Testimony of

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Committee on Homeland Security
& Governmental Affairs

“Chemical Facility Security: What is the Appropriate Federal Role?”

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Madam Chair and Members of the Committee, my name is Marty Durbin, and I am the Managing Director for Security & Operations for the American Chemistry Council (ACC). I thank you for this opportunity to speak today on behalf of the Council's members on the important subject of security in the business of chemistry, a critical sector of America's infrastructure. We thank you as well for devoting so much of your time and energy to this important subject. We agree with you, Madam Chair, that “this issue is simply too important . . . to accept inaction.”

The 128 members of the ACC manufacture essential life-saving products critical to homeland security, and life-enhancing everyday items that keep the economy moving. Our products are critical to daily life and crucial to the war on terrorism. We are essential to making bullet-resistant vests, night vision goggles and stealth aircraft. The products we manufacture are essential to the things that make modern life possible, from plastics to pharmaceuticals, from cars to clothing. And the products of chemistry are critical in many aspects of American life, including keeping our drinking water safe, supporting agriculture, and spurring medical innovations to prevent and treat disease.

ACC represents the leading companies in the U.S. chemical manufacturing sector, an industry which is the largest exporting sector in the economy ($91 billion), and employs nearly one million people in America alone, with $460 billion in sales. Our members are responsible for approximately 90% of basic industrial chemical production. In addition, the U.S. chemical industry has the largest share of knowledge workers of any industry, and it is the largest private industry investor in research and development.

Madam Chair, I welcome the opportunity to highlight four things for you and the Committee:

1. The leadership role ACC members have taken – at a cost of over $2 billion since 9/11 – to further enhance the safety and security of their products, their facilities, their supply chain and the communities in which they operate;

2. The great strides the federal government has taken, in cooperation with the chemical sector, to secure the industry;

3. The need for national legislation to provide an appropriate federal regulatory and oversight role in chemical facility security; and

4. Our views on the important and frequently misunderstood subject of inherent safety.

I. ACC Has Taken a Leadership Role in Enhancing Chemical Security

Even before September 11, 2001, Council members had begun to address the challenge of terrorist threats to our operations, by developing site security guidelines for chemical companies. Our Board of Directors was actually meeting that sad day, and their reaction to those events was swift and decisive. We quickly completed and issued our security guidelines, and a companion set of transportation security guidelines, in October and November of that year.
In those uncertain months, we shared those guidelines with state and federal agencies, and we and OSHA posted them on our public websites to make them as broadly available as possible. We also partnered with EPA to hold regional security briefings for our members and other chemical companies, state and local government officials, and first responders.

In January 2002, our Board launched an aggressive effort to develop a new Responsible Care® Security Code. Now in its 17th year, Responsible Care® is ACC’s signature program of ethical principles and management systems designed to continuously improve our members’ safety, health and environmental performance -- and now, their security performance as well. Implementation of Responsible Care® is mandatory for all members of the American Chemistry Council, as well as Responsible Care Partner companies, who represent chemical carriers, warehouses, logistics planners and others along the supply/value chain. In developing the Security Code, we consulted closely with plant-level Community Advisory Panels, and with first responders and government agencies at all levels. In June 2002, the Board adopted the Security Code.

Former Homeland Security Secretary Ridge has referred to the Security Code as a “model program,” and at this Committee’s June 15 hearing, Acting Under Secretary Robert Stephan recounted the “very legitimate, very real, and very qualitative improvements in security across the board” that DHS has observed at ACC members’ facilities. At the April 27 hearing, John Stephenson of the Government Accountability Office also focused on these accomplishments, adding that “ACC is very good.” Indeed, Madam Chairman and Senator Lieberman, our members were very gratified by your statements of commendation and appreciation last month for the work that companies like ACC’s members have done to voluntarily to secure their facilities. Moving to the state and local level, New Jersey has accepted the Code as a “best practice” for chemical facility security, the City of Baltimore has adopted a security ordinance that recognizes the Code as an alternative means of compliance, and Maryland has enacted legislation mirroring the Code. In published reports, the Security Code, and ACC members’ security enhancements, have been widely and uniformly recognized, from the Washington Post editorial page1 to GAO reports.2

The Security Code requires member companies to:

• Prioritize their sites by degree of risk, sorting them into four tiers. This process was begun before the Code was adopted, and every ACC member company completed it on schedule in June 2002.

1 “Some of the biggest security gains have been made cheaply, sometimes thanks to unobtrusive, even private-sector initiatives. The 140 large companies that form the American Chemistry Council, for example -- a group with both financial and practical interests in not having their chemical plants blown up -- have created their own security code, internal communications system and inspectorate.” The Washington Post, p. A26 (May 27, 2005).
2 “To its credit, the chemical industry, led by its industry associations, has undertaken a number of voluntary initiatives to increase security at facilities. For example, the ACC, whose members own or operate 1,000, or about 7 percent, of the facilities [handling large quantities of hazardous materials in the country] requires its members to conduct vulnerability assessments and implement security improvements.” GAO, “Homeland Security: Voluntary Initiatives Are Under Way at Chemical Facilities, but the Extent of Security Preparedness is Unknown” (GAO-03-439, March 2003), at “Highlights.”

3
• Thoroughly assess vulnerabilities, using rigorous methodologies developed by Sandia National Labs and the Center for Chemical Process Safety (CCPS), a program of the American Institute of Chemical Engineers (AIChE).

• Implement security enhancements commensurate with risks, and taking into account inherently safer approaches, engineering and administrative controls, and other security, prevention and mitigation measures.

• Verify the implementation of these physical security measures, using third parties that are credible with the local community, such as first responders or law enforcement officials.

All 2,040 ACC member company facilities have completed their vulnerability assessments, and virtually all have completed their enhancement verifications. Progress in implementing the Code was verified by GAO in its most recent report on chemical facility security.3

Our Security Code is not just limited to physical plant security. It covers the complete “value chain” for chemicals, from suppliers to customers, including transportation. Value chain management is an area where we have a long and successful history of partnering with and supporting federal agencies to safely steward our products and to prevent their diversion and misuse, such as for making illegal drugs or chemical weapons. In fall 2002, the Council issued a detailed value chain guidance document to enhance the security of our products outside the fence line. Our members who also belong to the Chlorine Institute have, together with the Association of American Railroads, implemented a chlorine rail car security plan.

The Security Code also covers cyber security, to protect our highly automated operations from being attacked electronically. Here again, the efforts of ACC members provide a model to other industries employing similar automated systems. Our members lead a broad Chemical Sector Cybersecurity Program to promote cybersecurity in our industry. In spring 2003 the Program issued a cybersecurity guidance document. The Program also launched a broad cybersecurity practices, standards and technology initiative through CIDX, the Chemical Industry Data Exchange. All of these guidance materials, and the Security Code, are available through our websites (www.americanchemistry.com and www.rctoolkit.com) so that they can have the broadest possible effect beyond our membership. Information about the Chemical Sector Cybersecurity Program can be accessed at www.chemicalcybersecurity.com. The CIDX materials are similarly available at www.cidx.org/CyberSecurity/default.asp.

II. The Federal Government, Working with ACC, Has Greatly Enhanced the Security of the Chemical Sector

ACC and its members have worked closely with the Department of Homeland Security during its first two and a half years of existence. We concurred with GAO’s recommendations in 2003 that the federal government should develop “a comprehensive national chemical security strategy that is both practical and cost effective,” and that should:

3 Based on work conducted between October 2004 and March 2005, GAO stated: “All 10 of the chemical facilities we visited reported making significant progress in fulfilling the requirements of the security code.” GAO, “Protection of Chemical and Water Infrastructure: Federal Requirements, Actions of Selected Facilities, and Remaining Challenges” (GAO-05-327, March 2005), at 5, 37. ACC members’ implementation of the Code is discussed in detail at pages 17-21.
• “Identify high-risk facilities based on factors including the level of threat and collect information on industry security preparedness;

• Specify the roles and responsibilities of each federal agency partnering with the chemical industry;

• Develop appropriate information sharing mechanisms; and

Develop a legislative proposal, in consultation with industry and other appropriate groups, to require these chemical facilities to expeditiously assess their vulnerability to terrorist attacks and, where necessary, require these facilities to take corrective action.”

A. Identify High Risk Facilities

Starting in March 2003, DHS partnered with ACC to facilitate visits to our members’ facilities. ACC also worked with DHS to develop methods for evaluating facilities based on potential physical and economic consequences. And even before the creation of DHS, the Coast Guard and state offices of homeland security or counterterrorism visited facilities to offer advice on enhancing facility security.

Today, DHS’ Protective Security Division (PSD) and the Coast Guard are actively visiting chemical facilities, reviewing vulnerability assessments and security plans, understanding common vulnerabilities and developing plans, in conjunction with local law enforcement and responders, to protect facilities and their communities. Information gained from these visits supports the development of DHS’s “Buffer Zone Protection Program” to provide support and resources to local governments in plant communities. ACC is also working closely with PSD to develop, refine and publicize its “Risk Analysis and Management for Critical Asset Protection” (RAMCAP), which allows DHS to compare the vulnerabilities of disparate assets and resources against a series of benchmark threat scenarios. RAMCAP will enable DHS to allocate protective resources rationally, on the basis of risk.

B. Specify the Roles and Responsibilities of Federal Agencies

In December 2003, the President issued Homeland Security Presidential Directive/HSPD-7, which clearly defines roles for various federal agencies in protecting the nation’s critical infrastructure and key resources, and specifically names DHS as the lead or “sector-specific” agency for the chemical sector. With DHS’s blessing, ACC organized the Chemical Sector Coordinating Council -- a group of 16 national chemical trade associations that coordinates communications between DHS and our sector for purposes of infrastructure protection. ACC serves as the administrative secretariat for the Sector Coordinating Council.

The federal Maritime Transportation Security Act (MTSA), which was enacted in late 2002, puts the Coast Guard in charge of regulating security within ports, on vessels, and at facilities that have the potential to be involved in a transportation security incident. Roughly 240 chemical plants in the United States -- including most of the largest facilities nationally -- are currently subject to rigorous Coast Guard oversight under the MTSA. These facilities have all conducted security

4 See “Homeland Security,” supra note 2, at 27.
vulnerability assessments, have implemented facility security plans, and have been inspected by the Coast Guard. Facility security plans specify actions the facility will take at different MARSEC (threat) levels regarding access control, restricted areas, handling cargo, delivery of vessel stores and bunkers, monitoring, security incident procedures, and barge fleeting facilities. They also include schedules for employee security training and response drills and exercises. Even more facilities are covered by area (i.e., port) security plans.

ACC supported the MTSA throughout the legislative process and we have worked closely with the Coast Guard to make the law a success. In particular, the U.S. Coast Guard recognized the Responsible Care Security Code as an Alternative Security Program (“RCSC–ASP”) for purposes of fulfilling facility security regulatory requirements under the MTSA. The RCSC—ASP was the first alternative security program the Coast Guard approved for facilities.

Cyber security is one area where needed progress will require DHS to better focus and prioritize its efforts. The chemical industry views physical security and cyber security as tightly coupled issues. Protection of our physical and cyber assets is critical to our security and ACC members have taken great initiative to secure their cyber assets. We do not believe that the National Cyber Security Division (NCSD) has been focused enough to help us in this effort.

We believe that better management of cyber issues at DHS is an important component to reaching overall security goals. However, we have not been able to have a strategic discussion with NCSD. Instead NCSD appears to be offering tools to solve a problem, before the strategic dialogue has taken place. Lack of continuity in leadership and staffing at NCSD contributes to the lack of progress. For example, nearly one year after his resignation, the Director of DHS’s NCSD has not been officially replaced.

C. Develop Appropriate Information Sharing Mechanisms

Effectively securing privately-held infrastructure -- like the business of chemistry -- requires a partnership between the private sector and the government. Within seven months of 9/11, ACC and the FBI created a Chemical Sector Information Sharing and Analysis Center (ISAC) to share security information daily between the federal government and companies that make and use chemicals. The Chemical Sector ISAC provides 24-7 capability for DHS’s Homeland Security Operations Center (HSOC) to contact the chemical sector as well as for individual members of the ISAC to convey incident or threat information to DHS. Members of the ISAC receive daily intelligence reports from DHS as well as episodic alerts and warnings. Open to any chemical sector business, whether or not it is a Council member, the ISAC has almost 600 participants. The Council runs the ISAC for free as a public service through its CHEMTREC service, in cooperation with Department of Homeland Security (DHS). It is located at http://chemicalisac.chemtrec.com.

ACC is also one of the first critical infrastructure sectors to be piloting DHS’s new Homeland Security Operations Center (HSOC) to contact the chemical sector as well as for individual members of the ISAC to convey incident or threat information to DHS. Members of the ISAC receive daily intelligence reports from DHS as well as episodic alerts and warnings. Open to any chemical sector business, whether or not it is a Council member, the ISAC has almost 600 participants. The Council runs the ISAC for free as a public service through its CHEMTREC service, in cooperation with Department of Homeland Security (DHS). It is located at http://chemicalisac.chemtrec.com. ACC is also one of the first critical infrastructure sectors to be piloting DHS’s new Homeland Security Operations Center (HSOC) to contact the chemical sector as well as for individual members of the ISAC to convey incident or threat information to DHS. 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Security Information Network – Critical Sectors (HSIN-CS), a set of secure communications and collaboration capabilities. ACC anticipates that the Chemical Sector ISAC will eventually be integrated into HSIN.

On behalf of the chemical sector, ACC recently participated in TopOff 3, the third in a series of congressionally mandated emergency response exercises. TopOff 3 was the first such exercise to involve the private sector. ACC’s involvement in TopOff 3 helped generate ideas for further improving the Chemical ISAC and added significant value to other signature parts of the exercise. The success of the public – private sector cooperation and coordination during TopOff 3 clearly underscored the value of private sector involvement, not only for providing expertise but ensuring that the business impacts of terrorist events and official reactions (or inaction) to such events are considered in both short and long term emergency management planning. ACC is now actively supporting development of lessons learned from TopOff 3 and the design of TopOff 4.

Information sharing between DHS and critical private infrastructure sectors like chemicals is a relatively new and complex challenge, and there are, understandably, still a number of ways in which it can be improved – a topic on which a subgroup of the Homeland Security Advisory Council has just made recommendations to Secretary Chertoff. Those recommendations, which ACC supports, include:

- **Regular, detailed threat briefings between DHS and each sector.** ACC believes that senior corporate security officials with security clearances should be able to meet regularly with DHS intelligence analysts to discuss threat information. The current semiannual briefings should be more frequent, be limited to single sectors, be more interactive, and focus on classified information.
- **Revising rules and policies to promote information sharing.** ACC feels that DHS has been slow to roll out its “Protected Critical Infrastructure Information” program for voluntarily-submitted information on threats, vulnerabilities and countermeasures. It has also been unclear regarding its ability to protect such information under other exemptions from the Freedom of Information Act. Finally, it has been indecisive regarding applicability of the Federal Advisory Committee Act to the activities called for by HSPD-7 -- sector coordination and information sharing. Public right-to-know is an important value, but operational communications about security simply must remain protected.

### III. The Need for Federal Legislation

ACC recognizes that not all chemical facilities are currently regulated under the MTSA. We also recognize that not all chemical facilities belong to ACC. No doubt many non-ACC members have taken steps comparable to those our members have taken, but as Under Secretary Stephan has estimated, something like 20% of high risk facilities have not.

As a result, ACC has been taking a leadership role at the federal level to ensure that all chemical facilities are secured against the threat of terrorism. We have worked continuously with Congress and the Administration to secure enactment of national security legislation that will:

**Establish national standards for security of chemical facilities.** We agree with Under Secretary Stephan that these standards should be:
• **Risk based, reasonable, clear, and equitable.** The only sensible way to address the risks posed by terrorist attacks on our homeland is to adopt a risk-based system of prevention and preparedness. Different chemical facilities pose different risks, based on their differing vulnerabilities and consequences, and any regulatory system must reflect those differences and require security measures commensurate with those risks.

• **Performance-oriented.** Facilities need flexibility to select among appropriate security measures that will effectively address risks. Under Secretary Stephan noted that an overly prescriptive system could, by its predictability, actually assist terrorists in targeting their attacks.

**Require identified facilities to conduct vulnerability assessments and implement security plans.** Vulnerability assessments should be based on rigorous methodologies like those accepted under the Responsible Care Security Code.

**Recognize responsible voluntary efforts.** Based upon their substantial and verifiable efforts to date, ACC members strongly believe that federal legislation should enable DHS to give credit for their substantial voluntary, at-risk expenditures implementing the Responsible Care® Security Code. Under Secretary Stephan testified that “[w]e should recognize the progress that responsible companies have made to date.” GAO’s John Stephenson likewise stated: “I would expect that any federal system would give them credit for – indeed, recognize” ACC members’ efforts. Mr. Richard Falkenrath concurred that ACC member companies deserved “a level playing field” and “a common set of expectations” that all chemical facilities would be required to meet. We are not asking for anything less stringent than everybody else, only that DHS be allowed to recognize our members’ significant actions, just as the Coast Guard has done.

**Provide oversight, inspection, and enforcement authority to DHS.** DHS must have the legal authority to police compliance with its standards and to take enforcement action if necessary.

**Protect sensitive information.** Information about the vulnerabilities of facilities, and the measures they have taken to reduce them, is literally a roadmap for terrorists. A law that required such information to be created, but then permitted it to be released publicly, would be worse than the status quo. Senator Voinovich, Mr. Falkenrath and others have emphasized the overriding importance of ensuring that this information is protected from public release in any fashion.

In the absence of Congressional action on chemical security, state legislatures are beginning to fill the vacuum. Both Maryland and New York have enacted chemical facility security laws. ACC supported both of these statutes, and is working with the two states’ offices of homeland security on their implementation. However, we strongly believe a national program, not a patchwork of potentially conflicting state efforts, is necessary.

**IV. ACC’s Views on Inherent Safety**

In legislative and policy debates over chemical security, no issue has proven more controversial than the concept of “inherent safety” and what role it should play. Because of ACC
members’ deep investment in this issue, I would like to spend the balance of my time explaining our views and why we feel so strongly about them.

The concept of inherent safety was invented by the chemical engineering profession. In fact, it is no exaggeration to say that the business of chemistry, and indeed ACC members, wrote the book on inherent safety. The leading reference on the subject -- *Inherently Safer Chemical Processes: A Life Cycle Approach*, also known as the “Gold Book” -- was written by nine process safety experts, every one of whom worked for an ACC member company at the time. The concept of inherent safety has been well understood within the process safety community for many years. Basically, it means designing a process to minimize hazards in the first place, rather than managing and controlling them with protective equipment or procedures.

The business of chemistry has long embraced inherently safer approaches. For over a decade and a half, our Responsible Care® initiative has required ACC members to have mechanisms for reviewing the design and modification of facilities and job tasks, with inherently safer design and material substitution at the top of the hierarchy of controls. This drives our members continually to develop and implement safer processes. We conduct process hazard analyses of our facilities, and those analyses can lead us to change processes, modify procedures, or substitute materials to reduce and manage risks. As I noted earlier, the Responsible Care Security Code mandates that our members take inherently safer approaches into account in assessing possible security measures. It is also in companies’ best interest to implement inherent safety when that technology is effective. Such changes not only reduce risks for employees and surrounding communities, but typically reduce long-term costs associated with maintaining other protection systems or regulatory compliance oversight that would otherwise be required. In fact, the GAO documented that seven out of the 10 ACC member facilities it visited had included process changes as a part of their security enhancements.

I cannot overemphasize, however, that inherently safer chemical processing requires considering all the risks potentially associated with a process. Inherent safety typically involves making very challenging judgments to ensure that risks are not unwittingly shifted or substituted, and that overall risks are reduced. Many inherently safer approaches involve trading one risk against the potential of another. For example, advocates of inherent safety frequently speak of reducing onsite inventories, or reducing or eliminating storage, of hazardous materials. By reducing inventories, though, a facility may increase the number of truck shipments through the plant’s neighborhood. Similarly, replacing a low temperature, low pressure process that uses a toxic chemical with a process that uses a less toxic chemical, but operates at higher temperatures and pressure, increases the potential hazard to its workers.

Fundamentally, ACC has been dubious of any regulatory initiative that involves government agencies or other third parties reviewing and approving -- or disapproving -- facilities’ decisions regarding inherent safety, whether in the context of security or otherwise. The history of “inherently safer” approaches is full of examples of unintended consequences: chlorofluorocarbons, underground storage tanks and PCBs were all originally regarded as inherently

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7 See “Protection of Chemical and Water Infrastructure,” supra note 3, at 21.
safer, from the perspective of fire or explosion. Their possible effects on stratospheric ozone, groundwater or health, however, were not fully appreciated until later.

The challenge to regulators is compounded by the complexity of chemical industry processes. There are no “standard processes” for making chemicals, and “[c]omplex process systems, especially those with a long history of safe performance, should not suddenly be changed without careful thought and consideration.” To expect effective regulatory oversight in this area is unrealistic, at least without great difficulty, expense and delay. In fact, in the Clean Air Act Risk Management Program rulemaking, EPA concluded that requiring and reviewing multiple process options at each regulated plant would not lead to greater advances in process safety. In doing so, it recognized that no small, central group of people can be so omniscient as to be able to understand the huge range of issues involved at so many unique facilities.

The challenge facing regulators – and even businesses – is further heightened by that fact that, while the concept of inherent safety is generally agreed upon, “a systematic methodology to measure inherent safety does not exist and it is not currently possible to know how inherently safe a plant or equipment item is because it is not possible to evaluate the principles that have been applied.” Another leading process safety expert concurs: given “the lack of formal and agreed inherent safety approaches . . . [e]xperience has shown that regulators and industry have a difficult time interpreting inherent safety and agreeing on adequacy of efforts.” This is not to say that such methodologies cannot be developed – they should, and ACC supports efforts to do so. But even if agreement on methods is achieved, leading process safety experts discount the feasibility of using them in a regulatory system: “[T]he complexity of process plants essentially prevents any prescriptive rules that would be widely applicable.”

Members and witnesses at April’s hearing agreed on the importance of legislation, in Senator Voinovich’s words, being “sharply focused” on security and not “burdened with extraneous issues.” Dr. Falkenrath clearly stated that chemical security legislation should not be used as a “back door” for addressing environmental or safety issues, and maintained that the government should not have the power to order hazard reduction measures to be taken. Mr. Stephenson agreed, adding that many types of chemicals and chemical processes do not lend themselves to such approaches without massive capital expenditures, and that, in general, facilities using or storing such chemicals can make such changes more easily than manufacturing facilities.

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9 See 61 Fed. Reg. 31699 (June 20, 1996). EPA has also concluded, as Thomas Dunne stated last month, that attempting to use this Clean Air Act authority to regulate security “would subject the agency to significant legal vulnerability and protracted litigation.” Dr. Falkenrath similarly testified that he “disagrees” with the Clean Air Act approach, adding that it would be “politically imprudent” to accomplish such a significant intervention in the economy via such an indirect and imprecise mechanism.
11 David Moore, supra note 8, at 1.
In the final analysis, ACC firmly believes that judgments about inherent safety are fundamentally process safety decisions that must ultimately be left to the process safety professionals. We will remain concerned about legislation that would enable government officials focused on security to second-guess process safety decisions.

IV. Conclusion

In closing, I want to reiterate our commitments. Our member companies are committed to doing all they reasonably can to enhance the security of their operations and products against those who would do us harm. But we know that our nation will not be safe until all chemical facilities that need to be protected have taken steps equivalent to those taken by our members.

Madam Chair, it has been almost four years since 9/11. The attacks last week in London confirm that our enemies, and their determination to harm us, are still very real and present. Now is the time to act. We welcome this series of hearings and the Members’ stated willingness to work in a bipartisan way with the Administration. We are committed to working with you, and others, to see that legislation is enacted by this Congress. Thank you and I’d be happy to answer any questions.