Center for American Progress

Critical Infrastructure Security Series

New Strategies to Protect America: Putting Rail Security on the Right Track

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Progressive Ideas for a Strong, Just, and Free America

CRITICAL INFRASTRUCTURE SECURITY SERIES

New Strategies to Protect America: Putting Rail Security on the Right Track

EXECUTIVE SUMMARY

The current state of rail security says a great deal about the current state of homeland security. Almost four years after September 11, homeland security is losing its sense of urgency. The Bush administration has not been willing to force the private sector to overcome commercial, cultural and economic barriers to fundamental change. The federal government has not worked effectively with states and cities, nor committed the level of planning and resource necessary to this critical dimension of our national security.

September 11 transformed how the federal government conducted airline security. The same cannot be said for March 11, 2004 and the string of train bombings that occurred in Madrid. There has been no wake-up call for rail security. Except for marginal improvements in physical security, there have been no major operational changes in response to the on-going risk of terrorist attacks against major cities and our national transportation infrastructure.

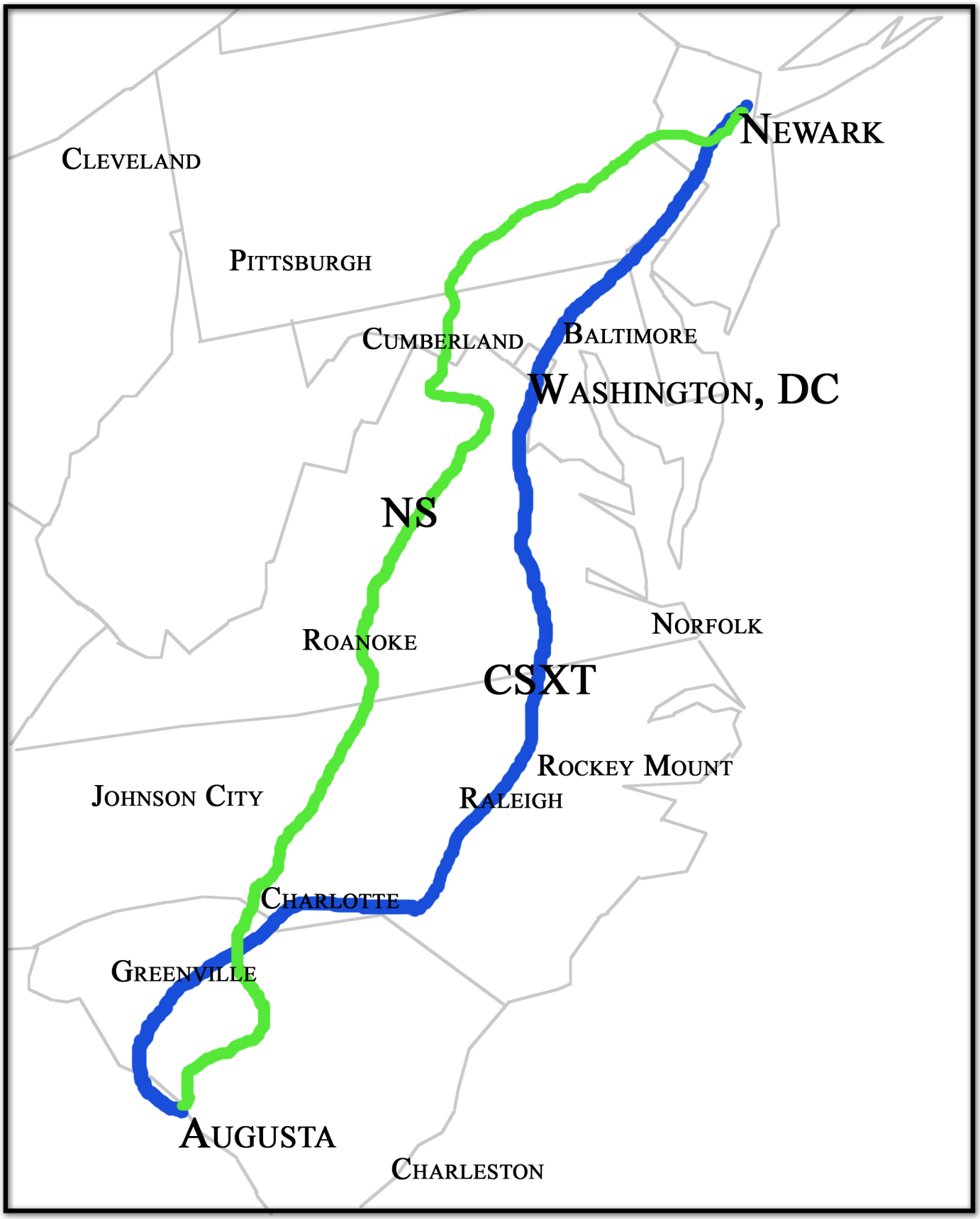
Where there is a need for action, the Bush administration is actually trying to prohibit proactive steps that will make our major cities and critical infrastructure less vulnerable to catastrophic terrorism. Instead of aggressively confronting this challenge, the private sector and federal government have spent the past two months defending business as usual in United States District Court. Despite the opposition of the Bush administration and the railroad and chemical industries, on April 18, 2005, Judge Emmet G. Sullivan allowed the District of Columbia to proceed with a ban on rail and truck transport of specific ultrahazardous material through a specified exclusion zone in the heart of the city "*until* the federal government has more thoroughly addressed the threat of terrorist attack on trains and has put sufficient safeguards in place."[1] In other words, while the federal government is best positioned to develop a "consistent and comprehensive federal policy addressing the risks of terrorism on our interstate rail system," it has failed to do it. [2]

Rail security is off track for a number of reasons. Relative to other aspects of our nation's transportation network, not enough has been done. No national planning has been accomplished regarding how to make rail operations, and by extension our major urban centers, more secure. Security adjustments made by the rail and chemical industries have been voluntary and limited because of entrenched commercial interests. Both the federal government and rail industry have acted with excessive secrecy that precludes necessary involvement by local authorities.

In the second of a series of papers on securing our critical infrastructure, the Center for American Progress outlines five steps that will eliminate or reduce a known risk to our major urban and economic centers and create a strategic framework for action. First and foremost, the federal government should approve the District of Columbia's rail and truck hazardous material or "hazmat" exclusion zone rather than continue to fight it. Second, it should undertake a national review and identify other major cities where similar re-routing options exist. Third, it should encourage localities to enact a broader set of physical security initiatives, particularly regarding railway sidings and private track hazardous material storage. Fourth, the country needs a genuine homeland security partnership, not a rivalry, one based on better communication, coordination and action. Finally, the federal government needs a comprehensive hazardous material strategy that looks at the supply and demand for hazardous materials and encourages changes in manufacturing and operating processes that should reduce the volume of toxic, explosive and lethal substances on the nation's railways.

North-South Routing Options

for Washington, DC



Background

The first rule of national security is to understand your potential adversaries. In this so-called war against terror, the on-going threat to the United States remains global jihadist networks such as al Qaeda. Al Qaeda demonstrated its modus operandi on September 11 when it turned an essential private sector resource, the commercial airliner, into a weapon and attacked symbols of our political, military and economic power. The attacks were not random. They were carefully planned and ruthlessly executed in order to inflict as much loss of civilian life and economic damage as possible.

While we are better prepared in many respects to confront this continued threat, today our major urban and commercial centers, critical infrastructure, people and economy remain unacceptably vulnerable to attack. Even though President Bush put the country on war-footing on September 11, here at home, not enough has changed. There is no longer a sense of urgency. In too many respects, we continue business as usual. The nation's freight railroads are a prime example.

The current state of rail security says a great deal about the current state of homeland security; the evident unwillingness of the federal government to work effectively and communicate responsibly with states and cities; its reluctance to overcome the private sector's commercial, cultural and economic limitations; and the lack of priority and inadequate level of resource committed to homeland security and rail security. Instead of real action, the Bush administration is actually trying to prohibit cities from taking proactive steps that will make our urban areas and many of our people less vulnerable to catastrophic terrorism. Instead of a united front focused on terrorism, there has been a divisive battle in United States District Court.

Despite the opposition of the Bush administration and the railroad and chemical industries, on April 18, 2005, Judge Emmet G. Sullivan allowed the District of Columbia to proceed with a ban on rail and truck transport of specific ultrahazardous material through a specified exclusion zone in the heart of the city "*until* the

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> *United States District Court for the District of Columbia*
> *CSX Transportation, Inc. v. Anthony A. Williams, et al.*
> *April 18, 2005*

federal government has more thoroughly addressed the threat of terrorist attack on trains and has put sufficient safeguards in place." While acknowledging that "each level of government has a role to play," Judge Sullivan made clear that the federal government "has the ultimate authority and responsibility to provide a safe, secure and efficient rail transportation system in the United States and to formulate an effective and coordinated response to the threat of terrorism." He provided conditional approval for the District hazardous material exclusion zone "so long as there is a gap in federal coverage."[3]

Unlike September 11, March 11, 2004 did not serve as a wake-up call for the federal government or the railroad industry. One year after this international tragedy, where ten simultaneous explosions killed 192 people, we have seen marginal improvements in rail security, but few major operational changes. The resistance to change is profound, influenced significantly by the economics of the rail industry; how it is regulated by the federal government; and the history of its relationship with local authorities. And yet the threat is compelling. Federal officials say they have intelligence indicating that terrorists are focused on ultrahazardous cargo carried in accessible and slow-moving rail cars that continue to travel through most major metropolitan areas that the Department of Homeland Security has designated as high threat target cities.[4]

The Madrid attack, and even the recent contemplated suicide turned commuter rail disaster at a crossing in California, demonstrate how open, accessible and vulnerable our rail system is. Physical security improvements can only accomplish so much. A greater emphasis must be placed on eliminating or significantly reducing known risks. Commuter rail travel is a serious and difficult issue, but is not directly addressed in this report. This paper concentrates on ultrahazardous freight rail cargo and the re-routing controversy it has generated in the District of Columbia.

In many respects, chemical shippers and carriers are "pre-positioning" what the federal regulators call "potential weapons of mass destruction" in nearly all our most important cities on a daily basis.[5] They are rolling on tracks that traverse through downtown areas and are dispersed in rail yards and sidings that have only minimal physical security. They are inviting targets for terrorist groups like al Qaeda determined to inflict costly and high profile damage upon the United States. The economic implications of a successful terrorist attack involving a toxic or explosive cargo would start in the tens of billions of dollars.[6]

The challenge is how to change the status quo in ways that best serves "the public interest" – a phrase loaded with economic and political implications.[7] We must improve the overall state of rail security while preserving a viable national rail system that is vital to our national economy; protect our major urban

centers and most important critical infrastructure by eliminating or reducing known terrorism risk; and build a genuine homeland security partnership with all stakeholders – federal, state and local governments, the private sector and the American public – based on transparency, trust, leadership and action.

Rail security is off track today for a number of reasons:

- A lack of priority, particularly relative to other transportation sectors;
- A failure of the federal government to effectively plan and act;
- Cultural and commercial resistance within the chemical and rail industries; and
- Excessive secrecy that precludes the necessary involvement of local authorities.

Each of these problems is visible in the on-going legal dispute between the railroad industry, joined by government, and the District of Columbia. It is a local case study in what needs to be done but on a national basis, and why homeland security is not as effective as it needs to be.

Lack of Priority

Rail security has simply not been a high priority for the Bush administration since September 11. To a large extent, we are fighting the last battle rather than anticipating the next one. A look at the budget, structure and political struggles of the Transportation Security Administration (TSA) tells part of the story.

As its name implies, the TSA's mission is to protect "the Nation's transportation systems to ensure freedom of movement for people and commerce."[8] The TSA was established by the Aviation and Transportation Security Act (ATSA) in November 2001 within the Department of Transportation (US DOT). It later became part of the newly formed Department of Homeland Security. According to the ATSA, core TSA functions include the need to "assess threats to transportation" and "develop policies, strategies and plans for dealing with threats to transportation security." At the same time, the law makes clear that TSA's establishment "shall not supersede the authority of any other department or agency of the Federal Government under law with respect to transportation or transportation-related matters."[9]

TSA is in many respects a remarkable organization, rapidly standing up a new organization, assuming responsibility for airline security, building a federal air screening force and taking a number of steps to close gaps that terrorists

exploited on September 11. However, the understandable organizational focus to prevent a repeat of 9/11 has overwhelmed other dimensions of transportation security.

Ninety percent of TSA's budget is devoted to aviation security, $4.6 billion this year and a proposed $5 billion in FY2006. That leaves only $32 million for all other modes, including truck, bus, port, pipeline, transit and rail security. The budget supports a federal air screening workforce of 45,000, but only 100 surface transportation inspectors, most of whom will work on rail security. Rail security this year is supplemented by $150 million in rail and transit security grants added by the Congress. However, rather than designate grants for specific needs, the President proposed a total of $600 million for all homeland security grants in his budget proposal. This means that rail security will be competing with other critical infrastructure protection needs, including port security, virtually assuring that the program will continue to be under-funded.[10]

To date, TSA's rail security efforts have concentrated on physical and not operational security improvements. TSA is also spending much of its energy trying to stay in business. Conservatives in Congress, concerned about "big government" and uncomfortable with the size of the federal screening force, would like to reduce TSA's profile. As a result, TSA is not in an ideal position to push for aggressive action that might generate additional political opponents.

Hazmat safety issues fall within the jurisdiction of the US DOT's Federal Railroad Administration (FRA). Economic regulation is the province of the independent Surface Transportation Board (STB), linked administratively to US DOT. Since 9/11, FRA and DHS share the jurisdiction for hazmat freight rail security matters. Even though Congress expanded existing regulatory authorities to include security, which can involve very different requirements than safety, the federal government's actions and mindset have changed little. In fact, in his April 18 ruling, District Court Judge Sullivan criticized the government for legal reasoning that "conflates the risk of rail accidents with the risk of terrorism" and failing to take into account "both the probability of an attack and its likely consequences."[11]

Unfortunately, to date, this bureaucratic arrangement has favored policy inertia. The Department of Transportation lists as a specific security outcome in its 2003-2008 strategic plan the "rapid recovery of transportation from intentional harm." If something goes wrong, we'll fix it, but after the disaster takes place. This traditional safety emphasis on post-event analysis of causal factors and on container (railcar) integrity mitigate against a more proactive, risk-avoidance security approach.[12]

Failure to Act

Transportation systems and chemicals are among 17 economic sectors identified by the Department of Homeland Security's Interim National Infrastructure Protection Plan, which is more of a process on how to proceed than a determination of what to protect; how to do it; and who will do it.[13] DHS has yet to complete a long-awaited comprehensive national threat and vulnerability analysis to prioritize critical infrastructure security.

Richard A. Falkenrath, former deputy homeland security adviser in the Bush administration, called chemical plant and hazmat transportation security risks his top security concern in recent public statements. At the same time, he acknowledged, "There has been no meaningful improvement in the security of these chemicals moving through our population centers."[14]

Physical security by itself is insufficient to secure the nation's critical rail infrastructure. The nation's rail system is simply too open. Graffiti on railcars, for example, is a daily advertisement of the rail system's vulnerability to penetration and interception. If graffiti artists regularly gain access to rail yards, tunnels and hazmat cargo, so can terrorists.[15]

Despite federal rail safety regulations on container safety, existing toxic gas and explosives railcars are not designed to withstand puncture by a terrorist or even all accident possibilities. Even a robust chlorine tank car, with strong steel walls, was punctured in a Florida accident merely by an errant piece of rail (perhaps deliberately left). A large and fatal release of gas resulted.[16] Terrorists by contrast might employ weapons like .50 caliber sniper rifles, bazookas, land mines, or C-4 explosives which could either be procured in the United States or smuggled across our borders. Their railcar targets are easily identifiable by both their distinctive shapes and identifying safety placards.

A number of disaster exercises have shown that an emergency evacuation of an urban population in a worst-case toxic gas railcar release is not likely to be successful. An early Coast Guard plume model showed that a chlorine cloud can move two miles in only 10 minutes, so even a sheltering strategy would be difficult to implement effectively.[17]

> "[T]he District Act will stand only so long as there is a gap in federal coverage….all parties believe that it is in everyone's best interests to have one consistent and comprehensive federal policy addressing the risk of terrorism on our interstate rail system."
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Thus, with limited physical security and mitigation options, the best approach is to eliminate potential attacks in the first place through strategic re-routing and stronger regulations, particularly regarding security at rail sidings. As the District of Columbia case demonstrates, there no consensus regarding who should do what.

Up to this point, the federal government has not regulated the routing of dangerous rail cargo for safety or security reasons, due in large part to relatively weak federal regulatory agencies that exercise minimal safety oversight of the nation's railroads. The only major safety precedents regard truck movements, not trains. DOT regulation HM-164, a 1980s-era regulation, controls routing for high-level nuclear waste trucks only.[18] The longstanding but ineffective federal safety regulation on hazmat truck routing through cities (49 CFR 397.9) is not enforced and is still widely ignored. The final US DOT Security Plan regulation (HM-232) from March 2003 pointedly omits mentioning hazmat routing as an important security measure.[19]

While there is a frequent federal and industry impulse to overrule state and local hazmat regulations, a general legal principle is that when the federal government has not ruled in a specific area, states and localities are "free to do so."[20] For example, after 9/11 the City of Baltimore imposed minimum security standards on hazmat railcar storage. That local initiative is only now being followed by a new federal DOT regulation, HM-223, which takes effect in June 2005, and gives local and state officials new authority over certain kinds of hazmat railcar storage.[21]

Conversely, when it comes to rail operations, federal rail regulators, no doubt prodded by the railroad industry, have claimed exclusive federal regulatory jurisdiction and suggested that local regulations inhibit interstate commerce. There is a lot of history behind that increasingly contested position.

Cultural Resistance and Commercial Interests

The railroad industry's reluctance to seriously engage localities or pursue a re-routing strategy is directly tied to the way in which railroads evolved. Railroads are used to operating as national entities virtually unconstrained by economic, safety, or security regulation by state or local governments.

There are only seven Class I freight railroads operating in the United States today, half the number that existed in 1990.[22] Four in particular, CSXT, Norfolk Southern, Union Pacific and Burlington Northern Santa Fe, have expanded into dominant regional carriers – two operating across the eastern half and two across the western half of the country. However, there used to be far

greater competition among regional railroads – the Baltimore & Ohio and Richmond, Fredericksburg & Potomac are familiar names in the Washington area. Localities used the powers of taxation and eminent domain to help favored carriers against potential competitors. As a result, much of the existing federal regulatory system was geared to eliminating local influence and ostensibly to creating a level competitive playing field.

The current competitive environment, with two dominant duopolies supported by a network of small regional players and short line railroads, relies economically on higher freight charges paid by "captive shippers," most of whom have only one option for rail delivery.[23] Individual railroads admit they have not overhauled the basic way they operate, and cannot imagine voluntarily handing over their most dangerous (and lucrative) chemical cargo to their main competitor for security reasons. This would require "forced access," the real explanation for the railroads' refusal to allow governmental mandates that they re-route even for homeland security reasons. Such a precedent could open up the rail system to significantly greater competition that would presumably drive down shipping costs and revenue.[24]

Densely-populated target cities could be avoided with only a small cost in additional travel distance. (See box) Contrary to its protests, the American railroad industry exercise frequent and "seamless" cargo interchanges among major and regional carriers every day through various contractual arrangements. Analyses done for the District of Columbia estimated that hazardous material re-routing off the CSXT "I-95 line" would require only a small number of interchange agreements for ultrahazardous cargo. Even CSXT acknowledged in its court filing that hazardous material traffic through the District represented less than two-tenths of one percent of its national rail traffic and 2.3 percent of its total national hazmat traffic.[25] However, while there could be costs involved, the burdens of terrorism re-routings might balance out. To avoid downtown Cleveland, for example, Norfolk Southern would have to turn cargo over to CSXT, the reverse of the District situation.

How Strategic Re-Routing Could Work

Major chemical shippers and carriers have for many years had computerized route maps and routing models which can indicate optimal routes for time, length of route, number of interchanges or switchings, and exposures to dense populations along the routes. Alternative rail (and highway) routes avoiding major target cities are available in many cases. For example, a chemical manufacturing facility in Georgia, shipping chlorine gas to a user facility in New Jersey, has at least two main choices for its rail carrier. CSXT's line would cut directly through Washington, Baltimore, Wilmington, Philadelphia and into New Jersey. On the other hand, Norfolk Southern's line would most likely swing 50 miles west of the Capitol through non-target areas such as Elkton, West Virginia, Luray, Virginia, Hagerstown, Maryland and Reading, Pennsylvania, from which feeder lines reach the major northeast cities. However, there is no anti-terrorism mandate that encourages either the supplier or the railroad to choose the safer option.

See map before page 1

Stephen Flynn in *America the Vulnerable* highlighted how individual corporations have no economic incentive to spend money on homeland security unless all its competitors are mandated to do likewise.[26] No major company, moreover, has announced any corporate policy to use "catastrophe avoidance routing" to avoid major target cities. There have been no voluntary codes promulgated as was done for the chemical industry by the American Chemistry Council. The chemical transportation firms, moreover, do not even face any federally imposed "general duty" regulation even to prevent accidents and reduce risks, much less to produce risk management plans (RMPs).

It is possible that corporate liability concerns could have an impact, given the heightened prospect of a toxic release due to a terrorist attack. Even in the absence of official mandates, prudent terrorism prevention would seem to favor routing ultrahazardous cargo away from target populations or attractive trophy buildings. To the extent that insurance coverage is restrictive and expensive, companies may be self-insured or carrying significant levels of co-insurance, representing increased risk for potential corporate investors and uncertainty for potential future claims by terrorism victims.

The reality is that government regulatory action by US DOT and DHS is required to force a change in the status quo, perhaps mandated by Congress given the District Court decision. An alternative, but extremely unlikely, way forward would be for the Surface Transportation Board to use the existing (but little known) "public interest" provisions in its founding legislation to force railroads to share facilities and rail lines in order to offer reasonable service to rail shippers at fair rates – or to prevent terrorism.

Excessive Secrecy and No Accountability

The Bush administration's July 2002 *National Strategy for Homeland Security* clearly envisioned a different relationship between the federal government and its local partners. "The Administration's approach to homeland security is based on the principles of shared responsibility and partnership with the Congress, state and local governments, the private sector, and the American people." It recognized "the expertise and commitment of local agencies and organizations involved in homeland security" and vowed "to increase collaboration and coordination" with governments between and across all levels of government to address the terrorist threat. The federal government has yet to live by these words and build a structure that encourages better cooperation and information-sharing.[27]

Key industry and government documents assessing the routing of ultrahazardous cargo, ongoing transportation security risks and terrorism countermeasures have been routinely withheld from all but a few officials. As a result, there is virtually no accountability, no way to assess existing risks or weigh the measures taken to reduce them.

Post-9/11 security regimes such as Sensitive Security Information (SSI) and Protected Critical Infrastructure Information (PCII) have been nearly universally deployed to inhibit elected officials and interested citizens from carrying out traditional public safety responsibilities.[28] Certainly, given the technical sophistication of terror networks and the advent of the Internet, we need to be cognizant of how public information might potentially help our adversaries. However, the risk of releasing too little information is at least as great as releasing too much. For example, in a related area of critical infrastructure protection, the National Academy of Sciences recently complained that security restrictions on information sharing by the Nuclear Regulatory Commission "are hindering progress in addressing potential vulnerabilities of spent [nuclear] fuel storage to terrorist attacks." The Academy rightfully asserted that sharing information "is essential for ensuring that mitigative actions to reduce vulnerabilities are carried out."[29]

State and local fire and policy officials often get information only if they are seen as having an "operational need to know." In fact, what is required is a need to share. As suggested by the so-called Gilmore Commission in its final December 2003 report, state and local officials are going to have the most significant engagement with the private sector and are in the best position to improve integration of public and private efforts to prevent and respond to future incidents.[30] The federal government does not have the resources to work with major private building owners, for example, with properties close to rail and highway lines where serious chemical releases are possible.

The current trend towards corporate and government secrecy is a reversal of the approach to American emergency planning adopted since the 1984 Bhopal toxic gas disaster, which killed 6,000 and injured 100,000 in one night. In light of Bhopal, Congress required that the public have access to assessments of worst case scenarios for toxic gas and explosion releases through public review of risk management plans. Tellingly, even though the chemical industry reluctantly went along, its transportation sector was exempted.[31] Only a few state agencies, including the California Public Utilities Commission, have even tried to regulate railroads regarding chemical accident potentials. Industry generally does not share hazmat security plans with its workers or union health and safety officials.[32]

Excerpts from District of Columbia Terrorism Prevention in Hazardous Materials Transportation Emergency Act of 2005

The Council of the District of Columbia finds that:
(1) A terrorist attack on a large-quantity hazardous material shipment near the United States Capitol ("Capitol") would be expected to cause tens of thousands of deaths and a catastrophic economic impact of $5 billion or more.
(2) The threat of terrorism facing District of Columbia residents and workers in the vicinity of the Capitol requires an urgent response that recognizes and addresses the unique status of this area in American politics and history, and the risk of terrorism that results from this status.
(3) The federal government has not acted to prevent the terrorist threat resulting from the transportation of dangerous quantities of ultra-hazardous materials near the Capitol.
(4) Shippers of ultra-hazardous materials do not need to route large quantities of ultra-hazardous chemicals near the Capitol in order to ship these chemicals to their destinations, and alternative routes would substantially decrease the aggregate risk posed by terrorist attacks.
(5) Requiring permits for ultra-hazardous shipments from a Capitol Exclusion Zone that encompasses all points within 2.2 miles of the Capitol would impose no significant burden on interstate commerce.

Prohibition on shipments of hazardous materials.
Except in cases of emergency, it shall be illegal in the Capitol Exclusion Zone, without a permit, to:
(1) Transport any of the following:

Continued on next page

The existing national hazmat cargo handling system and the federal regulations on containers, placards, etc., are based almost entirely only on the historical experience of and potential for accidental spills – not on the potential for deliberate and catastrophic terrorist releases in urban or other high threat areas. And in a recent review by the Department of Homeland Security, Secretary Michael Chertoff backed off from removing placards from hazmat railcars after strong protests from first responders.[33]

D.C. Moratorium: A Threat Reduction Case Study

Many of the shortcomings outlined thus far are present in the attempt by the District of Columbia to create a hazardous material exclusion zone in the heart of the city, with a local hazmat security ordinance carefully designed to avoid traditional federal safety preemption.

On February 1, 2005, the City Council for the District of Columbia passed (and two weeks later the mayor signed) the Terrorism Prevention in Hazardous Materials Transportation Emergency Act of 2005 (see box).[34] The ordinance bans certain classes of hazardous materials, including explosives, flammable gasses and toxic substances within an exclusion zone that includes the U.S. Capitol and other government facilities vital to the continuity of federal and local government. The moratorium applies to rail and truck traffic flowing through the District bound for other destinations and requires carriers to obtain a permit if there is "no practical alternative route" except through the District.

There are three primary reasons for the District action: first, a genuine concern regarding the impact that hazardous materials for the safety of its citizens in light of the on-going threat of terrorism; second, the fact that the federal government has not developed a national rail security plan; and third, that the federal government and railroad industry has chosen to conduct whatever security planning is being done in total and excessive secrecy.

The District law is predicated on the availability of commercially viable alternate routes.[35] Even the U.S. military map that designated "strategic rail corridors" (STRACNET) showed viable industrial freight routes around the District.[36] The D.C. Council also benefited from information from the property insurance industry, which has done some serious transportation security-related threat and vulnerability assessments. An AIR Worldwide map of the two main highway and rail corridors in the District clearly showed the much lower comparative terrorism risk of the alternative westerly route.[37]

While unusual, and a first regarding rail transportation, the city's action was not unprecedented. New York City has re-routed the most dangerous trucks around the city for 25 years. Its safety permit and truck routing regulations, codified in its Fire Code Chapter 40, was similarly challenged but upheld in the Second Circuit Court of Appeals in 1982 as a permissible burden on commerce, precisely because of the huge benefit to public safety.[38]

Rail carrier CSXT, supported by various agencies of the United States government and chemical shippers, filed petitions with both the Surface Transportation Board (STB) as well as the United States

Continued from previous page

(A) Explosives of Class 1, Division 1.1, or Class 1, Division 1.2, as designated in 49 C.F.R. § 173.2, in a quantity greater than 500 kilograms;
(B) Flammable gasses of Class 2, Division 2.1, as designated in 49 C.F.R.
§ 173.2, in a quantity greater than 10,000 liters;
(C) Poisonous gasses of Class 2, Division 2.3, as designated in 49 C.F.R.
§ 173.2, in a quantity greater than 500 liters, and belonging to Hazard Zones A or B, as defined in 49 C.F.R. § 173.116; and
(D) Poisonous materials, other than gasses, of Class 6, Division 6.1, in a quantity greater than 1,000 kilograms, and belonging to Hazard Zones A or B, as defined in 49
C.F.R. § 173.133; or
(2) Operate a vehicle or move a rail car which:
(A) Is capable of containing explosives of Class 1, Division 1.1, or Class
1, Division 1.2, as designated in 49 C.F.R. § 173.2, in a quantity greater than 500 kilograms, and has exterior placarding or other markings indicating that it contains such materials;
(B) Is capable of containing flammable gasses of Class 2, Division 2.1, as
designated in 49 C.F.R. § 173.2, in a quantity greater than 10,000 liters, and has exterior placarding or other markings indicating that it contains such materials;
(C) Is capable of containing poisonous gasses of Class 2, Division 2.3, as designated in 49 C.F.R. § 173.2, in a quantity greater than 500 liters, and belonging to Hazard
Zones A or B, as defined in 49 C.F.R. § 173.116, and has exterior placarding or other markings indicating that it contains such materials; or
(D) Is capable of containing poisonous materials, other than gasses, of
Class 6, Division 6.1, in a quantity greater than 1,000 kilograms., and belonging to Hazard Zones A or B, as defined in 49 C.F.R. § 173.133, and has exterior placarding or other markings indicating that it contains such materials.

District Court, seeking to have the D.C. act invalidated and requesting an injunction to prevent its enforcement. The company claimed that the District action was a violation of interstate commerce; that only the federal government had jurisdiction over rail security; and that TSA had "approved" its required HM-232 security plan. Tellingly, during the hearing on the case, District Court Judge Sullivan asked to see CSXT's security plan in order to evaluate its adequacy. No one in the courtroom, representing various government departments and interested parties had ever seen it. The Judge tried to broker a settlement that would have involved suspension of enforcement of the D.C. law, re-routing on both CSXT lines through the city, and sharing of CSXT's security plan with lawyers representing the District. CSXT and the US government refused, preferring a legal ruling (though probably not the one they received) that they are sure to appeal.[39]

The STB, while not having the power to invalidate the District ordinance, issued a declaratory order at the behest of the railroads on March 14 saying that state and local restrictions are preempted under provisions of the Interstate Commerce Act. "Congress foreclosed state or local power to determine how a railroad's traffic should be routed." The STB reasoned that the intent of federal regulation of railroads as codified in 49 U.S.C. section 10501(b) was "to prevent a patchwork of local regulation from unreasonably interfering with interstate commerce. The D.C. Act would unreasonably interfere with interstate commerce, and if permitted to exist, would likely lead to further piecemeal attempts by other localities to regulate rail shipments."[40] However, the District Court was not bound by the STB declaratory ruling.[41]

"By routing trains out of high-risk areas and through lower risk areas, the government would not be simply 'shifting the risk,' but would actually be reducing the aggregate risk faced by the population as a whole….[T]here may be some added incremental risks absorbed by communities along rerouted lines. However, plaintiff has….provided no evidence suggesting that, in the aggregate, these additional operational risks will outweigh the reduction in the risk of terrorist attack."

Judge Emmet G. Sullivan
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Judge Sullivan was heavily influenced by the plain language of one of the controlling laws on the issue, the Federal Rail Safety Act (FRSA). The FRSA, while establishing significant federal preemption powers, nonetheless contains the same provisions common in all hazmat transportation laws, which recognize traditional state and local police powers for public health and safety. As the Judge noted, the FRSA says that states and localities may regulate on a particular rail safety subject "until" the federal government does.[42]

In light of the District Court ruling, the federal government has both an imperative and a new opportunity to take the initiative. The Bush administration's reliance on voluntary approaches falls short of what is needed – legally and substantively. In this case, CSXT attempted to argue that despite September 11, "there is no reason to believe there is an imminent emergency."[43] It is doubtful the private sector will take adequate steps without clear federal guidelines. Cities have shown an interest and willingness to act, and perhaps will be key actors in ultimately pushing Congress or federal regulators into responsible and comprehensive action. Certainly, adjudicating scores of local solutions, with potential legal appeals, is not the optimal scenario in the midst of a war. The federal government is in the strongest position to lead an integrated national approach.

A Strategic Action Plan

First Priority: Reroute Hazardous Traffic from the District of Columbia

TSA should adopt the exclusion set forth in the proposed District of Columbia ordinance, particularly in light of the United States District Court ruling. Potential weapons of mass destruction, whether transported by rail or truck, should not flow through the center of Washington and the nexus of the war against terror. It is common sense. It is compelling policy. It should be a permanent ban.

The danger and strategic logic are both indisputable. The U.S. Naval Research Lab's gas cloud model outlines that in a worst-case 90-ton chlorine railcar release from the tracks near the Mall, during a crowded public event such as the Fourth of July, 100,000 people could die in 30 minutes.[44] Washington, D.C. is one of two U.S. cities to be attacked by al Qaeda and nothing since September 11 has changed the likelihood that it will try again.

Against the backdrop of clear and present danger, commercial considerations are truly secondary. It is fair to suggest that under normal circumstances, the shortest distance between shipping points will also be the safest. That does not make it the most secure, however, when the shortest distance runs within yards of government buildings and national landmarks that are vital to the continuity of government and our way of life. Industry statements that the ban simply shifts the burden from one jurisdiction to another ignore the larger strategic reality and the nature of al Qaeda and similar jihadist organizations.

A permanent ban on the shipment of hazardous materials by rail and truck from Washington, D.C. eliminates the very combination of factors – iconic structures, large numbers of people and world stage – that makes such an attack attractive. It makes the country and the national transportation system significantly safer.

National Strategic Re-Routing

Beyond the District of Columbia, Congress should mandate that US DOT and the Department of Homeland Security urgently undertake a national re-routing study to identify all options for re-routing to avoid target cities and produce a national risk-based federal routing regulation for rail hazmat shipments. It should:

- Compile a list of the most dangerous cargo transported by rail that should be excluded from city centers;
- Identify those target cities where catastrophe avoidance re-routing options exist, using the roster of 50 Urban Area Security Initiative (UASI) recipients as a starting point;[45]
- Improve computer modeling to assess the need for catastrophe avoiding routing. The insurance industry can help;
- Require railroads to enter into interchange agreements (as currently with mutual compensation arrangements) to share routing of the covered WMD cargo where feasible under the existing "public interest"standard;
- Establish better mechanisms for dispute resolution.

The Bush administration is at risk of losing control of a major sector of critical infrastructure security if it fails to act decisively in light of the District of Columbia case. While a cumulative approach by at-risk target cities can work, a single comprehensive solution to freight rail security is better. Homeland security requires national solutions that incorporate the strengths and resources of each echelon – federal, state and local governments and the private sector.

Strategic re-routing follows the same logic as other critical infrastructure. Vehicle traffic has been re-routed away from the Pentagon, for example, to remove any vulnerability to a truck bomb. Rail re-routing has been done upon request during the past three U.S.-hosted Olympics – Los Angeles, Atlanta and Salt Lake City – and other special events. When it has recently been in their economic interest to do so, railroads have concluded major re-routing agreements, around the historical rail centers of Chicago and another around major Texas cities.[46] It should be incorporated into routine operations.

Better Rail Siding and Storage Security

Strategic planning must be augmented by broader efforts to improve physical security and emergency response capabilities along major rail corridors; hardening and reducing the size of some toxic gas tank cars; real-time tracking of shipments and pre-notification of shipments; varying long-distance routes; using decoys and, geo-fencing.

Just as more attention needs to be paid to the transportation of hazardous material, regulations regarding railcar hazardous material storage need to be strengthened at all levels. The U.S. Department of Transportation regulation HM-223 takes effect June 1, 2005 and allows greater latitude for local initiatives. State and local officials should put forward new protective rule-making regarding hazmat railcars stored on "private track" near chemical facilities. Baltimore's recent ordinance regulating railcar storage is a good example of needed security enhancements. Voluntary codes recommended by the American Chemistry Council are also useful.[47] The U.S. Environmental Protection Agency and Occupational Safety and Health Agency can also play a role.

Build Homeland Security Partnership

The federal government should encourage each state (and the District of Columbia) to establish an Urban Area Security Task Force to improve local and regional coordination among the homeland security stakeholders. These should be modeled after Area Maritime Security Committees mandated by current law in port security regulation.

The February 2005 Interim National Infrastructure Protection Plan fails to specify how state, local and tribal officials link to national critical infrastructure/key resources (CI/KR), specific sector coordinating committees (SCCs) and federal government coordinating councils (GCCs); provide local and regional perspective to sector-specific planning; and determine requirements for Urban Area Security Initiative (UASI) grants.[48]

The major benefit would be the establishment of urban area security zones, like that created for Washington, D.C.; improve domain awareness in that city center; and manage security aspects of day-to-day activities that are judged to increase the risk of terrorism. Those working on the task force would all have security clearances to promote the flow and exchange of information among echelons of government. These task forces would regularly meet in open session in order to promote public input on sensitive homeland security issues and greater transparency regarding homeland security measures. Homeland security

in the long run can only be sustained if there is a reasonable balance among secrecy, transparency and accountability.

Develop a Hazardous Material Strategy

Increasing the security of our major cities and national transportation system is not just a matter of the routing of hazardous materials. It is also a matter of supply and demand. We also make the country less vulnerable to terrorism by reducing our reliance on highly toxic or explosive materials. Building better fences may help, but is not in itself a sustainable. The United States needs a forward-looking and aggressive strategy to eliminate the risk that hazardous materials can be used as weapons against us by encouraging the adoption of new materials and manufacturing and storage techniques that in essence remove facilities, cities and our transportation system from terrorist target lists.

The Center for American Progress recently advanced an "inherent hazard reduction" approach that has the potential to eliminate or greatly reduce the number of vulnerable targets across the country and the risk associated with those targets.[49] Using existing solutions and authorities, it recommends:

- Material substitution: replace acutely toxic substances with less dangerous alternatives wherever possible;
- Just-in-time manufacturing: adopt processes that enable more efficient use of chemicals and reduce storage requirements;
- Inventory reduction and separation: decrease overall storage inventories and separate dangerous substances into smaller containment tanks; and
- Hardened storage: Make storage tanks less vulnerable to deliberate attack, less accessible and less visible, including storage underground.

The strategy also calls for conducting a comprehensive inventory of facilities and materials that pose the greatest risk; setting clear priorities for action; strengthening government authorities to establish effective hazard-reduction measures; and developing an aggressive action plan to reduce the country's known vulnerabilities to terrorism.

Also, working cooperatively with the private sector, the federal government should significantly increase research and development of less dangerous materials and create incentives, including tax benefits, low interest loans and homeland security grants, to encourage fundamental change in current business practices and the adoption of inherently safer and more secure operations.

Conclusion

Defending the status quo is unacceptable. Given the nature of the terrorist threat, we must make our cities safer by eliminating clear vulnerabilities present in current freight rail operations. Our cities have shown a willingness to act. Besides the District of Columbia, a number of major cities, including Baltimore, Philadelphia, Pittsburgh, Cleveland and Houston, are evaluating what needs to be done.[50] Cumulative actions can make us safer, but a comprehensive approach is by far the best way to improve our homeland security.

All stakeholders in rail security – various governments and private sector industries – have important roles to play. However, what is urgently required are two essential ingredients that have been missing up until now: a national strategy and federal leadership.

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Endnotes

[1] CSX Transportation, Inc. v. Anthony A. Williams, et al, United States District Court for the District of Columbia, Civ. Action No. 05-338 (EGS), April 18, 2005 at 5, *available at* http://www.dcd.uscourts.gov/opinions/2005/Sullivan/2005-CV-338~11:28:34~4-18-2005-a.pdf.
[2] CSX Transportation, Inc. v. Anthony A. Williams, et al, United States District Court for the District of Columbia, Civ. Action No. 05-338 (EGS), April 18, 2005 at 73.
[3] CSX Transportation, Inc. v. Anthony A. Williams, et al, United States District Court for the District of Columbia, Civ. Action No. 05-338 (EGS), April 18, 2005 at 3-5, 72.
[4] Ahmed Ressam, arrested in connection with a Millennium plot to blow up Los Angeles International Airport, testified that he was trained at al Qaeda camps in Afghanistan on "how to blow up the infrastructure of a country," including "electric plants, gas plants, airports, railroads," among other targets.
[5] See RSPA-02-12064 (HM-232) available at http://dmses.dot.gov/docimages/p71/165783.pdf.
[6] Consultants to federal agencies have estimated that a potential bioterrorism attack in a crowded transportation terminal could result in $1 billion to $10 billion in direct property damage; $20 billion to $200 billion in trade disruption; and at least $42 billion in indirect costs, not to mention loss of life.
See "The Economic Impacts of Bioterrorist Attacks on Freight Transport Systems in an Age of Seaport Vulnerability," Department of Transportation, Volpe National Transportation Center.
[7] Public interest is a term used to denote political policies and movements that provide social or economic benefit to members of a society. In the instance of rail security, the challenge remains balancing consumer demand with the safety of the general public to cater to public interests most effectively.
[8] See Mission Statement of the Transportation Security Administration, available at http://www.tsa.gov/public/display?theme=7.
[9] Aviation and Transportation Security Act, Pub. L. No. 107-71 (2001), § 114(f)(2) and (3), and (g)(3), available at http://www.tsa.gov/interweb/assetlibrary/Aviation_and_Transportation_Security_Act_ATSA_Public_Law_107_1771.pdf.
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[11] CSX Transportation, Inc. v. Anthony A. Williams, et al, United States District Court for the District of Columbia, Civ. Action No. 05-338 (EGS), April 18, 2005 at 68=69.
[12] U.S. Department of Transportation Strategic Plan 2003-2008, Section 10-7, Table 5, available at http://www.dot.gov/stratplan2008/strategic_plan.htm#_Toc52257064.
[13] Department of Homeland Security, "Interim National Infrastructure Protection Plan" at 3, is available at http://www.deq.state.mi.us/documents/deq-wb-wws-interim-nipp.pdf.
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[15] Robert Block, *Graffiti Artists Put Their Mark On War Against Terrorism*, Wall Street Journal, January 23, 2004 at 1.
[16] Chlorine release in Youngstown, Fl in 1978. The Chlorine Institute maintains a list of large chlorine releases.
[17] Undated U.S. Coast Guard Air Dispersion Release Model.
[18] See RSPA Old Docket Number HM-164
[19] See ee RSPA-02-12064 (HM-232) available at http://dmses.dot.gov/docimages/p71/165783.pdf

[20] See Massachusetts v. DOT, 93 F.3rd 890 (D.C. Cir. 1996) re imposition of a state bonding requirement on hazardous waste truckers]. The First Circuit in New Hampshire Motor Transport Assn v. Flynn in 1984 had already established that a state may impose a reasonable permit and fee system on hazardous waste trucks.

[21] The proposed federal regulation HM-223 is available at http://hazmat.dot.gov/regs/notices/nprm/hm/hm223.htm.

[22] See Federal Railroad Administration *Freight Railroad Overview* at 1, available at http://www.fra.dot.gov/downloads/policy/freight2003.pdf.

[23] Captive shippers are shippers who are physically served by only one rail carrier and therefore have no choice but to use that carrier. Captive shippers, therefore, cannot benefit from competition among the rail industry.

[24] Forced access is meant to apply to the federal government's determination to grant railroads permission to use another railroad's right of way in order to gain access to customers.

[25] CSX Transportation, Inc. v. Anthony A. Williams, et al, United States District Court for the District of Columbia, Civ. Action No. 05-338 (EGS), April 18, 2005 at 65.

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[29] See National Academy of Sciences News Release, April 6, 2005, available at http://www4.nationalacademies.org/news.nsf/isbn/0309096472?OpenDocument.

[30] V. Forging America's New Normalcy: Securing Our Homeland, Preserving Our Liberty, *The Fifth Annual Report to the President and the Congress of the Advisory Panel to Assess Domestic Response Capabilities for Terrorism Involving Weapons of Mass Destruction*, p 29 (December 2003), available at http://www.rand.org/nsrd/terrpanel/additional/volume_v/volume_v.pdf.

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[35] CSX Transportation, Inc. v. Anthony A. Williams, et al, United States District Court for the District of Columbia, Civ. Action No. 05-338 (EGS), April 18, 2005 at 69.

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