dissemination of such information could enable would-be terrorists to plan the most damaging possible attacks.<sup>34</sup> Amendatory legislation (P.L. 106-40) was passed in 1999 to put limits on

<sup>30</sup>Law enforcement collaboration may include registering with the ANSIR system (Awareness of National Security Issues and Response), whereby the FBI notifies corporate security directors of possible threats, including industrial espionage. See [<http://www.fbi.gov/hq/nsd/ansir/ansir.htm>].

<sup>31</sup> Democrats Want Emergency Funds Used for DOJ Report on Threat to Chemical Plants. *Occupational Safety and Health Reporter*, October 4, 2001. p. 901. An interim report was distributed within the government on a classified basis in May 2002.

<sup>32</sup>See CRS Issue Brief IB88090, *Nuclear Energy Policy*, by Mark Holt and Carl Behrens; and CRS Report RS21050, *Hazardous Materials Transportation: Vulnerability to Terrorists*, by Paul Rothberg.

<sup>33</sup>See Emergency Preparedness for Homeland Security, by Keith Bea. In CRS Briefing Book on Terrorism, [<http://www.congress.gov/brbk/html/ebter162.html>].

<sup>34</sup>CRS Report RL30228, *Accident Prevention Under the Clean Air Act Section 112(r)*, by (continued...)

distribution of information such as the “offsite consequence analyses.” Then, after the terrorist attacks of September 2001, the EPA and the Nuclear Regulatory Commission removed further information from their websites about companies’ emergency plans. S. 2579 (Bond) would place further restrictions on dissemination of such information.

There is a difficult balancing here, as disclosure of information could, on the one hand, increase the risks of terrorist actions while, on the other, lead to reduction in the risks of accidental releases (or at least improve the public’s ability to plan for emergencies in their communities). Another problematic aspect of information flow is that owners of critical infrastructure may be reluctant to disclose possible vulnerabilities to the government from concern over legal liability or investor reaction. S. 1456 (Bennett, Kyl et al.) would provide a greater degree of confidentiality for critical information voluntarily shared with the government.

## **Anthrax and Mail Handling<sup>35</sup>**

**Mail Operations in General.** OSHA and the Centers for Disease Control (CDC) have issued guidance for dealing with potential anthrax and other bioterror agents in workplaces. To date, the experience has been that mail handling areas, whether public or private, have presented the greatest risk. With regard to anthrax, OSHA categorizes workplaces into three levels of risk. The vast majority of workplaces are in the “green zone,” i.e., where contamination is unlikely. The recommendations consist mainly of general hygienic-type precautions, actions that will minimize skin contact with the mail and are least likely to spread any contents in the air. Nitrile or vinyl gloves are optional; respirators are not recommended in the green zone.

In the “yellow zone” – which includes facilities handling bulk mail and/or mail coming from contaminated places – *engineering controls* are the preferred strategy, although these may take considerable time to implement. These are aimed essentially at exhaust ventilation of air from around mail handling machinery and thorough filtering of circulating air. After engineering controls, prudent work practices are called for, such as using wet cleaning methods and properly filtered vacuums. Finally, impermeable gloves are called for. Properly chosen and fitted respirators should be used by those working around machinery that could generate aerosolized particles, e.g., automatic sorters.<sup>36</sup>

Finally, the “red zone” applies to facilities where contamination is confirmed or strongly suspected. Only qualified emergency response personnel should be involved, with the operative requirements being those of OSHA’s HAZWOPER

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<sup>34</sup>(...continued)

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<sup>35</sup>For background on anthrax in general, see Anthrax: Frequently Asked Questions and Statistics, by Judith A. Johnson, CRS Briefing Book on Terrorism, [<http://www.congress.gov/brbk/html/ebter181.html>].

<sup>36</sup>CDC recommends “yellow zone” procedures for all mail handling facilities, whereas OSHA’s guidance would not apply them to places such as small business mail rooms.

standard. Depending on the situation, this may include the highest degree of respiratory and skin protection.

**U.S. Postal Service.** The Postal Service (USPS) has taken a number of steps to ensure the safety of its workers as well as the general public. These include: testing of employees who may have been exposed, closure and cleaning of work areas found to be contaminated, irradiation of mail, and provision of gloves and masks. In addition, a task force of managers, labor and industry associations was established to monitor developments and recommend solutions. While most observers consider USPS response much improved since the confusing first days of the crisis in October 2001, there are a number of unresolved issues. For example, differences have arisen between the USPS and some of its unions (and among the different union groups) over whether entire buildings must be shut down when contamination is found, or just the immediate work area. Some also question the safety of Cipro and other antibiotics.<sup>37</sup>

More broadly, it remains to be seen how much of the financial cost of responding to this threat can be borne by the Postal Service. The Administration allocated \$175 million in an emergency grant, but much more will be needed for full implementation of steps such as irradiation. Moreover, the USPS financial condition has deteriorated due to a decline in mail volume.<sup>38</sup> It is not clear whether private sector express delivery companies are gaining a competitive advantage from the situation, or whether the USPS should adopt any of their procedures in response. While there are no absolutes, some consider the private company traffic less likely to contain dangerous agents because senders are identified and all packages are tracked. Moreover, most of their shipments are sent business-to-business.<sup>39</sup>

**Emergency Responders.** As noted, areas where biological agents are suspected are considered a “red zone,” calling for a high level of respiratory protection. Use of self-contained breathing apparatus (SCBA) is recommended by groups such as the National Fire Protection Association in situations where the nature of a hazard has not been established. In addition to the usual standards pertaining to SCBAs, the National Institute for Occupational Safety and Health (NIOSH) has begun a voluntary certification program whereby specific models of equipment will be labeled as suitable for use against biological, chemical and radiological agents.<sup>40</sup>

The Department of Labor has initiated a partnership with the Laborers International Union to develop a biohazard clean-up curriculum. It will be used first

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<sup>37</sup>LaBrecque, Louis. Union Leader says USPS Must do More to Communicate with Workers at Local Level. *Daily Labor Report*, November 1, 2001. p. A-1; Davidson, Dan. Union Contests Anthrax Policy. *Federal Times*, December 3, 2001. p. 8.

<sup>38</sup>For further discussion of the managerial and economic repercussions, see Anthrax in the Mail, by Nye Stevens and Frank Gottron. CRS Electronic Briefing Book on Terrorism, [<http://www.congress.gov/brbk/html/ebter161.html>].

<sup>39</sup>Schlangenstein, Mary. Analysts Don't Expect Anthrax Scare to Hurt FedEx, UPS. *Pittsburgh Post-Gazette* (from Bloomberg News), October 16, 2001. p. E-1.

<sup>40</sup>[<http://www.cdc.gov/niosh/npptl/scbasite.html>].

to upgrade the skills of workers already certified for hazardous waste operations, and later distributed to organizations such as OSHA training institutes.

Finally, scientific uncertainties remain as to the best prophylactic regimen for workers with inhalation exposure to anthrax. It is believed that the disease is unlikely to develop more than 60 days after exposure, hence the recommendation for 60 days of antibiotic treatment. However, there is some evidence of live spores in lungs as much as 100 days after exposure. Therefore, the Department of Health and Human Services advises that people may wish to consider 40 more days of antibiotic treatment. In addition, the Department is making available vaccine on an “investigational” basis as a post-exposure treatment.<sup>41</sup>

Bioterrorism legislation passed in the 107<sup>th</sup> Congress – P.L. 107-188 (H.R. 3448 (Tauzin et al.)/S. 1765 (Frist et al.)) – aims at a comprehensive enhancement of national preparedness.<sup>42</sup> Among other measures, Section 153 directs NIOSH to expand its research on the safety of “workers who are at risk for biological threats or attacks in the workplace.” More specifically on emergency responders, Section 131(a) establishes a state block grant program which, among other things, funds training initiatives to improve detection and response to biological threats, including “training and planning to protect the health and safety of personnel . . . involved in responding to a biological attack.” Meanwhile, the President’s budget proposal for FY2003 would expand by ten-fold, to \$3.5 billion, federal support to states and localities for homeland security capabilities of first responders. The intention is to use this additional planning, equipment, training and exercises, to improve their general preparedness for “everyday emergencies” as well as terrorist threats of many types

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<sup>41</sup>For further medical information on bioterrorist threats and government response, see [<http://www.bt.cdc.gov>].

<sup>42</sup>See generally, CRS Report RL31263, *Bioterrorism: Legislation to Improve Public Health Preparedness and Response Capacity*, by C. Stephen Redhead, et al.