

Statement of C. Russell H. Shearer
Nominated by President Bush to be a Board Member
U.S. Chemical Safety and Hazard Investigation Board
before the
Committee on Environment and Public Works
United States Senate
Washington, DC
October 2, 2007

Madam Chairman, Ranking Member Inhofe, and Members of the Committee, thank you for the opportunity to appear before you. With me today are my wife, Michelle, and my one and a half year old daughter Eliza, upon whom I may call to answer questions because nobody can be mad at a girl with her smile.

I am grateful for and honored by the President's nomination to serve as a member of the Chemical Safety and Hazards Investigation Board ("Board"), and I appreciate this opportunity to appear before your committee today. I likewise appreciate having had the counsel of the committee members, their staff, and of other congressional staff. Understanding their views has been instructive, and I will continue these communications if confirmed.

I look forward, if confirmed, to working closely and collegially with the Chairman and Board Members. They have wisely hewn fast to Congress's mandate to investigate events, to devise lessons learned and recommendations from them, and to communicate that information to workers, the public, industry, and government agencies. That mandate is an important one because in it Congress recognized that investigating and communicating lessons learned is the first step to building safety performance. Industry in a perfect world would uniformly recognize the wisdom of that fact and universally act on it, performing this function on its own and sharing the information and operating experiences both within and without the chemical industry. But it has not and so Congress created the Board to fill that void.

The Board, then, has a critical national safety function in executing a performance-based investigation program that seeks out root and contributing causes, the solutions to which may require technical, managerial, policy, or regulatory solutions, or a mix of each. Congress and the Board have thus taken an important step beyond traditional, limited-scope assessments of simple compliance with existing regulations, and into the more important function of building from events a good base of safety knowledge, lessons learned, and operating experience. I therefore view the Board's mission to be similar to—albeit an imperfect analogy—a high-performing corporate safety office whose responsibility is to use events as learning tools that change behavior in order to prevent the recurrence of that or similar events.

My experience is in high-hazard chemical and nuclear operations—as a program manager and as a chief corporate environment, safety, and health officer—and I routinely use the Board's products. The Board's expertise in conducting investigations and devising lessons learned and recommendations is, in my assessment, outstanding. The insights gained from these investigations serve a critical role in fostering excellence in chemical-safety performance because they form the technical basis to help the industry and the appropriate regulatory agencies identify and formulate corrective actions. The challenge is to ensure that the lessons are effectively communicated in a timely fashion to the intended audience. I therefore intend, if confirmed, to work with the Chairman and the Board Members to build on the excellent progress already made and to promote the following three objectives:

- First, the Board should continue to build the base of safety¹ knowledge by expanding the number of investigations it conducts in a manner, of course, that maintains the excellence for which these investigations have become known. Each investigation is an opportunity to learn new information, to gain additional insights into mechanical-system, management-system, and human behavior. Indeed, enhanced safety performance begins with building safety

¹ I view the generic term “safety” to encompass public safety, worker safety and health, plant safety, and protection of the environment, and I am a firm believer that a high performing environment, safety, and health (ES&H) program will include each of these components. I believe, moreover, that performance in any one aspect of an ES&H program—whether it is environment, safety, or health—is a good indicator of performance in each of the others.

knowledge, including developing lessons learned, operating experiences,² and best practices.³ And this safety knowledge, I believe, is critical in this post 9-11 operating environment because safer, more robust, and better and more intelligently designed and engineered plants provide the defense-in-depth required to prevent or mitigate the effects of potential malevolent acts.

Building this base of safety knowledge is also an important national asset because companies with good safety records are profitable companies. These companies have learned the truism that integrating safety into production yields safe and reliable operations that, in turn, produce excellent products. This is true because the focus is on quality—quality in safety, quality in worker health, quality in environmental performance, and quality in production—rather than production alone. The integration of these attributes is the pillar of an overall Quality Assurance program, which studies have time and again shown to be the foundation of a competitive enterprise. These companies have therefore come to the enlightened self-interest that safety is not only morally right; it is a good business practice.

- Second, the Board should adopt additional cost-effective methods for outreach to and awareness among the public, workers, industry, and government agencies. I believe that communication of information learned from events to all of these groups is vitally important. It builds accountability and transparency and ensures that lessons learned are translated into actions that improve safety performance.

The Board, for example, should establish forums to learn, share, and consider state-of-the-art and best practices from diverse stakeholders, including the public, labor unions, workers, industry associations, corporate representatives, national consensus-standard setting groups, environmental groups, the public, and others. These meetings should not be mere press events but gatherings where technically- and not-so-technically-minded people can share

² Lessons learned is the data collected from an event or events, which is stored in a database or other less formal method; operating experiences is that same data when applied to operations in order to improve safety or reliability or some other attribute of plant function.

³ A “best practice” is a description of process proven to generate favorable results written in a way that others may apply it with equal success.

information and insights with the explicit objective of improving safety performance. An important lesson learned over the last two decades is that institutions must be technically inquisitive for a safety culture to flourish, and that they must be open to new ideas and practices from outside their experiences in exercising that inquisitiveness.

The Board might also build on the Institute for Nuclear Power Operators' "Prevent Events" model in preparing talking points that synopsizes its reports. These talking points would then be available for industry to use at plan-of-the-day or daily "tool box" meetings so that it could explain to its workers exactly how an event at another facility applies to them personally. It is a tool, in short, that makes abstract events personal to the workers and helps them understand how to behave more safely.

The Board should also seek out successful companies that have demonstrated an understanding of, and *put into practice*, the concept of integrating safety with production. The experience and practice of these companies can then be used as case studies to communicate the concept and to form the basis of best practices.

- Third, the Board should continue to analyze operating-experience data that identify adverse—and little understood—trends and that point out generic safety issues with broad applicability across the chemical industry. In 2002, for example, the Board analyzed 150 accidents involving uncontrolled-chemical reactions with the objective of improving reactivities-hazard management. This report resulted in several recommendations to the Environmental Protection Agency (EPA) and the Occupational Safety and Health Administration (OSHA).

I will bring to the Board, if confirmed, the commitment I have demonstrated in prior civil-service positions to safe and reliable operations, to identifying and working with stakeholders, and to sharing information openly and conducting affairs transparently. I will also bring to the Board, if confirmed, hands-on experience that will be useful in understanding the precursors that cause accidents, recognition of business- and safety-management systems that influence an organization's safety culture, and techniques that may resolve those issues, including the following:

- Understanding and respecting worker and public safety as a foremost consideration;
- Conducting performance-based accident investigations that focus on underlying root causes and employ innovative methodologies, such as Human Performance Improvement, which seeks to ferret out latent organizational defects that lead to most human error;
- Developing and implementing an operating-experiences (lessons-learned) program that is not a mere data-collection exercise but a process that shares those experiences among the corporate specialists and executives who make decisions about capital investments in vital plant systems, infrastructure, and technical-staff development that ensure continued safety and reliability;
- Building a well-developed operating experiences program that looks beyond the parochial experiences of a particular industry to analyze analogous events in others, such as the Columbia Space Shuttle accident and the Davis-Besse nuclear power plant event (involving reactor-vessel head corrosion), in order to derive comprehensive and balanced operating experiences, recommendations, and operational requirements;
- Promoting operational rigor through procedures in a program previously guided by ad-hoc, expert advice, sometimes known as “tribal knowledge;”
- Promoting the development and use of specific tools, beyond simple lagging metrics, to enhance, throughout an organizational structure, operational awareness of real-time, facility-level safety and production performance, which, in turn, promotes information sharing about and accountability for that performance; and
- Promoting the development of expectations (standards) that integrate safety throughout a facility’s life cycle, including site selection, design (especially, early design stages), construction, operation, and dismantling and decommissioning.

Madam Chairman, I appreciate the opportunity to testify before this Committee, and its consideration of my nomination. I will seek to answer any questions that the Committee Members may have. Thank you.