Written Testimony of Dr. Rafael Moure-Eraso, Chairman and CEO,
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House Joint Committee on Public Safety and Security
of the Connecticut General Assembly

Subject Matter Hearing: H.B. 5802: An Act Adopting Certain Safety
Recommendations of the Thomas Commission

February 15, 2011

Good morning, my name is Dr. Rafael Moure-Eraso and I am Chairman and CEO of the US Chemical Safety Board. Thank you for the opportunity to comment on H.B 5802. I commend the committee for holding this hearing and for considering adoption of these important safety recommendations.

The Chemical Safety Board or CSB is an independent, non-regulatory federal agency that investigates major industrial accidents involving hazardous substances. We were established in 1998 and have investigated approximately 70 industrial fires, explosions and toxic gas releases across the country.

As many of you know, the CSB investigated the accident at Kleen Energy, a natural gas-fueled power plant under construction in Middletown, Connecticut. On February 7, 2010, contract workers were conducting a "gas blow", " – a planned effort to clean out new fuel-gas piping leading to combustion turbines by directing high-pressure natural gas through the pipes and out of vents located near ground level, adjacent to the power generation building. Just before 11:30 am, the accumulated gas ignited, triggering a massive explosion. Six workers lost their lives and many others were injured.

As is the case with so many industrial accidents, the disaster at Kleen Energy was entirely preventable. At a public meeting held in Connecticut on June 28, 2010, the CSB released its final report that concluded that using gas blows to clean piping is inherently unsafe, and should no longer be permitted in the construction of power plants. The CSB issued a total of 18 urgent safety recommendations including a recommendation that the governor and legislature of Connecticut enact legislation applicable to power plants that prohibits the use of flammable gas that is released to the atmosphere to clean fuel gas piping.

The CSB is pleased that the State of Connecticut is setting an example for the rest of the country. Last September, I applauded the decision by former Governor Jodi Rell to ban gas blows in Connecticut via Executive Order. Today, we applaud the efforts of Representative Linda Orange and her colleagues to make this prohibition a permanent part of Connecticut state law. A permanent prohibition of this practice would safeguard the lives of Connecticut's workers and honor the legacy of six men whose lives were lost at Kleen Energy: Ronald Crabb, Peter Chepulis, Raymond Dobratz, Kenneth Haskell, Christopher Walters, and Roy Rushton. A

permanent prohibition would also send a strong message to the other 49 states, the federal government, voluntary consensus standards organizations, and the power generation industry that we *can* and we *must* abandon this inherently unsafe practice.

Since the incident at Kleen Energy, the CSB has advocated for safer alternative pipe cleaning methodologies. Our investigation found that far safer cleaning methodologies are available and quite feasible to accomplish the same cleaning function, including blowing with air or nitrogen, which cannot explode, or forcing a cleaning object or so-called "pig" through the fuel-gas piping under air pressure.

Already, following CSB recommendations, major gas turbine manufacturers are advising their customers to use alternative pipe cleaning methodologies to remove debris that would otherwise damage the turbine. GE Energy, for example, has revised its policies to, as a GE Senior Professional Engineer put it, "make gas blows something that will not happen again under GE's watch." GE also expressly prohibits its own employees from being on site if one of its customers chooses to conduct a blow with flammable gas.

The CSB also issued a recommendation to the Occupational Health and Safety Administration to develop a national gas safety standard. Recommendations were also made to several voluntary consensus standard-setting bodies, including the National Fire Protection Association (NFPA), and the American Society of Mechanical Engineers (ASME) to prohibit this practice in their standards. The CSB is working very actively with these groups, and we are confident that many of these efforts will be successful in changing the standards to prohibit gas blows.

The CSB found that over the next five years 125 or more natural gas fueled power plants are anticipated to come online. Since our study was published, we further learned that the State of Colorado announced plans to require the conversion of all of the coal-fired power plants in the Denver area to natural gas. In many of these instances, the new or refitted plants may opt to use "gas blows" despite the inherent dangers, simply because gas is conveniently available.

Any delay in banning gas blows will put more lives at risk. Enacting legislation in Connecticut that will prohibit gas blows cannot wait.

Thank you for the opportunity to submit this statement.