

Testimony of Glenn Erwin
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Madam Chairman, Senator Lieberman, and members of the Committee, thank you for allowing me to testify this morning on behalf of the 850,000 members of the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union or the USW for short.

The comments I make this morning reflect my 35 years of experience within the petrochemical industry. I currently serve as the Program Director for USW's Triangle of Prevention (TOP) Program. This program is a system based, union led, company supported method for finding and fixing the potential failures within a facility. We have trained over 20,000 union and management employees to understand and use the TOP approach to identify problems and make recommendations to correct them.

My comments here this morning are both professional and personal, as I am sure this topic is with the group I sit before.

My invitation letter asks me to discuss the risks posed by the chemical industry to the security of both the workers inside the chemical facilities and the communities that surround these facilities. When I look at the potential effects of a catastrophic failure within a facility, I can see little difference between intentional and unintentional releases. Although the causes are very different, they both have the same tragic effects.

I would like to begin by stating that the USW stands ready to work with the Congress, the Administration and the oil, chemical, paper, steel, nuclear and any other industries where we represent workers. Our goal is for workers and other members of the community to reap the benefits of a safe and secure place to work and live.

In the spring of 2004, we conducted a [survey](#) of 125 sites where USW represents workers.¹ These sites were those designated by the EPA as Risk Management Program (RMP) sites. The respondents to our survey reported that each of these sites had quantities of chemicals or other hazardous materials large enough to cause a catastrophic event onsite if those materials were involved in a fire, explosion or other release. Importantly, this study was a process of participatory research carried out among professional researchers, union staff and rank and file members from some of the same plants for whom chemical plant security is a central and vital issue.

My goal in appearing here today is to bring to light some serious gaps between the ideal we desire, and the reality with which we live. We will look today at some of the issues those gaps represent, as identified by our members. First, I will address issues of security. Second, I want

¹ Paper, Allied Industrial, Chemical and Energy Workers International Union (PACE). 2004. *PACE International Union Survey: Workplace Incident Prevention and Response Since 9/11*. Nashville, TN. PACE International Union recently merged with the United Steelworkers of America to form the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers Intl. Union (USW).

to address issues related to prevention. Finally, I will present the USW's positions on legislative action.

1. Security

One of the gaps identified by our members in our survey was security. I think we can all agree that the reassessment of worksite security in the face of new terrorist threats has been a paramount issue since 9/11. Yet, in our survey, only four out of five high-risk facilities had conducted a reassessment of worksite security since September 11—twenty percent had not² (p. 16). Similarly, only three in four sites reported that the company at their site had improved the systems to guard and secure the facilities (p. 16). These findings are consistent with news reports of the ease with which reporters have been able to get unfettered access to chemical plant sites that should have been secured.³ If the patterns in these data were to hold more broadly among the population of RMP sites, approximately 3,000 sites would still be without reassessment of worksite security and a similar number would have failed to act to improve security.

Let me illustrate from my personal experiences the ease of access to a facility, which we believe is a failure of security.

As recently as this summer, I stood at the main entrance to one of the nation's major oil refineries and watched pick-up trucks only slow down as guards waved them through. Sitting in the back of the trucks were several closed-topped buckets. When I asked the employee standing with me who they were, he said they were temporary workers employed by contractors. When I asked him what was in the buckets, he said, "I have no idea." I wanted to know why the guards had not screened the trucks' occupants and examined its contents. He said there was so much traffic it would be impossible to check them all. Following the September 11 attacks, this volume of unsecured traffic in and out the gates of our facilities is astounding.

This same facility had a storage tank containing 800,000 pounds of hydrofluoric acid. A release of this much hydrofluoric acid would create an enormous catastrophe. A lethal vapor cloud of hydrofluoric acid would extend for miles downwind and reach into one of the most heavily populated metropolitan areas in the country. As we drove past the tank, I watched approximately 50 people working in the area using heavy equipment less than 50 feet from the exposed liquid line leading to the hydrofluoric acid tank. My tour guide explained that the site was engaged in a "turn-around" and that these people were temporary contract workers. A "turn-around" is the term that describes the periodic shutdown of processing units for major maintenance. I asked if he knew any of these people. He replied, "No, they are just here for three to four weeks." As we drove, we discussed what the result would be if by accident, or on purpose, the bulldozer was driven into the liquid line of this tank. His reply was that thousands maybe tens of thousands would be killed.

² PACE. 2004. *PACE International Union Survey: Workplace Incident Prevention and Response Since 9/11*. Nashville, TN.

³ Prine, C. 2002. "Lax Security Exposes Lethal Chemical Supplies," *Pittsburgh Tribune-Review*. Sunday, April 7, 2002; and CBS News, <http://www.csbnews.com/stories/2003/11/13/60minutes/main583528.html>.

There is no silver bullet or sole solution to having a safe and secure facility with large volumes of highly hazardous materials. The facilities in which our members and many others work are complex and closely coupled. They require layers of protection.

The concept of “layered protection” has not been applied to the access of critical areas within many of our plants.

First, the access to office buildings should be one layer. Stronger, more in-depth measures should be applied for access to other areas with higher hazard potential. Something must be done to control the “Front Gate Freeway” that exists in far too many facilities.

Second, as the potential for devastation increases, so should the security. A tank of hydrofluoric acid is of far greater concern than a tank of gasoline, but typically, there is no additional layer of internal security for those processes or vessels with the most serious hazard potential.

Think multi-layered protection.

After the access is controlled and limited to known, trusted and trained people, there are more important steps that we need to take to make our plants inherently safer. If we rely too much on security and deemphasize measures that will make sites inherently safer we will do so at our own peril.

2. Prevention

The most foolproof way to prevent our facilities from being turned into weapons of mass destruction by terrorists is to eliminate the very substances, that if released into the environment, could kill or harm workers and the people in surrounding communities. This has been done in many cases such as replacing chlorine with sodium hypochlorite in water treatment facilities.

At the time of the 9/11 attack on the Pentagon there were seven tank cars with a combined 550 tons of chlorine and sulfur dioxide at the Blue Plains Sewage Treatment Plant just across the river. This was enough to have killed thousands of neighbors, including those in Congress and the White House. Al Qaeda computers recovered in Afghanistan contained maps of similar plants. Eight weeks after the attack, engineers at Blue Plains were directed to get rid of the chlorine. Today D.C. treats its sewage with a much safer chemical, sodium hypochlorite, strong household bleach.

In one of our steel plants, the site employed a process using chlorine to treat certain waste streams. The contractor doing the work found it convenient to have as many as fourteen chlorine tanks cars on the site at one time. This quantity of chlorine could have put a major metropolitan area at risk. There was never a need for more than one tank car of chlorine at a time. The union fought successfully first to reduce the amount of chlorine stored and later in persuading the company to use a different and safer process that eliminated the use of chlorine all together.

Earlier I spoke about a plant with large volumes of hydrofluoric acid. Hydrofluoric acid is used as a catalyst in a process called alkylation that chemically joins refining compounds. Alkylation can be carried out with the much more dangerous hydrofluoric acid or with the less dangerous

sulfuric acid. Some facilities have become inherently safer by replacing hydrofluoric acid with sulfuric acid. Others have not.

There are other examples safer chemical substitution. Whenever they are possible, these types of substitutions provide the first and best layer of protection by eliminating the hazard.

Reducing the hazards that remain provides the second, and next best layer of prevention. Here we ask:

Are the quantities of hazardous materials stored and energy used as small as possible?

Recall, that the reduction in the volume of chemicals was the first step in the steel mill example just cited. Substitution with a safer process came later. Another example comes from Bhopal where the release of methyl isocyanate (MIC) killed and injured thousands. Union Carbide used MIC as an intermediate in the production of the pesticide Sevin. In a similar process used by Mitsubishi in Japan, the process was designed such that MIC was consumed immediately as it was being produced. Union Carbide could have produced Sevin without any MIC storage. No storage, no massive release.

We also ask:

Are reactive materials adequately isolated from each other?

Are the least hazardous conditions and least hazardous forms of materials being used?

Have systems been designed so that they are hardened against possible failures and forgiving of potential errors?

Each of these safeguards reduces the likelihood of a catastrophic release.

The next layers of protection is provided by mitigation and containment should vessels be breached. Here we ask:

Can hazardous materials be stored in smaller, separate containers?

Are systems sufficient to suppress, neutralize and contain a release if it occurs?

Will these key systems operate if the power supply is interrupted?

Moving to yet another layer, we must have in place preparedness, warning and response capabilities commensurate with the disaster potential at chemical facilities. I find that we are always too slow in sounding the alarm and that communication equipment is seldom, if ever, sufficient. Lives can be saved if automatic notification devices are installed to detect and trigger evacuation alarms when toxic or explosive material is released.

I have just covered:

Substitute for safer materials. Effective substitution requires less dependence on other prevention and response systems.

Further minimizing risks using other secondary prevention methods.

Mitigating the effects of a release should systems be breached.

Being prepared to carry out an effective response.

We are stressing these forms of prevention here because the overriding focus since 9/11 has been limited to security. Prevention has been bypassed as a priority.

Now here is the problem. In our survey⁴ (p. 39), 90% of respondents stated their facility had not worked with the local union, or hourly workers about plans or actions to prevent or respond to a possible terrorist attack. The people who know the most about these facilities are the full-time workers who run and maintain them. We are astounded that in the vast majority of cases these people have not been included in addressing chemical plant security and safety issues related to a possible terrorist attack. If workers are neither informed nor involved before an incident happens, how can there possibly be effective preventative systems in place? How could workers possibly contribute their vast knowledge, experience and skills to prevention, preparedness or response? We firmly believe that the lack of union or worker involvement in preventing terrorist attacks means that the systems are broken and in desperate need of repair.

In the 1990 Clean Air Act Amendments, Congress required OSHA to promulgate a process safety management standard addressing the risks of catastrophic chemical accidents. This same legislation required EPA to institute its complementary risk management program. Of course, the concern then was the accidental release of highly hazardous chemicals. It is time these programs be adapted and applied to our post-9/11 world. For example, the government should mandate that all facilities covered by the OSHA Process Safety Management Standard conduct a “Process Hazard/Terrorist Analysis.” Sites would conduct this analysis in accordance with the present requirements for unintentional events, but would now include an analysis of terrorist potential at each point of review for each covered process. Furthermore, in because terrorists are capable of striking multiple targets simultaneously, we recommend that all “worst case scenarios” under OSHA and EPA now include multiple failures.

Finally, on the issue of the necessity of federal legislation ...

I would take this opportunity to express my sincere thanks to those forward thinking facilities that are striving to achieve the excellence necessary to provide a safe workplace and be a good neighbor.

But if you review the results of USW’s national survey you will see that in the days following 9/11 there has been some improvement in some areas by some companies. But, we ask, is some improvement in some areas by some companies enough? With what is at stake, we all know the answer is an emphatic no. Workers and members of our communities should not be placed at risk because some companies either have other priorities or choose to ignore the possibility of an attack. The phrase, “this will never happen to us,” should be erased from our vocabulary.

Responsible companies should not be placed at an economic disadvantage because they allocate resources to address the threats we face.

To insure that not just some, but all prepare:

We support legislation that would dovetail with the OSHA Process Safety Management Standard and the EPA Risk Management Program with a focus on potential terrorist attacks.

⁴ PACE. 2004. *PACE International Union Survey: Workplace Incident Prevention and Response Since 9/11*. Nashville, TN.

This legislation should certainly mandate high-level security measures—fences, guards, etc.—but its main focus should be on forging inherently safer processes and minimizing the storage of highly hazardous chemicals. EPA should enforce this part of the legislation, even if DHS enforces the fences and guards.

This legislation should include provisions for prevention, preparedness, emergency response and remediation. Our experience, coupled with our national study, shows that voluntary measures are not enough. The country needs strong legislation that will ensure that companies take all possible measures to protect our communities, our workers and our industries.

This legislation should strike an appropriate balance between, on the one hand, the need to keep critical information out of the hands of terrorists, and, on the other, the information needs of local responders, and the public's right to know. It is hard to imagine how we can win true protection without providing vital information to workers and communities. If they are kept in the dark, not only will opportunities for prevention and preparedness be lost, chaos will reign if an incident does occur.

Legislation should mandate the participation of workers and their unions as major contributors to both security and inherent safety.

There should be government funding for both research on, and promotion of inherently safer systems. Funding should also be provided for training and education for chemical site workers, emergency responders and remediation workers. A model program for this type of training already exists at the National Institute of Environmental Health Sciences' (NIEHS') Worker Education and Training Program (WETP). That highly successful program should be strengthened and expanded.

Every day hundreds of thousands of workers stand on the front lines, working skillfully and diligently to ensure the safety of our nation's chemical-related facilities. Since September 11, these workers have stood ready to make an additional contribution to workplace prevention, preparedness and response related to possible terrorist attacks. Neither the union nor its members want to stand idly by. Enlist us in the fight to keep our plants safe for our members as well as those across the fence-lines. Serving on the front lines, we know that the job of protecting our facilities and our country cannot be accomplished without us.

Thank you again for the opportunity to speak to you.