## Rails Aff

### Inherency - 1AC

**Contention 1 is Inherency -**

**Rail infrastructure is massively underfunded now – leaves us vulnerable to attacks**

**Capra 6** (Gregory Capra, chief of program management at Andrews AFB, Maryland, Air War College @ Maxwell AFB, Federal Civilian Service, BRAC Analyst for the Air Force, 2006, "Protecting Critical Rail Infrastructure," Maxwell AFB)

Part of the concern is the U.S. Government’s lack of emphasis on and funding for the security of rail systems. Essentially, protection of U.S. rail systems have been given a much lower priority than protection of the U.S. airline industry as a result of the impact of the terrorists’ acts on the commercial aviation industry. This is reflected in the funding provided by the U.S. Government for security through the Transportation Security Agency. During the Secretary of Homeland Security’s testimony before the Homeland Security Committee, Representative Bennie Thompson (D-MS) pointed out the fact that the Transportation Security Agency focused too much on aviation and had allocated a mere 7 percent of its budget to inspect and patrol rail lines. Representative Thompson felt this was unacceptable and that, if necessary, the Transportation Security Agency should be reorganized to make rail security a higher priority.30 In addition, the GAO recently reported that funding for aviation security for fiscal years 2005 and 2006 was 87 percent of the Transportation Security Agency’s budget.31 The president of the American Public Transportation Association testified that since 9/11 the industry identified a $6 billion requirement for security enhancements of all systems, they invested $2 billion, and only received $250 million from the Transportation Security Agency over three years.32 Finally, the Federal Transit Administration assessed transit national critical infrastructure as “. . . designed and operated as an open environment—it is by its very nature a high risk, high consequence target for terrorists. More than 9.5 billion passengers a year ride our transit systems. Some of the largest transit systems report that more than 1,000 people a minute enters their largest intermodal facilities during rush hour. Transit subways travel under key government buildings, business centers, and harbors. Worldwide, transit has been a frequent terrorist target, including bombings in the London and Paris subways [and bus lines], the sarin gas attack in Tokyo, and bus bombings in Israel.”33 Approximately 3 percent of the total gross domestic product, $319 billion, is attributed to freight for-hire transportation services. Of this, rail systems account for approximately $26 billion.34 The gross domestic product attributed to transportation-related final demand is over $1.1 trillion, about 10.5 percent.35 In addition, the annual operation expenses for the transit sector exceed $30 billion annually.36 With such a high potential to affect the economy, it is possible the next terrorist attack in the United States could be on the rail systems.

**Despite increased funding, focus is still on aviation - states and localities lack the financial infrastructure for a focused increase on rail security**

**Stoller 10** (Gary Stoller, staff writer, December 2010, "Can trains, subways be protected from terrorists?," http://travel.usatoday.com/news/2010-12-27-railsecurity27\_CV\_N.htm)

TSA has devoted most of its resources to air security after the 2001 attacks on New York and Washington, leaving subway and rail security primarily to transit authorities, local governments and rail operators, including many that are not in good financial condition.¶ In an April report, the American Public Transportation Association said public transportation systems "are facing unprecedented funding challenges due to widespread declining state and local revenues."¶ The association, which represents transit agencies and rail and bus operators, found 70% of 151 transit systems that responded to an association survey project "budget shortfalls" this year.¶ William Millar, the association's president, says transit authorities don't have the necessary resources. More than $30 billion has been allocated for aviation security since 9/11, compared with $1.7 billion for subway, passenger rail, cargo rail, bus and some ferry security, Millar says.¶ Police Chief Paul MacMillan of the Massachusetts Bay Transportation Authority, which operates transit systems in Boston, says, "We understand the commitment to aviation," but "There needs to be a commitment by the federal government to dedicate more attention to mass transit."¶ Rep. Bennie Thompson, D-Miss., chairman of the House Committee on Homeland Security, says he's "deeply troubled" by the small amount of TSA's budget devoted to transit and rail security. Fewer than 2 million airline passengers fly daily, and about 34 million rail and transit passenger trips are taken each weekday, he says.¶ "Although funding for surface transportation security at TSA was doubled for fiscal year 2010 (which ended Sept. 30), it still only constituted less than 2% of TSA's budget, compared to around 85% for aviation," Thompson says.¶ TSA spokeswoman Kristin Lee says that "the Obama administration has made extraordinary investments in surface transportation security" during the past two budget years, including allocating $850 million for transit agencies, funding local anti-terrorism teams and launching a program with Amtrak to encourage passengers to report suspicious activity.

### **Terrorism - 1AC**

Contention [ ] is Terrorism -

Status quo transparency and transportation techniques are extraordinarily vulnerable to terrorist interception

Jenkins & Butterworth 10 (Brian Jenkins, director of the National Transportation Security Center AND Bruce Butterworth, field research director, 2010, "Potential Terrorist Uses of Highway-Borne Hazardous Materials," Mineta Transportation Institute, <http://transweb.sjsu.edu/mtiportal/research/publications/documents/2981_Terrorist%20Uses_011410.pdf>)

Terrorists and terrorist groups often use public, “open” sources to gain information about potential targets and weapons. The 9/11 conspirators studied aviation security by examining public reports of security measures, conducting reconnaissance, and observing security measures in dry runs. We explore in later sections the ways terrorists might conduct surveillance. In this section, we discuss the information terrorists could gain from the open literature about the effects of the hazardous materials considered in this study. We believe that three types of data in particular could inspire and instruct terrorist thinking about the use of hazardous materials: (1) how the materials behave in accidents, including spectacular, newsworthy events; (2) how the materials are acquired in publicized nonterrorist crimes; and (3) how materials involved in accidents behave in publicly known disposal operations. ACCIDENT HISTORIES Information on hazardous materials involved in highway accidents indicates how the materials behave when they are released in an accident, how many casualties they can cause, and how much damage they can inflict on highway infrastructure. This information may be studied by terrorist groups seeking to understand the advantages of weaponizing different types of hazmat. Two distinct “sets” of information are available to terrorists: (1) analytical studies and official data analyses that identify trends and averages, and (2) histories of individual accidents, especially spectacular accidents that generate publicity.

Organized terrorism is becoming ideological, not tactical - heightens the risk of attack

Jenkins & Butterworth 10 (Brian Jenkins, director of the National Transportation Security Center AND Bruce Butterworth, field research director, 2010, "Potential Terrorist Uses of Highway-Borne Hazardous Materials," Mineta Transportation Institute, <http://transweb.sjsu.edu/mtiportal/research/publications/documents/2981_Terrorist%20Uses_011410.pdf>)

The local al Qaeda-inspired cell may consist of first- or second-generation immigrants or converts to Islam who are knowledgeable about local customs and culture. They are integrated into the society and have the rights and benefits afforded to all of the countries’ citizens. Usually, a catalyst organizes the local al Qaeda-inspired cell. Members may be usually radicalized through jihadist or Salafi websites, in the prison system, or in radical meeting places. Local cells are connected by ideology and personal ties, not through a hierarchical structure. Members gravitate to each other based on that ideology and personal relationships. Some of these groups may be amorphous and temporary, but others may establish longer-term partnerships in a sustained campaign directed by a central figure. Due to the nature of local cells, funding is more of a necessity for them than for the lone operator. Funding comes from sources such as criminal activity (e.g., the babyformula black market, cigarette smuggling, and distribution of counterfeit items) or local sympathizers. Criminal activity increases a cell’s exposure to local law enforcement and detection through intelligence-based policing. Foreign intelligence sources are of very little value in detecting these cells beyond providing trend analysis of increased local Jihadist cells in other countries. A local cell’s planning for a possible attack is more in-depth and involved than that of the lone operator. Since the cell obviously has more than one member, individuals can be tasked with specific assignments, and tailored research can be done. Cell members may also be recruited for a specialty they possess. Planning is still at a rudimentary level because: (1) local cells cannot take advantage of the resources and knowledge that comes from a central and presumably more professional and well-financed authority; (2) the members have uneven training, mostly through websites, videos, printed manuals, etc., and very little hands-on practical experience; and (3) cell members are from the local community and have very little operational experience. Cells Funded and Supported by al Qaeda Central. Such cells may consist of “foreign” Islamists or a mix of foreign Islamists and radicalized local members under the direction of the foreign Islamists. At least some members are likely to have received training and operational experience in either Bosnia, Iraq, Afghanistan, or Pakistan. They have handson experience and specialties in explosives, munitions, weapons, etc. Many may have been involved in operations against foreign targets, most likely in Bosnia or Iraq.

Vulnerabilities invite CBRW attacks

HITRAC 6 (Homeland Infrastructure Threat & Risk Analysis Center (HITRAC), Office of Intelligence and Analysis / Directorate for Preparedness, Strategic Sector Assessment, “(U//FOUO) The Terrorist Threat to the U.S. Commercial Passenger and Freight Rail System”, Ohttp://www.nefafoundation.org/file/FeaturedDocs/HITRAC\_PassengerFreightRail.pdf, May 24, 2006,)

Chemical, Biological, or Radiological Attacks (U//FOUO) Terrorists show continuing interest in toxic chemical dispersion devices, given the relative ease with which toxic materials can be acquired or produced, the potential for large numbers of casualties, disruptions at the scene of the event, and psychological impact on the population. Improvised chemical attacks against the U.S. passenger rail systems pose a serious threat, as evidenced by the liquid sarin attack on the Tokyo subway system carried out by the Japanese religious cult Aum Shinrikyo in March 1995 that killed twelve passengers. (U//FOUO) Aum Shinrikyo also was responsible for an attempted biological attack in March 1995 in the Tokyo subway system involving three briefcases left in the Kasumigaseki train station. Although no injuries resulted, an Aum Shinrikyo member later confessed this was a failed biological attack involving the use of botulinum toxin. (U//FOUO) A radiological attack against a rail target could be conducted by exploding a radiological dispersal device close to unshielded individuals, rolling stock, and other rail equipment. (U) Hazardous Material Attacks (U//FOUO) U.S. freight trains carry more than 1 million tons of hazardous chemicals daily, 50 percent of the nation’s total. The vast majority of these chemicals, if released, will not cause mass casualties. A number of chemicals, however, can be fatal if inhaled. Nonetheless, an attack to release hazardous material (HAZMAT) as a weapon would be difficult for terrorists to execute and probably would not produce the desired effect, given the number of variables such as wind speed and direction, train timetables, and the capability of railroad HAZMAT teams to control and contain the effects of a release rapidly. (U) Toxic Inhalation Hazard Chemicals: A Rail Transportation Concern (U//FOUO) Of all toxic inhalation hazard (TIH) chemicals, chlorine is of greatest concern to the freight rail industry, because of the high number of chlorine-filled tank cars on the nation’s tracks each day, and due to the high demand and criticality of chlorine in water purification and other commercial uses. (U) Demolition or Sabotage of Rail Bridges and Tunnels (U//FOUO) The destruction or sabotage of rail bridges and tunnels is another possible method of terrorist attack against the U.S. rail system. Tens of thousands of rail bridges throughout the country vary widely in design, from reinforced wooden bridges to heavy steel trestle bridges. The simple sabotage of the rails on a bridge can cause a derailment, the momentum of which could force the engine and at least some of the cars to drop from the bridge. Demolition or sabotage of rail tunnels may increase casualties when they involve hazardous materials or are under water.

**This lack of security measures magnifies the impact of even unsophisticated terrorism**

HITRAC 6 (Homeland Infrastructure Threat & Risk Analysis Center (HITRAC), Office of Intelligence and Analysis / Directorate for Preparedness, Strategic Sector Assessment, “(U//FOUO) The Terrorist Threat to the U.S. Commercial Passenger and Freight Rail System”, Ohttp://www.nefafoundation.org/file/FeaturedDocs/HITRAC\_PassengerFreightRail.pdf, May 24, 2006,)

(U//FOUO) The most likely targets considered by al-Qa‘ida or affiliated extremists are passenger trains loaded to capacity during peak ridership periods, underwater rail tunnels, and heavily used stations in large metropolitan areas. Within the United States, heavily used stations include Pennsylvania Station (hereafter referred to as Penn Station) and Grand Central Station in New York, and Union Station in Washington, D.C. Union Station is not the most heavily trafficked station in the United States, but its location within the National Capitol Region provides an important symbolic motivation for terrorists. (U//FOUO) Following the March 2004 bombing of commuter trains in Madrid, Spain, foreign terrorists expressed a strong interest in attacking passenger trains in the United States. The terrorists specifically were interested in striking an above-ground passenger train traveling between two major cities, and considered New York City and Washington, D.C., as possible targets. The ultimate target selection would depend on detailed surveys and surveillance reports by the designated operatives, who have not been found. The identification of operatives who could actually travel to Western countries to perpetrate the attacks was a main problem for the terrorists. Numerous methods were considered for attacking trains, to include derailment, explosions with gas canisters, igniting fires, and ramming a vehicle into a train. The preferred method was to cause a powerful explosion from inside a rail passenger car. ⎯ (U//FOUO) Terrorists considered a variety of techniques for obtaining and using explosives. The terrorists believed it would be easier to manufacture or buy explosives in the United States than to smuggle them into the country. Possible explosive mixtures would include ingredients such as acetone, aluminum powder, fertilizer, nitric acid, peroxide, petroleum jelly, and yellow sulfur. The manufactured explosives would have to fit inside backpacks or carry-on items similar to those used in the London and Madrid attacks. ⎯ (U//FOUO) The terrorists did not believe it was necessary to inflict massive casualties through train attacks. Rather, their goal would be to create many explosions in many different trains in order to terrify the ridership and consequently adversely affect the U.S. economy. A train attack was the preferred type of attack in the United States because it was the easiest to conduct and would not require significant time to plan and prepare.(U//FOUO.

**Attacks would decimate the economy and competitiveness**

HITRAC 6 (Homeland Infrastructure Threat & Risk Analysis Center (HITRAC), Office of Intelligence and Analysis / Directorate for Preparedness, Strategic Sector Assessment, “(U//FOUO) The Terrorist Threat to the U.S. Commercial Passenger and Freight Rail System”, Ohttp://www.nefafoundation.org/file/FeaturedDocs/HITRAC\_PassengerFreightRail.pdf, May 24, 2006,)

(U//FOUO) Freight railroads are critical to the economic well-being and global competitiveness of the United States. As an indispensable part of our nation’s transportation system, the country’s 550 common carrier freight railroads serve nearly every industrial, wholesale, retail, and resource-based sector of the U.S. economy. They move 42 percent of our nation’s freight (measured in ton-miles)—from raw materials to sophisticated finished products—and connect businesses with each other across the country and with markets overseas. Freight railroads are overwhelmingly private property, and billions of dollars are spent each year building and maintaining their rights-of-way. Freight railroads also contribute billions of dollars each year to the economy through investments, wages, purchases, and taxes.

Global nuclear war

Auslin 9 [Michael Auslin is a resident scholar and Desmond Lachman is a resident fellow at the American Enterprise Institute,“ The Global Economy Unravels,” 3/6/2009, http://www.forbes.com/2009/03/06/global-economy-unravels-opinions-contributors-g20.html]

What do these trends mean in the short and medium term? The Great Depression showed how social and global chaos followed hard on economic collapse. The mere fact that parliaments across the globe, from America to Japan, are unable to make responsible, economically sound recovery plans suggests that they do not know what to do and are simply hoping for the least disruption. Equally worrisome is the adoption of more statist economic programs around the globe, and the concurrent decline of trust in free-market systems. The threat of instability is a pressing concern. China, until last year the world's fastest growing economy, just reported that 20 million migrant laborers lost their jobs. Even in the flush times of recent years, China faced upward of 70,000 labor uprisings a year. A sustained downturn poses grave and possibly immediate threats to Chinese internal stability. The regime in Beijing may be faced with a choice of repressing its own people or diverting their energies outward, leading to conflict with China's neighbors. Russia, an oil state completely dependent on energy sales, has had to put down riots in its Far East as well as in downtown Moscow. Vladimir Putin's rule has been predicated on squeezing civil liberties while providing economic largesse. If that devil's bargain falls apart, then wide-scale repression inside Russia, along with a continuing threatening posture toward Russia's neighbors, is likely. Even apparently stable societies face increasing risk and the threat of internal or possibly external conflict. As Japan's exports have plummeted by nearly 50%, one-third of the country's prefectures have passed emergency economic stabilization plans. Hundreds of thousands of temporary employees hired during the first part of this decade are being laid off. Spain's unemployment rate is expected to climb to nearly 20% by the end of 2010; Spanish unions are already protesting the lack of jobs, and the specter of violence, as occurred in the 1980s, is haunting the country. Meanwhile, in Greece, workers have already taken to the streets. Europe as a whole will face dangerously increasing tensions between native citizens and immigrants, largely from poorer Muslim nations, who have increased the labor pool in the past several decades. Spain has absorbed five million immigrants since 1999, while nearly 9% of Germany's residents have foreign citizenship, including almost 2 million Turks. The xenophobic labor strikes in the U.K. do not bode well for the rest of Europe. A prolonged global downturn, let alone a collapse, would dramatically raise tensions inside these countries. Couple that with possible protectionist legislation in the United States, unresolved ethnic and territorial disputes in all regions of the globe and a loss of confidence that world leaders actually know what they are doing. The result may be a series of small explosions that coalesce into a big bang.

Hazardous material transportation is key to the chemical industry

Spraggins 9 (H. Barry Spraggins, U Nevada Reno, 2009, "The case for rail transportation of hazardous materials," Journal of Management and Marketing Research, <http://www.aabri.com/manuscripts/09224.pdf>)

Twenty percent of the nation’s chemicals move by rail. But railroads carry an even higher percentage of those chemicals essential to the public health and standard of living for the United States. Rails move 22 percent or 35,000 carloads annually of chlorine which is an essential element used to purify more than half the nation’s water supplies and contained in 85 percent of all pharmaceuticals (Hazmat, 2009). Other hazardous materials (hazmats) moved by rail include fuels, fertilizers, disinfectants and cleaners, along with the chemicals used in foods, glass, medicines, weapons and munitions. The transportation of hazmats is an important problem due to their pervasiveness. Hazardous materials, or dangerous goods, include explosives, gases, flammable liquids and solids, oxidizing substances, poisonous and infectious substances, radioactive materials, corrosive substances, and hazardous wastes. Due to the nature of most chemicals, they can pose hazards of explosion, toxic release, and fire. The approximate 1.7 million carloads of hazmat transported by rail each year present a “Toxic Inhalation Hazard” (TIH). These are gases or liquids such as chlorine and anhydrous ammonia that are especially dangerous if released (Hazmat, 2009). The fact that the volume of hazardous materials moving by rail more than doubled since 1980 indicates that rail has become an integral part of the tremendous increase in the transport of hazardous materials. Because rail and truck transportation is inherently interstate in nature, the safe transport of any commodity, including hazardous materials, requires uniform standards that apply nationally. As common carriers, railroads and most major trucking firms are required by federal law to move hazardous materials. Since both modes must transport hazardous materials, the focus should be on the safest method of shipping, rail.

Chemical industry collapse causes extinction

Baum 99 (Rudy M., C&EN Washington, Chemical and Engineering News, Millennium Special Report, 12-6, <http://pubs.acs.org/hotartcl/cenear/991206/7749spintro2.html>)

Here is the fundamental challenge we face: The world's growing and aging population must be fed and clothed and housed and transported in ways that do not perpetuate theenvironmental devastation wrought by the first waves of industrialization of the 19th and 20th centuries. As we increase our output of goods and services, as we increase our consumption of energy, as we meet the imperative of raising the standard of living for the poorest among us, we must learn to carry out our economic activities sustainably. There are optimists out there, C&EN readers among them, who believe that the history of civilization is a long string of technological triumphs of humans over the limits of nature. In this view, the idea of a "carrying capacity" for Earth—a limit to the number of humans Earth's resources can support—is a fiction because technological advances will continuously obviate previously perceived limits. This view has historical merit. Dire predictions made in the 1960s about the exhaustion of resources ranging from petroleum to chromium to fresh water by the end of the 1980s or 1990s have proven utterly wrong. While I do not count myself as one of the technological pessimists who see technology as a mixed blessing at best and an unmitigated evil at worst, I do not count myself among the technological optimists either. There are environmental challenges of transcendent complexity that I fear may overcome us and our Earth before technological progress can come to our rescue. Global climate change, the accelerating destruction of terrestrial and oceanic habitats, the catastrophic loss of species across the plant and animal kingdoms—these are problems that are not obviously amenable to straightforward technological solutions. But I know this, too: Science and technology have brought us to where we are, and only science and technology, coupled with innovative social and economic thinking, can take us to where we need to be in the coming millennium. Chemists, chemistry, and the chemical industry—what we at C&EN call the chemical enterprise—will play central roles in addressing these challenges. The first section of this Special Report is a series called "Millennial Musings" in which a wide variety of representatives from the chemical enterprise share their thoughts about the future of our science and industry. The five essays that follow explore the contributions the chemical enterprise is making right now to ensure that we will successfully meet the challenges of the 21st century. The essays do not attempt to predict the future. Taken as a whole, they do not pretend to be a comprehensive examination of the efforts of our science and our industry to tackle the challenges I've outlined above. Rather, they paint, in broad brush strokes, a portrait of scientists, engineers, and business managers struggling to make a vital contribution to humanity's future. The first essay, by Senior Editor Marc S. Reisch, is a case study of the chemical industry's ongoing transformation to sustainable production. Although it is not well known to the general public, the chemical industry is at the forefront of corporate efforts to reduce waste from production streams to zero. Industry giants DuPont and Dow Chemical are taking major strides worldwide to manufacture chemicals while minimizing the environmental "footprint" of their facilities. This is an ethic that starts at the top of corporate structure. Indeed, Reisch quotes Dow President and Chief Executive Officer William S. Stavropolous: "We must integrate elements that historically have been seen as at odds with one another: the triple bottom line of sustainability—economic and social and environmental needs." DuPont Chairman and CEO Charles (Chad) O. Holliday envisions a future in which "biological processes use renewable resources as feedstocks, use solar energy to drive growth, absorb carbon dioxide from the atmosphere, use low-temperature and low-pressure processes, and produce waste that is less toxic." But sustainability is more than just a philosophy at these two chemical companies. Reisch describes ongoing Dow and DuPont initiatives that are making sustainability a reality at Dow facilities in Michigan and Germany and at DuPont's massive plant site near Richmond, Va. Another manifestation of the chemical industry's evolution is its embrace of life sciences. Genetic engineering is a revolutionary technology. In the 1970s, research advances fundamentally shifted our perception of DNA. While it had always been clear that deoxyribonucleic acid was a chemical, it was not a chemical that could be manipulated like other chemicals—clipped precisely, altered, stitched back together again into a functioning molecule. Recombinant DNA techniques began the transformation of DNA into just such a chemical, and the reverberations of that change are likely to be felt well into the next century. Genetic engineering has entered the fabric of modern science and technology. It is one of the basic tools chemists and biologists use to understand life at the molecular level. It provides new avenues to pharmaceuticals and new approaches to treat disease. It expands enormously agronomists' ability to introduce traits into crops, a capability seized on by numerous chemical companies. There is no doubt that this powerful new tool will play a major role in feeding the world's population in the coming century, but its adoption has hit some bumps in the road. In the second essay, Editor-at-Large Michael Heylin examines how the promise of agricultural biotechnology has gotten tangled up in real public fear of genetic manipulation and corporate control over food. The third essay, by Senior Editor Mairin B. Brennan, looks at chemists embarking on what is perhaps the greatest intellectual quest in the history of science—humans' attempt to understand the detailed chemistry of the human brain, and with it, human consciousness. While this quest is, at one level, basic research at its most pure, it also has enormous practical significance. Brennan focuses on one such practical aspect: the effort to understand neurodegenerative diseases like Alzheimer's disease and Parkinson's disease that predominantly plague older humans and are likely to become increasingly difficult public health problems among an aging population. Science and technology are always two-edged swords. They bestow the power to create and the power to destroy. In addition to its enormous potential for health and agriculture, genetic engineering conceivably could be used to create horrific biological warfare agents. In the fourth essay of this Millennium Special Report, Senior Correspondent Lois R. Ember examines the challenge of developing methods to counter the threat of such biological weapons. "Science and technology will eventually produce sensors able to detect the presence or release of biological agents, or devices that aid in forecasting, remediating, and ameliorating bioattacks," Ember writes. Finally, Contributing Editor Wil Lepkowski discusses the most mundane, the most marvelous, and the most essential molecule on Earth, H2O. Providing clean water to Earth's population is already difficult—and tragically, not always accomplished. Lepkowski looks in depth at the situation in Bangladesh—where a well-meaning UN program to deliver clean water from wells has poisoned millions with arsenic. Chemists are working to develop better ways to detect arsenic in drinking water at meaningful concentrations and ways to remove it that will work in a poor, developing country. And he explores the evolving water management philosophy, and the science that underpins it, that will be needed to provide adequate water for all its vital uses. In the past two centuries, our science has transformed the world. Chemistry is a wondrous tool that has allowed us to understand the structure of matter and gives us the ability to manipulate that structure to suit our own purposes. It allows us to dissect the molecules of life to see what makes them, and us, tick. It is providing a glimpse into workings of what may be the most complex structure in the universe, the human brain, and with it hints about what constitutes consciousness. In the coming decades, we will use chemistry to delve ever deeper into these mysteries and provide for humanity's basic and not-so-basic needs.

The nuclear sector is barely recovering - accidents massively dissuade investment in nuclear energy

Koebler 12 (Jason Koebler, 3/30/2012, US News, http://www.usnews.com/news/articles/2012/03/30/expert-nuclear-power-is-on-its-deathbed)

That government backing of nuclear energy is starting to change after the Fukushima meltdown. Even the staunchest nuclear advocates say that with new technologies, nuclear power can always be made safer, but nothing can offer a guarantee against a plant meltdown.¶ "In the wake of a severe nuclear accident like Fukushima, the attention of policymakers, regulators, and the public is riveted on the issue of nuclear safety," the report says. "The scrutiny is so intense that it seems like the only thing that matters about nuclear reactors is their safety."¶ Although several reports by nonpartisan groups have reinforced the perception that America's nuclear reactors aren't in danger of a meltdown, the public is wary. Earlier this month, an analysis of Fukushima by the American Nuclear Society blamed Japan's regulatory oversight and reaction to the meltdown for magnitude of the disaster. According to Michael Corradini, a co-author of that report, "things are acceptable going forward in the States."¶ "I don't think anything coming out of Fukushima would imply we aren't prepared," Corradini says.¶ Steven Kerekes, a spokesperson for the Nuclear Energy Institute, says that new safety measures are being placed in a new reactor set to go online in Georgia in 2017.¶ "There's some safety enhancements they're undertaking, despite the fact they're already safe," Kerkes says. "These enhancements will increase the margin of safety by another order of magnitude."¶ [Experts on Fukushima: It Can't Happen Here]¶ But according to a report by the Union of Concerned Scientists, 80 percent of America's nuclear reactors are vulnerable to at least one of the factors involved in the Fukushima disaster, including vulnerability to earthquakes, fire hazard and elevated spent fuel.¶ Retrofitting existing reactors with the latest safety equipment is extremely expensive, Cooper says.¶ Cooper says the very different natures of nuclear disaster versus coal pollution rightly makes people worried.¶ "Sometimes the industry says 'If people understood it better, they wouldn't be as concerned,'" he says. "It's a different kind of disaster, and the industry has to start accepting it is different. There's a very wide impact in the aftermath of a nuclear disaster—you've got large dead zones, large exclusion zones. These problems you create, they strike a chord in human beings that is very deep-seeded and real. It's the nature of the technology."

Accidents create a shift away from nuclear power to fossil fuels - that causes warming - maintaining nuclear power is key to solve

Weart 12 (Spencer, Center for History of Physics at the American Institute of Physics, doctorate in physics and astrophysics, 3/26/2012, "Shunning Nuclear Power Will Lead to a Warmer World," Yale Environment 360 http://e360.yale.edu/feature/shunning\_new\_nuclear\_power\_plants\_will\_lead\_to\_warmer\_world/2510/)

A disaster began when a tsunami struck the Fukushima nuclear reactors a little more than a year ago — but not the sort of disaster that most people think of. Attention has focused on the threat that Japanese citizens may have received doses of radiation that will increase their risk of cancer. But there are worse consequences for the health of the Japanese, and serious long-term impacts on all of us.¶ Japan has shut down almost all its reactors, and it’s unclear how many will ever restart. Germany has decided to phase out its nuclear power industry, and Italy and other nations are canceling ambitious plans for expansion. In the United States, prospects for additional reactors hang by a thread. Other nations, including India and China, continue to press ahead with their nuclear programs, but there can be little doubt that the Fukushima crisis has been a setback to prospects for a nuclear renaissance.¶ These blows to the world’s nuclear industry will have severe unintended consequences, most notably because they will inevitably lead to more burning of fossil fuels. Over the past half-century, wherever a nuclear reactor was not built, a coal-fired power plant usually was constructed to While nuclear reactors make me nervous, the consequences of fossil-fuel burning terrify me. supply the necessary electricity. In future decades, the fewer nuclear reactors, the more coal, natural gas, and oil will be consumed. To be sure, there are promising alternatives like wind and solar, and increases in efficiency so that fewer power plants will be needed. Yet realistically these cannot meet the intense demand for rising economic prosperity, especially in China and other developing nations. And while nuclear reactors make me nervous, the consequences of fossil-fuel burning terrify me.¶ The harm done to human health and the environment by all the nuclear accidents and nuclear waste releases in history is minor compared with the harm caused by the mining and burning of coal, with other fossil fuels not far behind. And there is worse: global warming, caused largely by the emission of heat-trapping gases from fossil fuels. If emissions continue to increase in a “business as usual” fashion — let alone if they increase even faster as reactors are phased out — future generations will suffer as we destabilize the climate system that has supported human civilization for thousands of years. Rising sea levels, droughts in key agricultural regions, and ever-worsening heat waves will threaten people just as the world’s population is projected to expand from 7 billion today to 10 billion by 2100. We will see the impoverishment of some of the ecosystems on which our society depends. While nuclear power offers no magical solution, it could help us avoid the worst.

**Warming causes extinction - a preponderance of evidence proves it's real, anthropogenic, and outweighs other threats**

**Deibel 7** — International Relations @ Naval War College (Terry, "Foreign Affairs Strategy: Logic of American Statecraft," Conclusion: American Foreign Affairs Strategy Today)

Finally, there is one major existential threat to American security (as well as prosperity) of a nonviolent nature, which, though far in the future, demands urgent action. It is the threat of global warming to the stability of the climate upon which all earthly life depends. Scientists worldwide have been observing the gathering of this threat for three decades now, and what was once a mere possibility has passed through probability to near certainty. Indeed not one of more than 900 articles on climate change published in refereed scientific journals from 1993 to 2003 doubted that anthropogenic warming is occurring. “In legitimate scientific circles,” writes Elizabeth Kolbert, “it is virtually impossible to find evidence of disagreement over the fundamentals of global warming.” Evidence from a vast international scientific monitoring effort accumulates almost weekly, as this sample of newspaper reports shows: an international panel predicts “brutal droughts, floods and violent storms across the planet over the next century”; climate change could “literally alter ocean currents, wipe away huge portions of Alpine Snowcaps and aid the spread of cholera and malaria”; “glaciers in the Antarctic and in Greenland are melting much faster than expected, and…worldwide, plants are blooming several days earlier than a decade ago”; “rising sea temperatures have been accompanied by a significant global increase in the most destructive hurricanes”; “NASA scientists have concluded from direct temperature measurements that 2005 was the hottest year on record, with 1998 a close second”; “Earth’s warming climate is estimated to contribute to more than 150,000 deaths and 5 million illnesses each year” as disease spreads; “widespread bleaching from Texas to Trinidad…killed broad swaths of corals” due to a 2-degree rise in sea temperatures. “The world is slowly disintegrating,” concluded Inuit hunter Noah Metuq, who lives 30 miles from the Arctic Circle. “They call it climate change…but we just call it breaking up.” From the founding of the first cities some 6,000 years ago until the beginning of the industrial revolution, carbon dioxide levels in the atmosphere remained relatively constant at about 280 parts per million (ppm). At present they are accelerating toward 400 ppm, and by 2050 they will reach 500 ppm, about double pre-industrial levels. Unfortunately, atmospheric CO2 lasts about a century, so there is no way immediately to reduce levels, only to slow their increase, we are thus in for significant global warming; the only debate is how much and how serous the effects will be. As the newspaper stories quoted above show, we are already experiencing the effects of 1-2 degree warming in more violent storms, spread of disease, mass die offs of plants and animals, species extinction, and threatened inundation of low-lying countries like the Pacific nation of Kiribati and the Netherlands at a warming of 5 degrees or less the Greenland and West Antarctic ice sheets could disintegrate, leading to a sea level of rise of 20 feet that would cover North Carolina’s outer banks, swamp the southern third of Florida, and inundate Manhattan up to the middle of Greenwich Village. Another catastrophic effect would be the collapse of the Atlantic thermohaline circulation that keeps the winter weather in Europe far warmer than its latitude would otherwise allow. Economist William Cline once estimated the damage to the United States alone from moderate levels of warming at 1-6 percent of GDP annually; severe warming could cost 13-26 percent of GDP. But the most frightening scenario is runaway greenhouse warming, based on positive feedback from the buildup of water vapor in the atmosphere that is both caused by and causes hotter surface temperatures. Past ice age transitions, associated with only 5-10 degree changes in average global temperatures, took place in just decades, even though no one was then pouring ever-increasing amounts of carbon into the atmosphere. Faced with this specter, the best one can conclude is that “humankind’s continuing enhancement of the natural greenhouse effect is akin to playing Russian roulette with the earth’s climate and humanity’s life support system. At worst, says physics professor Marty Hoffert of New York University, “we’re just going to burn everything up; we’re going to het the atmosphere to the temperature it was in the Cretaceous when there were crocodiles at the poles, and then everything will collapse.” During the Cold War, astronomer Carl Sagan popularized a theory of nuclear winter to describe how a thermonuclear war between the Untied States and the Soviet Union would not only destroy both countries but possible end life on this planet. Global warming is the post-Cold War era’s equivalent of nuclear winter at least as serious and considerably better supported scientifically. Over the long run it puts dangers form terrorism and traditional military challenges to shame. It is a threat not only to the security and prosperity to the United States, but potentially to the continued existence of life on this planet.

The United States federal government should implement an integrated National Transportation Strategy to increase railroad transportation security

### Solvency - 1AC

Contention [ ] is Solvency

Implementing an NTS is key to rail security

**Capra 6** (Gregory Capra, chief of program management at Andrews AFB, Maryland, Air War College @ Maxwell AFB, Federal Civilian Service, BRAC Analyst for the Air Force, 2006, "Protecting Critical Rail Infrastructure," Maxwell AFB)

Actions required to protect these assets are: (1) accelerated development of high-volume, walk-through chemical, biological, and radiation sensors to screen passengers and bags at transit stations; (2) rerouting hazardous cargo railroad shipments around cities with high densities of population; and (3) developing an integrated National Transportation Strategy. Abstract Terrorist attacks and accidents involving rail systems have resulted in death and destruction. The attacks in Madrid and London are good indications of the potential effects of a terrorist attack on the United States rail systems. Three years after the Madrid bombings, the United States has made little progress in securing its rail systems. This paper advocates that the United States develop a long-range, comprehensive, integrated National Transportation Strategy to address security of the systems and the demand to move more people and cargo. A background on foreign terrorist attacks in the United States and an overview of rail systems are included, as well as an examination of: • terrorist threats to the United States and its rail systems; • vulnerabilities and critical elements of freight railroads and passenger rail systems; • Department of Defense’s role in protecting critical rail infrastructure; and • specific recommendations on what to protect first and how to protect it. Priorities for protecting rail systems are: (1) transit rail stations in the biggest, most densely populated cities with a history of terrorist attacks; (2) railroad shipment of hazardous materials through large metropolitan areas; and (3) passenger trains and other rail stations.

**Federal action is the key – maintain competitiveness and get other sectors on board**

Rosenbloom & Wachs 12 (Sandra Rosenbloom, Director of the Drachman Institute @ U Arizona, Institute fo Land and Regional Development Studies AND Martin Wachs, senior principal researcher at RAND, director of RANAD Transportation, Space, and Technology Program, Civil and Environmental Engineering and City and Regional Planning @ Berkeley, Urban Planning @ UCLA, "A Federal Role in Freight Planning and Finance," RAND)

Demands for Federal Action Most analysts and stakeholder groups have concluded that there is a role for the federal government in addressing problems in the U.S. freight system. At the core of major debates, however, are questions about how often, how much, how, and with what sources of funds the federal government should respond. Many industry groups and analysts have argued that the federal government should make substantial efforts to address freight issues. The American Association of State Highway and Transportation Officials (undated) asserted that, Unless America takes direct action soon to develop [a] New Interstate Highway System, the nation’s freight highway network will experience greater unreliability, delay, and congestion. Incremental changes will fall far short of the necessary investment needed to reverse these trends. (p. 21) Many freight stakeholders, particularly in the private sector, argue that the federal government must intervene aggressively to maintain national productivity and increase American competitiveness. Michael Lind, writing in the December 2009 issue of McKinsey Quarterly, commented, . . . the low cost and reliability of freight transportation in the United States have been critical to the country’s economic success. But America’s failure to modernize its overloaded freight transportation infrastructure—chiefly the railroad network and highways used by trucks, but also inland waterways, ports, and airports—is imposing costs on American efficiency. As a result of congestion (highway delays, for instance), the penalty on American growth exacted by logistics costs rose from 8.6 percent of GDP in 2003 to 10.1 percent in 2007, even before the crisis [the current downturn in the economy]. Robert Poole and Adrian Moore of the Reason Foundation, which has called for reduced federal funding of a variety of transportationrelated activities, find that freight activities are worthy of federal assistance (Poole and Moore, 2010). Calling the urban interstates “the lifeblood of goods movement” (p. i) Poole and Moore conclude that commerce and international trade are clear federal responsibilities and should “be at the core of a rethought federal role” in transportation.

**Federal action is key - it accelerates development and reduces inefficiencies from private involvement**

**Capra 6** (Gregory Capra, chief of program management at Andrews AFB, Maryland, Air War College @ Maxwell AFB, Federal Civilian Service, BRAC Analyst for the Air Force, 2006, "Protecting Critical Rail Infrastructure," Maxwell AFB)

First, the U.S. Government must invest in automated security technology to ensure a 24/7 security blanket is in place at transit stations. Technology such as surveillance cameras and sensors can reduce the financial burden of personnel costs during times of elevated security across the country. Under the current system, every time there is a threat of a possible terrorist attack, increased surveillance costs millions of dollars in personnel overtime. The U.S. Government must take the lead to accelerate development, testing, and implementation of high capacity scanners for conventional explosives, chemical agents, and biological agents. Much research and development work and acquisition funding will be required before a practical security system is feasible. Second, the U.S. Government needs to address the transportation of hazardous materials through densely populated areas. State and local governments do not have the authority to restrict passage since this involves interstate transportation of goods. Therefore, the U.S. Government needs to provide funding or incentives for the freight railroads to relocate rail lines carrying hazardous materials away from densely populated areas with critical choke points like the Howard Street Tunnel in Baltimore. In addition, shipment of hazardous materials either should never be routed through major population centers or should at least be restricted in densely populated areas or through critical nodes during high threat levels. As a minimum, the U.S. Government needs to require freight railroads to notify local governments when transporting hazardous materials to allow these communities the opportunity to provide additional security. Third, federal and state governments need to develop and publish standards for prioritizing what is defended and then should oversee the vulnerability assessments of critical assets to ensure consistency. Lack of sufficient funding is the number one issue preventing transit organizations from implementing security enhancements and they are looking to the federal government for that funding.87 Before the federal government invests tax dollars or provides tax incentives to make security improvements, standards for risk assessments and levels of security need to be established. Several standard and risk assessment models exist that can be used to ensure comparable results. For example, the Federal Highway Administration’s Recommendations for Bridge and Tunnel Security provides an assessment guide that could be applied across all transportation systems.88 The Federal Transit Agency’s Transit Security Design Considerations provides guidance on incorporating security measures into transit projects.89 The GAO recommends systematic planning to optimize resources. For example, they found that the Transportation Security Agency acted promptly to meet the Congressional mandate to screen 100 percent of the luggage on commercial airlines for explosives, but they did not always use a risk assessment process to determine priorities and requirements. This led to 7,000 explosive scanners being installed in airport lobbies rather than being incorporated into the airport baggage conveyor system. Since these systems were not engineered into the screening process, the net result was an operational inefficiency and a requirement for additional screeners. The Transportation Security Agency is now working with nine airports to correct the oversight. Once implemented, this initiative will reduce the number of screeners and supervisors by 78 percent and save the government $1.3 billion over 7 years.90 Procedures need to be developed for screening passengers and luggage boarding trains and similar approaches to this would avoid many future problems if things are done systematically. The rail industry should learn from the airline industry’s experiences with security screening and avoid making the same costly mistakes. Fourth, the top priority for freight railroads is the physical security of transfer and maintenance yards. This can be accomplished by securing the perimeter and controlling entry. The U.S. military uses a layered approach in force protection, which could easily be followed by the freight railroads. The ultimate goal is to minimize mass casualties. Securing the perimeter of the installation defends against threats like car and truck bombs. Controlling the access at a limited number of manned gates could help ensure that authorized personnel and visitors are allowed in terminals and trains. The second layer of protection inside the perimeter is to ensure a proper standoff distance is maintained by not allowing vehicles to park within 25 meters of a rail facility or train. The freight railroads and Association of American Railroads, like U.S. military installations, set the standard for taking decisive action to secure their sector after the attacks of 9/11. However, a GAO visit to several stations showed that the rail companies need to secure the perimeter of the rail and in-route storage yards and control access to them. It is the same for railroad companies as for U.S. military installations; they need to be vigilant and provide security to their critical assets. Finally, United States Congress needs to establish and approve a long-range strategy addressing all modes of transportation. At a strategic level, it is easy to argue rail systems should be viewed as national assets in the same manner as the airports, airport security, and federal highways. The federal and state governments need to develop a near-term transportation plan for 2007 and a long-range National Transportation Strategy to provide a vision for the year 2030. This strategy needs to address transportation security issues; protection of intercity passenger rail service; defending freight transportation; providing security of air, rail, and highway systems; and increasing railroad capacity to handle the projected 57 percent increase in freight by 2020.91 There are two supporting reasons why a National Transportation Strategy is needed: • The first reason is discussed in Mr. Jenkins paper, Improving Public Surface Transportation Security: What Do We Do Now? He recommends the government develop a transportation system security strategy that focuses on: “preventing the loss of life; minimizing long-term risks to heath; and limiting social upheaval, . . . environmental catastrophe and economic disruption.”92 He suggests: “Vulnerable bridges can be upgraded and protected at a cost, or, if they are near obsolescence, they can be replaced with new physically stronger structures. The system could also be augmented with additional bridges to make it less vulnerable overall. Rather than merely becoming a continuing operational expense, security could be the basis for the reconstruction of the U.S. national transportation infrastructure.”93 • The second reason is the amount of money the federal government has spent to keep Amtrak in business that could have been used to fund transportation security. The federal government has spent $21.3 billion for Amtrak from fiscal years 1976 to 2003.94 GAO recently reported that it has cost the federal government $1 billion annually over the last five years to keep Amtrak operating. Plus, Amtrak says it will need $2 billion annually for operations and deferred maintenance, plus an estimated $70 billion over the next 20 years to expand the high speed passenger rail network.95 GAO recommended Congress consider developing a system-wide approach to transportation, as opposed to a focusing on one mode or type of travel. This type of approach may significantly change funding for Amtrak.

**Federal funding is key - it's the DHS responsibility**

McCarter 11 (Mickey McCarter, Journalist at Homeland Security Today, “TSA Calls for Increased Vigilance Due to Threat of Rail Plot”, <http://www.hstoday.us/briefings/today-s-news-analysis/single-article/tsa-calls-for-increased-vigilance-due-to-threat-of-rail-plot/ee3a737e6470b70bf35d05bc696c3c82.html>,)

Not everyone approved of the DHS decision to not issue an NTAS alert. Sen. Susan Collins (R-Maine), ranking member of the Senate Homeland Security and Governmental Affairs Committee, questioned Homeland Security Secretary Janet Napolitano about the decision in a hearing May 11. Friday, she reiterated her position that DHS should raise the alert level in light of intelligence concerning the plot against US rail systems. "Earlier this week, I urged the Secretary of Homeland Security to increase the threat level, at least for the next two weeks, while an intelligence assessment is conducted of the data seized from Osama bin Laden's compound and as a precautionary measure given the possibility of a retaliatory attack. I continue to question the secretary's decision not to increase the threat level," Collins said in a statement. William Millar, president of the American Public Transportation Association (APTA), stressed the history of terrorist attacks against rail lines and buses. Al Qaeda and other Islamist extremists have attacked rail transit systems in London, Madrid, and Moscow in recent years. The Government Accountability Office (GAO) reported in 2002 that one-third of terrorist attacks globally target transportation systems, Millar noted. "The threat to public transportation still clearly exists and the federal government needs to step up to the plate and adequately fund our nation's public transportation security needs. Transit security is national security and national security is the responsibility of the federal government," Millar said in a statement Friday. Federal funding for transit security has been too low, Millar argued. In fiscal 2011, DHS provides only $250 million in transit security funding outside of airport security. The White House has proposed $300 million in its fiscal 2012 budget. "Both of these levels of investment are inadequate," Millar said. "The 9/11 Commission Act [Public Law 110-53] called for the need for increased investment in transit security and authorized funding at the following levels: $650 million (fiscal 2008), $750 million (fiscal 2009), $900 million (fiscal 2010), and $1.1 billion (fiscal 2011) or $3.4 billion over four years. In fact, over the past four years, Congress has only appropriated less than half of the funding it authorized in the 9-11 Commission Act." Millar cited a recent survey that determined US public transportation systems require $6.4 billion over the next five years to adequately secure their infrastructure. He called upon Congress to enact legislation to "dramatically" increase federal transit security spending.

**The railroad industry is key - it's the most vulnerable**

**Capra 6** (Gregory Capra, chief of program management at Andrews AFB, Maryland, Air War College @ Maxwell AFB, Federal Civilian Service, BRAC Analyst for the Air Force, 2006, "Protecting Critical Rail Infrastructure," Maxwell AFB)

One critical infrastructure is the U.S. transportation system.6 The focus of this paper will be on the security issues surrounding only the rail portion of transportation. The national objectives for protecting critical infrastructure are: (1) to identify and assure the protection of those assets, systems, and functions that we deem most “critical” in nature, particularly in a national or major regional context; (2) to assure the protection of infrastructures and assets that face a specific, imminent threat; and (3) to pursue collaborative measures and initiatives to assure the protection of other potential targets that may become attractive over time.7 Rail Background Rail systems are classified into two categories. The first is the freight rail system which includes the DoD Strategic Rail Network. Freight systems are privately owned. Seven major railroads own 80 percent of the rail lines and the remaining 20 percent is owned by more than 500 short line railroads. The amount of Class I rail lines has steadily decreased since the height of railroad use in the early 1900s. There are approximately 100,000 miles of Class I rail lines crossing the country.8 Of this amount, DoD classifies 30,000 miles of Class I rail lines as critical to mobility for national defense. The freight railroads are the workhorse for moving large quantities of raw materials long distances. Freight railroads carry 42 percent of intercity freight, including 65 percent of coal shipments, 70 percent of automobile shipments, and 30 percent of grain shipments when compared on a ton/mile basis.9 The freight network has some redundancy, providing resiliency against critical failure. The second is the passenger rail system that includes intercity passenger rail (Amtrak) and transit rail which includes commuter rail, heavy-rail (metro, subway, rapid transit, or rapid rail) and light-rail (streetcar, tramway, or trolley).10 According to The National Strategy for The Physical Protection of Critical Infrastructure and Key Assets, about 20 million intercity passengers ride trains annually that travel on the surface and 45 million passengers ride subways each year.11 Amtrak operates intercity passenger service on 22,000 miles of rail track but only owns 650 miles of rail track in the profitable northeast commuter corridor.12 “Amtrak serves over 500 train stations, the majority of which are owned by cities, states, and freight railroads. However, about 135 stations are owned by Amtrak, including Penn Station in New York, which is used by 400,000 [local] commuters and intercity rail customers daily. Amtrak also owns and operates the Northeast Corridor, the most heavily traveled passenger rail corridor in the country, [running] over 1,200 trains per day, including over 1,000 trains operated by commuter authorities.”13 Transit rail systems have 6,800 miles of commuter rail, 1,600 miles of heavy-rail and 1,000 miles of light-rail.14 Each year public transit serves 9.5 billion passengers (including buses), approximately onethird of these passengers use transit rail systems. On a daily basis, this is greater than the total number of passengers served by air or intercity rail.1

### Enviro Racism - 1AC

Contention [ ] is Environmental racism -

Hazardous materials are specifically transported through areas that have a high portion of minorities -the impacts are most likely to affect these individuals

Marshall 5 (Alan Marshall, Department of Environmental Humanities, School of Social Studies, Masaryk University, 2005, "The Social and Ethical Aspects of Nuclear Waste," Electronic Green Journal)

Indigenous Issues¶ Many countries with historical settler-populations have laws maintaining the land rights and personal rights of indigenous communities. Some of these countries, for instance, the United States, Canada, and Australia, have nuclear waste. In these countries it often happens that nuclear waste facilities are proposed in remote areas occupied by a high proportion of indigenous people or near to indigenous reservations. An added concern is that these communities are often peripherilized and economically disadvantaged (Fowler, Hamby, Rusco, & Rusco, 1990). This is a recipe for deep social injustice based not only on regionalism and economic inequality but on ethnic issues as well. For instance, Lois Wilson (2000) in Canada noted that one representative of the Canadian indigenous community in a preliminary hearing said that he:¶ represents fifty First Nation communities, inhabiting two-thirds of the Ontario land mass. Thirty-five of these communities do not have road access, twenty-five are not connected to the electric power grid, and none use nuclear power. (p. 16)¶ In Canada, the responsible authorities have now at least recognized the necessity to incorporate indigenous concerns into radioactive waste management (Nuclear Energy Agency, Radioactive Waste Management Committee, 2003). Amongst the cited concerns of indigenous groups within targeted sites are the issues of maintaining access to water and land resources, protecting the quality of these resources, health and safety against accidents and pollution, protecting important historical and cultural sites, and sustaining and enhancing cultural and economic opportunities for community members.

The federal government routinely reneges its responsibility to help the underprivileged - those who are unable to protest have their homes transformed into hazardous waste dumping grounds

Mantigua 2k (Juleyka Mantigua, managing editor of Urban Latino magazine, 10/4/2000, "Environmental Racism Threatens Minorities," LA Sentinel)

"People of color and low income are disproportionately affected by some environmental risks--the risk of living near landfills, municipal waste combustors, or hazardous waste sites," EPA Administrator Carol Browner testified before Congress. "I have made environmental justice one of the key policy themes of my administration."¶ In 1997, the Clinton administration backed up that commitment when the Nuclear Regulatory Commission rejected a permit for Louisiana Energy to build a nuclear plant near two black neighborhoods in Northern Louisiana.¶ But the EPA's guidelines released in late June stipulate that "Both the demographic disparity and the disparity in rates of impact (must be) at least a factor of two times higher in the affected population" for the EPA's Office of Civil Rights to pursue civil-rights cases against companies.¶ Environmental racism is already hard to prove. Now it's going to be twice as hard.¶ Ethnic minorities are 50 percent more likely than whites to live in communities with hazardous waste facilities, according to the National Black Environmental and Economic Justice Coordinating Committee, a lobbying organization that represents more than 100 minority neighborhoods in 30 states.¶ This exposure increases the risks for ethnic minorities of getting asthma, prostate cancer and other deadly diseases.¶ For minority communities, this issue strikes all too close to home.¶ In New York City, Bronx residents are up in arms about American Marine Rail's proposed waste transfer plant. The state's Department of Environmental Conservation has granted a waste management company permission to build a barge-to-rail transfer station in the heart of their community.¶ Blacks in West Oakland are concerned by the high levels of vinyl chloride, a gas that has been linked to a rare form of liver cancer. Since the 1950s, the federal land nearby has been used by the military as a dumping ground for biological materials. Some longtime residents and community organizers worry that the rates of asthma, breast cancer and prostate cancer have dramatically increased among black residents.¶ Nearby Richmond, a black residential area, has the dubious honor of being No. 1 among Bay Area black communities in terms of its pollution level.¶ According to government records obtained by activists, more than 350 industrial facilities handle hazardous materials in the area, and some 210 hazardous chemicals are stored or released nearby. Companies emit 800,000 pounds of toxic air contaminants, almost 18,000 pounds of pollutants in wastewater and some 179,000 tons of hazardous waste every year, according to the Sun Reporter.¶ Communities affected by environmental racism ought to be able to depend on the EPA to take their side against polluters. But with the new guidelines, the EPA is reneging on its commitments. Ethnic communities may pay a high price for this.

This is the result of a skewed decisionmaking paradigm which prioritizes the welfare of white, affluent majorities - the federal government has an obligation to resolve these problems

Bullard & Clinton 94 (Robert Bullard, Hydroscience & Engineering, University of Iowa AND William Clinton, 1994, "Overcoming racism in environmental decisionmaking," Environment, Vol. 36(4))

Despite the recent attempts by federal agencies to reduce environmental and health threats in the United States, inequities persist.(1) If a community is poor or inhabited largely by people of color, there is a good chance that it receives less protection than a community that is affluent or white.(2) This situation is a result of the country's environmental policies, most of which "distribute the costs in a regressive pattern while providing disproportionate benefits for the educated and wealthy."(3) Even the Environmental Protection Agency (EPA) was not designed to address environmental policies and practices that result in unfair outcomes. The agency has yet to conduct a single piece of disparate impact research using primary data. In fact, the current environmental protection paradigm has institutionalized unequal enforcement; traded human health for profit; placed the burden of proof on the "victims" rather than on the polluting industry; legitimated human exposure to harmful substances; promoted "risky" technologies such as incinerators; exploited the vulnerability of economically and politically disenfranchised communities; subsidized ecological destruction; created an industry around risk assessment; delayed cleanup actions; and failed to develop pollution prevention as the overarching and dominant strategy. As a result, low-income and minority communities continue to bear greater health and environmental burdens, while the more affluent and whites receive the bulk of the benefits.(4)

It is your obligation as a policymaker to resolve issues of environmental justice - vote affirmative to rectify status quo discriminatory policies - our discourse is key

Marshall 5 (Alan Marshall, Department of Environmental Humanities, School of Social Studies, Masaryk University, 2005, "The Social and Ethical Aspects of Nuclear Waste," Electronic Green Journal)

Social and Political Change¶ The social and political backgrounds against which radioactive wastes are to be managed are liable to change, perhaps drastically, in both the short-term and long-term life of the waste. Some, like Buser (1997),have noted that our knowledge of the physical environment and our prediction of its stability, while full of lacunae and doubts, are far more impressive than our ability to understand and predict the course of the social and political environment."Political science fiction" is the phrase Lois Wilson (2000) is driven to use when cogitating about failing institutions and changing social circumstances over the lifetime of radioactive waste.¶ Writers like Wilson are sensitive to the fact that things are going to change quite unpredictably. It's not only the case that wars will be fought, economic slumps and booms will come and go, but that nations also may rise and fall. And even the concept of a nation may disappear (as some intimate with regard to globalization (Giddens, 2000)) taking along with it, perhaps, any institutional body charged with maintaining control or a watching brief over nuclear waste.¶ Given all of this, many have stated that now is the time to solve the problem, now is the time to think of a permanent solution (McCombie, Pentz, Kurzeme & Miller, 2000; McCombie & Chapman, 2002; Säteilyturvakeskus, 1989; Nuclear Energy Agency, 1995; International Nuclear Societies Council, 2002). Whether this is true or not, an important question that must come up is this: is it worthwhile making any predictions for the future of social environment as is done with the physical environment? Some, like Wilson (2000), would say no, since it is merely sooth-saying. The chances of you predicting the right result are very small. Others may say yes, but only if we acknowledge that our predictions are limited to generalities. It is possible, for example, for social scientists to arrive at a range of scenarios for future societies that are helpful in providing overall advice to today's radioactive waste managers. Given that most social science has never been a predictive art, except to those with a distinct utopian agenda, most sociologists would be skeptical of the social and political predictions. However, based on their attempts to delve into the social aspects of other environmental problems (Williams, 1998; Dunlap & Michelson, 2002) , and based upon their attempts to tease out the social aspects within scientific and technological projects (Sismendo, 1996; Mack, 1990), most social scientists would be convinced of the massive importance of social and political issues on the future management of nuclear waste, and they'd probably say that these factors would equal or outweigh many of the technical factors already considered by nuclear waste managers.¶ Information Upkeep¶ If future generations are to be able to care for or avoid the radioactive waste facilities that this generation constructs, then some way of communicating the dangers of radioactive waste to these future generations has to be realized. However, any attempt to do this must be cognizant of the changing regimes of information storage. Mainstream manners of conveying information are obviously subject to change over long time periods. Many of the oral traditions and symbolic representations that were standard thousands of years ago are largely lost to or lost on the current generation. Similarly, the documents we produce now relating to the siting of dangerous waste are less likely to survive than the waste itself. The digital revolution may exacerbate this problem according to Ulrike Fink (1993) who points out that data losses may take place even faster due to the rapid progress and subsequent incompatibility of computer systems.

### **Inherency - Enviro Racism**

Nuclear waste disposal procedures structurally discriminate against the underprivileged

Marshall 5 (Alan Marshall, Department of Environmental Humanities, School of Social Studies, Masaryk University, 2005, "The Social and Ethical Aspects of Nuclear Waste," Electronic Green Journal)

Many prospective facilities have come across stiff opposition when proposed by governmental or private bodies. Despite this, though, the resources and funds that nuclear resistance groups are able to muster compared to the nuclear industry and government is very small. Governments and business can inject funds into their side of the proposal to produce advertisements, campaigns, education projects, and so forth, all aimed at fostering a public opinion conducive to their plans. If consent is given within such an atmosphere of often subtle but perfectly legal coercion, then what is the ethical status of the facility?¶ Normally we would regard all players in technology and environment debates as rational and well-informed actors capable of making up their own minds. For instance, if a radioactive waste facility was planned in a disused metro station in central New York or London and then opposed by the local people, we'd regard the people as being quite rational and informed. But as Blowers and Shrader-Frechette have illustrated, the communities subjected to waste facility plans (and the workers who are promised jobs in these facilities) may be regarded as peripheralized communities and economicallydisadvantaged workers, unable to access all the information they need, unable to access independent points of view, and unable to fully judge the economic benefits versus the radiological risk.¶ All this gives rise to what Shrader-Frechette (1991) and Wigley (Wigley & Shrader-Fechette, 1994) would call the consent dilemma: wherein the siting of nuclear waste facilities and the employing of nuclear waste workers requires the consent of those who are put at risk; yet those most able to give free, informed consent are usually unwilling to do so, and those least able to validly consent are often willing to do so because they are unaware of the dangers.¶ These problems then beg us to ask the following questions with regards to siting nuclear waste facilities.¶ \* What is an adequate level of information and understanding for people to make a decision?¶ \* Do all stakeholders have equal access to adequate information and assistance in understanding?¶ \* Who should be in charge of ensuring adequate and equally-accessed information and understanding?

Minority communities are targeted by design, not accident - the mentality of profit maximization motivates industries to avoid hurting the powerful

Flores 98 (John Flores, September 1998, "Not In Nuestro Backyard," Hispanic, Vol. 11(9))

Nature does not discriminate while doling out either its bounty or its wrath. Human beings, on the other hand, are not so objective. Pitting nature against economics by targeting communities of color for undesirable enterprises is known as, "environmental racism." In the West Texas town of Sierra Blanca, environmental racism takes the form of a nuclear-waste dump site.¶ Because the "minority" is the majority in this area of Texas, racial prejudice has had to go underground in a very literal sense. Powerful political figures and businesspeople are hoping to bring nuclear waste to a predetermined dump site near Sierra Blanca, despite the fact that the site is located directly over a geologic fault line and an aquifer set aside for future use by El Paso, an hour's drive from Sierra Blanca. "This nuclear-waste dumping issue is a classic example of how the poorest communities, usually those with a high concentration of minorities, are targeted for hazardous-waste dump sites," said Congressman Lloyd Doggett (D-Texas).¶ Doggett and U.S. Senator Paul Wellstone (D-Minnesota) tried to stop legislation that would bring nuclear waste to Sierra Blanca from all over the country. The House approved legislation, July 29, creating the Texas Low Level Radioactive Waste Disposal Compact which would allow Vermont and Maine to ship low-level nuclear waste to Texas. The state in turn will collect a fee of $25 million. The legislation had not passed the Senate at press time. "The people of Sierra Blanca have the least political power to resist this. There are so many people lobbying for the [nuclear waste dump] to be located there," Doggett continued. "This is a very important issue for the people of the area, and thev have exoressed strong concerns over health considerations. The nuclear waste could leak into the underground water supply."¶ The average income of Sierra Blanca residents is $9,000 per year. Thirty-nine percent live below the poverty line, and about 70 percent are Latino. Already, a site the size of El Paso, near Sierra Blanca, receives 250 tons of sewage weekly from cities across the country. It is one of the largest sewage-sludge projects in the world, Wellstone said. About 9,000 people from the area have signed petitions against the waste dump, to be presented to Texas Governor George W. Bush, Jr., Congress, and President Bill Clinton, said Blanca Torres, a spokesperson for the Sierra Blanca Legal Defense Fund. "They think they can do anything right now because the Mexican people are mostly poor. But it will affect the water of El Paso. It's directly over a fault line and [an aqifer for El Paso]. Why don't people realize that," Torres said.¶ A contingent of local businessmen supports the dump, arguing that its economic impact outweighs any environmental threat. Public sentiment is so strong, however, that they refused to be quoted for this article fearing a negative reaction from the community.¶ Environmental racism is not a new issue. A 1987 study bY the Commission for Racial Justice, "Toxic Waste and Race in the United States," concluded that minority communities are targeted for environmentally hazardous industry.What makes the dump an environmental justice issue is the fact that poor communities are made to choose between their environment and jobs.

### **Inherency - Funding**

Rails underfunded now - the focus is on aviation

**Capra 6** (Gregory Capra, chief of program management at Andrews AFB, Maryland, Air War College @ Maxwell AFB, Federal Civilian Service, BRAC Analyst for the Air Force, 2006, "Protecting Critical Rail Infrastructure," Maxwell AFB)

Part of the concern is the U.S. Government’s lack of emphasis on and funding for the security of rail systems. Essentially, protection of U.S. rail systems have been given a much lower priority than protection of the U.S. airline industry as a result of the impact of the terrorists’ acts on the commercial aviation industry. This is reflected in the funding provided by the U.S. Government for security through the Transportation Security Agency. During the Secretary of Homeland Security’s testimony before the Homeland Security Committee, Representative Bennie Thompson (D-MS) pointed out the fact that the Transportation Security Agency focused too much on aviation and had allocated a mere 7 percent of its budget to inspect and patrol rail lines. Representative Thompson felt this was unacceptable and that, if necessary, the Transportation Security Agency should be reorganized to make rail security a higher priority.30 In addition, the GAO recently reported that funding for aviation security for fiscal years 2005 and 2006 was 87 percent of the Transportation Security Agency’s budget.31 The president of the American Public Transportation Association testified that since 9/11 the industry identified a $6 billion requirement for security enhancements of all systems, they invested $2 billion, and only received $250 million from the Transportation Security Agency over three years.32 Finally, the Federal Transit Administration assessed transit national critical infrastructure as “. . . designed and operated as an open environment—it is by its very nature a high risk, high consequence target for terrorists. More than 9.5 billion passengers a year ride our transit systems. Some of the largest transit systems report that more than 1,000 people a minute enters their largest intermodal facilities during rush hour. Transit subways travel under key government buildings, business centers, and harbors. Worldwide, transit has been a frequent terrorist target, including bombings in the London and Paris subways [and bus lines], the sarin gas attack in Tokyo, and bus bombings in Israel.”33 Approximately 3 percent of the total gross domestic product, $319 billion, is attributed to freight for-hire transportation services. Of this, rail systems account for approximately $26 billion.34 The gross domestic product attributed to transportation-related final demand is over $1.1 trillion, about 10.5 percent.35 In addition, the annual operation expenses for the transit sector exceed $30 billion annually.36 With such a high potential to affect the economy, it is possible the next terrorist attack in the United States could be on the rail systems.

### **Inherency - Patchwork**

Centralizing rail funding is key to solve - current legislation is patchwork - degrades security requirments

Temple 7 (Bob Temple, Group 7, think tank for railroad security, "Major Vulnerabilities to Railway Security," Penn State, 5/8/2007, http://www.personal.psu.edu/staff/r/p/rpt117/sra211/vulnerabilities.htm)

Ambiguity in Who Is Responsible For Security The last major vulnerability with railway security is that the United States does not have one specific agency that deals with the security of its railways. In fact, it actually has over four separate agencies working on implementing security to difference aspects of the railway system. According to the GAO Report, the Transportation Security Administration, Federal Railroad Administration, Federal Transit Administration, and the Research and Special Programs Administration are all partially responsible for railway security. This poses a problem, because with the agencies working separate of one another, the possibility for gaps in security arises. If each agency thinks that the others have already thoroughly covered a particular vulnerability, it is possible that none of them will actually put in the time and work necessary to fully secure that vulnerability. Another costly problem with not having a specific agency responsible for railway security is that certain security aspects that are completely secure may be covered multiple times by multiple agencies. On the surface this seems like a good thing, because we are positive that that aspect is entirely covered. However, if you look at the financial costs of repeate dly covering the same security aspects multiple times, it becomes obvious that a large amount of funds are wasted that could be used on securing other vulnerabilities.

### **Terrorism - Feasible**

Empirics prove - it's easy to pull off

Jenkins & Butterworth 10 (Brian Jenkins, director of the National Transportation Security Center AND Bruce Butterworth, field research director, 2010, "Potential Terrorist Uses of Highway-Borne Hazardous Materials," Mineta Transportation Institute, <http://transweb.sjsu.edu/mtiportal/research/publications/documents/2981_Terrorist%20Uses_011410.pdf>)

In January 2008 alone, multiple thefts of tankers occurred. In examining these and other attacks, several observations arise: 1. The theft of fuel oil appears to be a significant crime, requiring some level of organization. In other words, it is the act not of a single criminal, but of a conspiracy—probably an informal, local one. This suggests that terrorists who seek knowledge of how fuel can be stolen can obtain it. 2. The theft of fuel appears to be related to fuel costs, if fuel prices increase, criminal thefts will also increase. Thus, the motivation for and sophistication of the thefts will increase, and so will the knowledge of successful techniques. Most of the thefts have occurred where fuel oil is needed and transported the most: on the mid-Atlantic seaboard and in the Northeast, areas that account for nearly 80% of the fuel oil used in the United States. 24 3. The fact that many thefts of tankers take place at night and from unguarded sites, some of them by hot-wiring or using keys left in the trucks, suggests that security measures could be strengthened with relatively little effort. 4. Some of the thefts are simple hijackings at gunpoint with the driver in the rig, or thefts of vehicles left unattended at a truck stop. Site visits performed by the authors of this report confirmed that there is a concern about common crime, including theft and nonterrorist employee sabotage, and a general sense that the chances of hijacking are likely to grow when the price of fuel increases. 5. Smaller companies appear to experience more thefts, although whether the loss per shipment is greater than that incurred by large companies cannot be determined with current data. It may also be that security measures used by smaller companies are more easily circumvented, but this is subject to verification. 6. The relatively few incidents in which the truck rig is damaged suggest that thieves and hijackers are familiar with trucks and that they have at least minimal driving skills, as well as basic insider knowledge of the trade. Site visits confirm that while a complete novice might have difficulty driving a stolen tanker truck, the level of sophistication needed to drive a rig and discharge the fuel is hardly insurmountable and could be achieved in a few days; some newer tractors have automatic transmissions, which makes them easier to drive. 7. There are indications of insider collusion. Such collusion could be unwittingly provided to a terrorist operation by a person who believes he is involved only in a criminal theft. In harder economic times, the incentive for employees to engage in what they perceive to be a “black market” will increase. 8. The fact that a storage or hiding area for the stolen fuel is often already arranged suggests that fuel could be stolen and later placed into either an underground facility, a fuel tanker, or a surrogate tanker for use in a terrorist operation. 9. Law enforcement response to hijackings is a challenge.

Unsafe disposal procedures make nuclear transport vulnerable

Jenkins & Butterworth 10 (Brian Jenkins, director of the National Transportation Security Center AND Bruce Butterworth, field research director, 2010, "Potential Terrorist Uses of Highway-Borne Hazardous Materials," Mineta Transportation Institute, <http://transweb.sjsu.edu/mtiportal/research/publications/documents/2981_Terrorist%20Uses_011410.pdf>)

Disposal operations for flammable liquids focus on cleanup and containment. Liquid flammables are generally released and ignited quickly. If they are not, the disposal operation involves transferring the liquid from a damaged container to another container. When liquid flammables do burn, the fire lasts less than 10 minutes and is extremely intense, generating heat of more than 2,000°F. TIH materials dissipate quickly if the containing structure is compromised. Casualties downwind and downhill from a release, under the right conditions, could be significant. But once TIH material is vented, there is little to do other than wait for it to dissipate through normal pressure and wind. Terrorists would learn little from disposal operations other than reconfirmation of the toxicity of the material if it can be directed to a concentrated population. Explosives experts face situations in which truckload explosives have either detonated through an accident and caused a blast or have to be isolated and removed from sources of further detonation. Explosive materials may remain stable despite an accident, thus emphasizing the need for detonation. It should be pointed out that when explosive that is contained and intact is exposed to fire, significant explosions can result. The most recent accident involving highway transportation of high explosives occurred in Spanish Fork, Utah, on August 10, 2005. The truck carrying the explosives caught fire, and the cargo— 35,500 pounds of cast boosters (Penolite)—detonated, creating a crater three stories deep.

### **Rails Good - Economy**

Rail infrastructure key to the economy

Dovell 12 (Elizabeth Dovell, fellow at the CFR, "US Rail Infrastructure," CFR, http://www.cfr.org/united-states/us-rail-infrastructure/p27585)

Rail is an essential component of a balanced national transportation (PDF) system and a globally competitive economy. The American Society of Civil Engineers, which graded U.S. rail infrastructure with a C-, notes that the rail industry requires $200 billion in investment by 2035 to meet projected future demand. In the United States, modern freight and passenger rail systems share the same corridors and infrastructure. But while privately owned U.S. freight has succeeded in remaining competitive with other transportation modes, federally run passenger rail has struggled. Experts say the continued success of freight rail will require billions in new funding to avoid congestion, particularly if plans for expanding passenger rail proceed. Funding for the upkeep and expansion of passenger rail--which receives significantly less in federal subsidies than other transportation modes--has remained a controversial issue in Washington. The Obama administration's plan to expand high-speed rail (sustained speeds of more than 125 miles per hour) faces fierce opposition. Supporters cite the unique benefits of high-speed rail, including energy savings, more efficient mobility, and greater manufacturing opportunities for U.S. companies. Moreover, many U.S. economic competitors in Asia and Europe are making significant investments in HSR (WashPost). Opponents argue the economic benefits of HSR rarely surpass the costs, and point out that most systems do not turn a profit and rely heavily on government subsidies. The Shakeup of U.S. Rail The mid-to-late nineteenth century saw thousands of miles of track laid across the United States, and by the turn of the twentieth century, rail companies--which offered both passenger and freight rail services at the time--provided one of the cheapest and most efficient modes of transport. In the 1930s, rail transportation began to struggle in competition with commercial aviation and the increasingly popular automobile. Meanwhile, freight regulations put in place by the Interstate Commerce Commission, along with labor union restrictions, stifled the industry further. By 1968, the Pullman Palace Car Company, a major manufacturer of passenger railroad cars, had gone bankrupt. In an effort to give the industry a much-needed boost, the Penn Central Transportation Company was formed that same year, only to declare shortly thereafter the largest corporate bankruptcy in history (Time). Freight railroad is maintained with little taxpayer money, unlike alternate forms of freight transport such as trucks and barges, for which the government maintains the highway infrastructure. The 1970s and 1980s were a turning point for U.S. rail. Amtrak was established by law in 1971 and ushered in a new era of publicly owned and subsidized passenger rail. The modern freight rail industry was created by the Staggers Act of 1980, which partially deregulated the industry and contributed to mass consolidation and increased investment. As part of the Staggers process, the U.S. government allowed freight carriers to exit the passenger business in exchange for donating equipment to Amtrak and pouring $200 million into the new system. Most of the approximately 22,000 miles of track over which Amtrak runs are still owned by freight railroads. Amtrak pays freight carriers for the right to operate on their tracks and for priority over other customers. The Staggers law also granted railroads the freedom to change prices and negotiate private contracts with shipping companies. Following enactment, the number of large railroad carriers shrank from twenty-six to seven, and the amount of track owned by these companies declined from nearly 165,000 miles in 1980 to about 94,000 in 2008. The Success of Freight Rail The U.S. freight rail industry continues to thrive today. "America's freight railways are one of the unsung transport successes of the past thirty years," says the Economist. "They are universally recognized in the industry as the best in the world." Freight railroad is maintained with little taxpayer money, unlike alternative forms of freight transport such as trucks and barges, for which the government maintains the infrastructure. Over the last several decades, U.S. freight companies have made billion-dollar investments in the national rail network. Warren Buffett highlighted this trend in 2009, increasing Berkshire Hathaway's holdings of BNSF (USA Today)--the nation's second largest railroad--by $26 billion. Remarking on the historic investment, which was the largest in the history of Berkshire, Buffett said, "Our country's prosperity depends on its having an efficient and well-maintained rail system." Compared to other modes of freight transport, rail also has a smaller environmental impact, better fuel efficiency, and lower costs over large distances. Steel wheel technology makes rail far more efficient than truck freight due to limited rolling resistance: railcars become more efficient as more weight is added. Trains can now move one ton of cargo approximately 484 miles on just one gallon of fuel, according to the American Association of Railroads. Lower freight rail costs save consumers money and help keep U.S. manufacturers globally competitive. According to Dr. Pasi Lautala, director of the Rail Transport Program at Michigan Technological University, "If you talk to industry experts, everyone has a positive outlook on the future of the freight rail industry, because it makes sense if you look at the world right now. You look at the economic advances, especially in fuel consumption compared to truck traffic and the limitations of marine transportation." But challenges remain. Freight rail will need substantial investment in the future, despite its current success. Congestion is on the rise, and capacity must increase by approximately 90 percent to meet estimated demands by 2035, according to the U.S. Transportation Department. Re-regulation and the potential for track sharing with high-speed and express intercity rail could also put the freight industry under strain. President Obama has proposed a 110 mile-per-hour intercity passenger speed limit, which could create congestion problems for slower-running freight trains.

Rails key to the economy - public supplies and freight

Spraggins 9 (H. Barry Spraggins, U Nevada Reno, 2009, "The case for rail transportation of hazardous materials," Journal of Management and Marketing Research, <http://www.aabri.com/manuscripts/09224.pdf>)

Railroads are vital to the national defense, economy, and public health. They provide ¶ critical support to the Department of Defense Strategic Rail Corridor Network which includes ¶ more than 30,000 miles of rail line for the movement of Department of Defense shipments. ¶ Some 40 % of all intercity freight goes by rail, including 67% of the coal or 7.6 million carloads ¶ used by electric utilities to produce power. They move 70 percent of new autos including 1.7 ¶ million carloads of vehicles, parts and accessories. Rails move 1.5 million carloads of lumber ¶ and paper products. Intermodal traffic has been the fastest growing rail traffic segment over the ¶ past 20 years and is now the largest single traffic segment for rail. Intermodal grew from 3 ¶ million trailers and containers to around 12 million today. Approximately 60 percent of this ¶ traffic consists of imports and exports from and to international ports (Railroads( 2009). ¶ Freight railroads significantly reduce highway congestion. One intermodal train can haul ¶ around 280 trucks. A train moving other types of freight can move up 500 truckload equivalents. ¶ They are cost-effective and lessen the impact on the highway system as the figures below depict ¶ (Safety (2008).

### **Solvency - Rerouting**

**Note - you should not read this with the environmental racism advantage. Although the solvency advocates say we should reroute to uninhabited areas and not low income areas, the argument still exists. Avoid it.**

**Implementing a federal strategy is key to rerouting - that prevents catastrophic impacts**

**Guerrerro 5** (Thelma Guerrerro, "Senator Urges Federal Security Plan For Hazmat Railroad Transportation," Transportation Topics 3645)

Rerouting rail cars carrying toxic chemicals would be the best way to eliminate the threat of a terrorist attack involving hazmats, Biden said. Rerouting would involve less than 5% of all hazmats shipped, he added. Biden told Senate members that nearly four years after the 9/11 terrorist attacks, DHS "officials are either unaware, or even worse, they are purposely ignoring a grave threat to our cities." The bill would require DHS to work with state and local officials to identify high-threat corridors and to determine which chemicals should be classified as extremely dangerous materials. The bill is now in the Senate Commerce, Science and Transportation Committee. American Trucking Associations said June 20 that it petitioned the Pipeline and Hazardous Materials Safety Administration, a division of the U.S. Department of Transportation, to distinguish between hazmats that can be used as weapons and those that pose no significant security risks. If approved, the petition would authorize DOT and DHS to establish separate security regulations for each (related story, p. 2). Nelson Peacock, Biden's legislative aide, said the senator got involved in the hazmat issue to deter court battles such as the litigation involving the District of Columbia and railroad CSX Transportation. "The senator believes there should be a national policy standard to regulate shipments of hazardous materials," Peacock said. "He believes federal, state and local officials should be at the table to come up with such a policy." A back-and-forth court battle between the D.C. City Council and CSX has been ongoing since February, after Mayor Anthony Williams signed legislation passed by the Council banning certain hazmat shipments within 2.2 miles of Capitol Hill (5-9, p. 3).

### **Solvency - Funding/AT: Random Action CP**

Patchwork fixes fail to conclusively increase safety - increasing federal funding is key to increase passenger rail security - only way to decrease risk

Peterman 5 (David Peterman, Analyst in Transportation - Resources, Science, and Industry Division, 5/26/05, "Passenger Rail Security: Overview of Issues," CRS)

As mentioned above, those plans will not be conclusive; their intent is to provide some guidance to policy-makers, but the plans will be based on studies which include decisions (e.g., which assets are critical, what kinds of threats are considered, what consequences are considered and how they are weighed in relation to each other) that policy-makers may wish to review. In the meantime, Members may wish to consider factors that may have influenced the size of the transit community’s security request. Transit agencies have limited knowledge of the level of risk to their system, and so may be inclined to imagine the worst; the consequences of an attack on a system could be disastrous; and in the aftermath of an attack, a transit agency whose ambitions for security were less than ‘state-of-the-art’ could face harsh criticism from its community — though that criticism could be deflected toward the federal government (and Congress) if the agency could claim that it had received much less security funding than it had requested. From the Congressional perspective, providing additional security funding for transit agencies may not be the best way to increase the security of those systems. There are several ways to reduce risks: by reducing threats, by reducing vulnerabilities, and by reducing consequences. The range of options available to transit agencies are largely limited to the latter two approaches, but Congress has the option of promoting the security of transit agencies and other homeland organizations by providing increased funding to agencies that combat terrorism directly, such the military, intelligence, and law enforcement agencies. Given limited resources, strategies that reduce the risk to many categories of assets may be more cost-effective than strategies that focus on individual categories of assets.

### AT: Rails are safe

**Hazmat spills are largely unreported - they're too minor to take out the impact but prove our vulnerability argument**

**Eisler 9** (Peter Eisler, staff writer, 9/9/09, "'Serious' hazmat spills not reported," USA Today, <http://www.usatoday.com/news/nation/2009-09-08-hazmat_N.htm#table>)

WASHINGTON — Nearly half of all "serious" hazardous materials spills on roads, rails, airstrips and waterways go unreported to the government, leaving investigators without data used to identify unsafe carriers and containers, federal records show. Although the Department of Transportation (DOT) says accurate incident data is critical to ensuring that hazmat carriers operate safely, it rarely uses its authority to penalize haulers that don't file the required reports after spills. From 2006 through 2008, hazmat carriers failed to report 1,199 "serious" incidents, such as larger spills that cause substantial evacuations, major road closures, serious injuries, or releases of especially dangerous materials. The number of serious incidents that were reported: 1,403. The DOT's Pipeline and Hazardous Materials Safety Administration began identifying unreported incidents in 2005 using news accounts and logs from emergency response agencies. USA TODAY requested the previously unreleased data . Hazmat carriers are required to report spills to DOT, and the data "are directly related to the department's ability to ... protect the public from the inherent hazards associated with (hazmat) transportation," the safety administration said in a statement. Besides being used to spot unsafe haulers and containers that are prone to failure, the data also help "identify precursors to potential high consequence incidents." However, since Jan. 1, 2006, the agency has sanctioned just seven carriers for not reporting serious hazmat spills; four were fined up to $2,750 each. All other cases were handled with warnings. "It is (the agency's) responsibility to take some type of enforcement action," said Rep. Jim Oberstar, D-Minn., and chairman of the House Transportation Committee. Without accurate data, the agency "cannot put together a strategic plan for reducing hazardous materials transportation incidents, fatalities, and injuries," added Oberstar, who plans to explore the issue at a hearing Thursday. Smaller hazmat carriers may not know the reporting rules, said Rich Moskowitz, vice president of the American Trucking Associations. "There needs to be better outreach to the industry and if that fails, then ... stepped up enforcement." Unreported hazardous materials spills Nearly half of all hazardous materials spilled in transport on U.S. roads, rails, airstrips and waterways are not reported to the government as required by law. The Department of Transportation's Pipeline and Hazardous Materials Safety Administration documented nearly 1,200 unreported incidents from 2006 through 2008 using news accounts and logs from emergency response agencies.

### AT: Spending/Politics

Homeland Security has the jurisdiction for the plan - the plan comes out of a discretionary appropriation

Peterman 5 (David Peterman, Analyst in Transportation - Resources, Science, and Industry Division, 5/26/05, "Passenger Rail Security: Overview of Issues," CRS)

The Department of Homeland Security provides grants for transit, passenger rail, and freight rail security under the Urbanized Areas Security Initiative program. Congress provided $150 million for these grants for FY2005 and again for FY2006, $275 million for FY2007, $400 million for FY2008 and again for FY2009, and $300 million for FY2010. In 2009 Congress noted that, according to DHS, about 90% of the FY2006 funding for transit and rail security had not yet been expended; 18 in 2010, appropriators reiterated their concern about the slow pace of spending of transit and rail security grant funds. 19

## **Rails Neg**

### **Neg - Squo Solves**

Status quo solves - nuclear transport rails have a great safety record

Rutter 4 (Allan Rutter, Cambridge Systematics, Executive Director of the NTTA, 2004, "Transportation of Nuclear Waste Subcommittee on Railroads, Committee on Transportation and Infrastructure," Congressional Testimony, http://www.fra.dot.gov/Pages/1652.shtml)

The Safety Record for Rail Shipments of SNF Rail shipments of Spent Nuclear Fuel (SNF) have a long and very positive safety history, having been transported safely by rail in the United States for more than 46 years. During that time, there has never been a single train accident or incident involving these rail shipments that has resulted in an injury, a death, or a release of the material from the packaging, and there has never been a single injury or death resulting from any rail shipment of radioactive material. Approximately 1,200 packages of SNF have traversed our Nation’s railroad system since 1957, when the U.S. Navy began shipping SNF by rail. Since that time, the Navy has safely shipped a total of more than 800 packages of SNF in a total of more than 300 train movements. In 1989, Carolina Power and Light, now known as Progress Energy, began intra-utility transfers of SNF from its two operating commercial nuclear reactors to temporary storage at a third reactor facility operated by the company. In 1995, the U.S. Department of Energy began shipment of SNF as part of its Foreign Research Reactor Fuel Program, which is intended to safeguard SNF from research reactors around the world by moving it to the United States and which is an important element in the Nation’s nuclear non-proliferation efforts. As a result of these programs, the number of rail movements of SNF increased from approximately 15 per year in the early 1990s to an average of approximately 25 per year from the year 1997 to the present.