

Self-Regulation to Promote Nonproliferation

— BY GRETCHEN HUND and AMY SEWARD

INTRODUCTION

The nuclear industry has a unique opportunity to promote the control and security of nuclear material and technologies. The companies involved in the production and trade of nuclear, radiological, and dual-use commodities and technologies are in an ideal position to bolster existing governmental mechanisms to secure these operations and prevent proliferation.

While international agencies, as well as national laws and regulations, are largely in place to prevent access to building or acquiring nuclear or radiological weapons, many countries that are developing nuclear power programs to address their growing energy needs lack the infrastructure to control and secure sensitive materials and technologies. In addition, as the nuclear industry expands, there will be a corresponding increase in the depth, breadth, and velocity of trade in critical commodities. Together, these trends represent a significant challenge to the nonproliferation regime.

This article discusses research by Pacific Northwest National Laboratory (PNNL) on the need for and means by which an industry, such as the nuclear suppliers, either as a whole or through steps taken by individual companies, can contribute to nonproliferation and nuclear security.

THE INDUSTRY SELF-REGULATION CONCEPT

Since 2005, PNNL has conducted research on the role of private industry in nonproliferation. Specifically, the PNNL team evaluated the concept of industry governance and self-regulation, which over the past several decades has

proven to be a powerful tool for improving operational performance in a variety of domains, including environmental protection, occupational and public safety and health, and nuclear safety. Self-regulation can be defined as “A systematic,

voluntary program of actions undertaken by an industry or by individual companies to anticipate, implement, or supplement regulatory requirements, generally through the adoption of best practices.”¹

¹ PNNL conducted an initial study by Gretchen Hund and Oksana Elkhamri in October 2005, titled “Industry Self-Regulation as a Means to Promote Nonproliferation,” A Pacific Northwest Center for Global Security Publication, PNNL-15355, of four other industries (diamond, fertilizer, cement and chemical) that have undertaken a self-regulation approach to identify potentially detrimental problems early on, and take appropriate steps to avoid damaging consequences to the industry. A subsequent PNNL legal analysis (Frederic Morris and Gretchen Hund, February 2007, “Legal Analysis: Scope for Industry Self-Regulation under Existing Nuclear Export Control and Physical Protection Laws,” A Pacific Northwest Center for Global Security Publication, PNNL-16349) assessed the potential contribution of industry self-regulation to prevent proliferation by supporting and reinforcing existing national and international legal and regulatory regimes to prevent access to the means of acquiring nuclear or radiological weapons. This analysis evaluated the systems in place for controlling exports and protecting nuclear, radiological, and dual use commodities in use, storage, and transport. The greatest gaps were identified in (1) dual-use export controls (an adequate model compliance program is needed), (2) security of radiological sources (better guidance is needed), and (3) physical protection guidance for dual use items.

Industries that pursued a self-regulation approach took action in response to a triggering event that was detrimental to a specific company and caused a ripple effect to the whole industry. For instance, following Union Carbide's accident in Bhopal, India, the chemical industry implemented Responsible Care, a program that promotes information sharing among companies and involves a rigorous system of checklists, performance indicators, and verification procedures to improve operations and address concerns about the manufacture, distribution, and use of chemicals. From the perspective of the nuclear, radioactive sources, and dual-use industries, such a trigger could be a terrorist attack using a dirty bomb. Were such an event to occur, it would likely have a crippling effect on the company that supplied the material – knowingly or not – and on the entire industry.

In addition to preventing a trigger event, an industry has many incentives for taking a more proactive role in nonproliferation. An industry could avoid losses in profits and reputation if an incident occurs, preempt the imposition of more restrictive regulations by proactively participating in a voluntary program, and potentially gain expedited clearance of goods. Demonstrating conscientious corporate citizenship could also result in positive gains in corporate ratings and reporting, as well as increased earnings and market share. Another potential benefit is improved relations with regulators and more robust cooperation between industry and government.

Challenges to Industry

PNNL works primarily with dual-use industries to better understand the challenges in meeting existing regulations and in adopting a self-regulation approach.² End-user verification is one of the key issues identified by companies in

complying with existing regulations. The Department of Commerce implements “catch all controls” with the intent of denying exports to the end-users of the item directly or indirectly related to all aspects of the manufacture of nuclear weapons, reactors and fuel. However, these controls do not adequately address the role of middlemen and front companies, which have been identified as enablers in the diversion or illicit procurement of sensitive goods.

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governments receive information that could potentially prevent the spread or diversion of sensitive commodities and technologies.

The private sector can take specific actions to address these challenges. The industry intimately knows the potential uses of sensitive materials and technologies, is familiar with its users, and in many cases has better information than the government on suspected illegitimate end-users.

Actions Individual Companies Can Take

Perhaps the easiest approach is for a company to take steps on its own to support nonproliferation and nuclear security. Most companies already have an Internal Compliance Program (ICP) in place, whose implementation relies on a certain individual or group. What is often missing is for the entire company staff to be aware of the full implications of their actions with respect to

Concern about the loss of proprietary information also inhibits the exchange of information on suspected illegitimate end-users and end-users. A less than collaborative government-industry relationship also limits the degree to which

nuclear security and nonproliferation and to consider these issues in all of their operations. By doing so, in addition to the ICP there could be a new tenet of the corporate governance structure that includes the control and security of nuclear commodities and technology. Companies could explicitly include this tenet as part of their corporate social responsibility program. These programs traditionally have focused on environmental and social or ethical responsibility. Companies could then preferentially buy goods from the suppliers who adopted similar language in their corporate governance structure, extending the impact of a self-regulation approach throughout the supply chain.

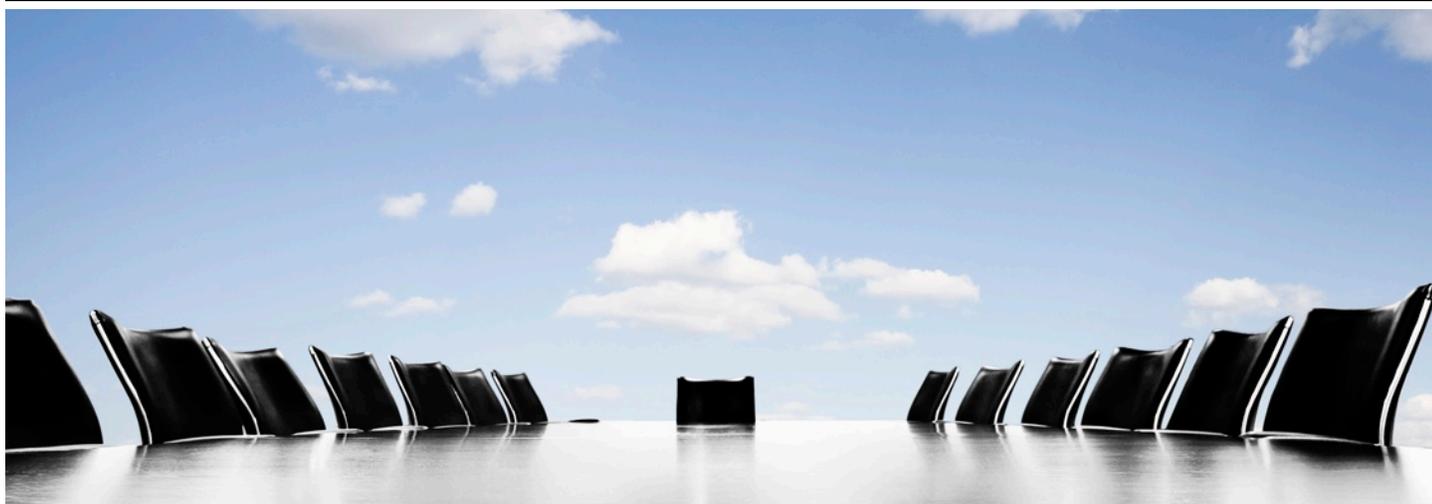
Individual companies would benefit from proactively supporting and strengthening existing governmental mechanisms to prevent proliferation. While a few multi-national companies have taken this approach, there is room for more participation by the industry as a whole.

Actions by an Entire Industry Will Have the Greatest Benefit

An industry can take several steps to support nonproliferation and nuclear security. First, an industry could develop a Code of Conduct and Ethics for model compliance.

Second, it could create a third-party entity to share best practices. Any action to integrate the knowledge of industry activity on nonproliferation grounds will require a resolution of the information sharing concern – between companies (to avoid any appearance of committing anti-trust violations). Similarly, industry has concerns about sharing illicit requests directly with the government out of fear that any company that shares such information will be held responsible for any ostensible wrong-doing. This third-party entity could also facilitate the exchange of information among members. Members could share best practices including how to identify an illicit request. Companies would be encouraged to anonymously share requests for illicit materials, which would alert all members of these requests and suggest that no company fill such an order. The entity could also share these illicit requests with the

² PNNL's research has included numerous interviews, primarily with dual-use industry representatives, trade associations, and relevant NGOs to solicit industry's response and potential interest in possible “self-regulation” or “industry governance” approaches. These discussions have enabled better understanding of the challenges industry faces both in meeting existing regulations and in adopting a self-regulation approach.



appropriate U.S. government officials. This third-party concept would augment the overall quality and effectiveness of the existing regulatory infrastructure associated with export control, physical protection, and safeguards of materials throughout the supply chain and at their facilities.

A third step entails working through the International Organization of Standardization (ISO) to develop an ISO standard for compliance with nonproliferation best practices, to be verified by a third-party.

Fourth, an industry could lobby one or more of the international organizations focused on corporate governance, such as the United Nations Global Compact, to include control and security of nuclear commodities and technology as a guiding principle.³

Growing Recognition of Industry's Role

The concept of a broader and more proactive role for the private sector in promoting nonproliferation has in recent months attracted growing interest among international nonproliferation entities, the U.S. government, NGOs, academia and industry. PNNL collaborates with other organizations and institutions to analyze and promote an

industry role in nonproliferation,⁴ and engage industry in dialogue.

Recent discussions with nuclear suppliers indicate that they may have interest in a more proactive role in nonproliferation and nuclear security. AREVA, a major company in nuclear energy services, added nonproliferation as a central principle to its value charter, which suggests a growing recognition of industry's critical role and responsibility in promoting nonproliferation worldwide.⁵

Leadership is needed to move from one company adopting a self-regulation approach to the industry as a whole securing and controlling their goods and services so that they are not diverted for illicit use. PNNL is identifying industry-specific self-regulation approaches by engaging companies in targeted industries. Recent discussions have included the vacuum industry, which is an essential component of uranium enrichment programs.⁶ PNNL plans to work with both individual companies and industries to promote this self-regulation concept.

Conclusion

In 2004, the revelation of the illicit trafficking network headed by Pakistani nuclear scientist Abdul Qadeer Khan provided an impetus to

strengthen international efforts to prevent nuclear proliferation. Nonetheless, momentum for developing better regulations has slowed perhaps because there has been no overt act of nuclear or radiological terrorism, limiting the pressure for companies or the entire industry to act.

Given the potentially catastrophic impact of a nuclear or radiological terrorist event, the fact that it has not occurred is not a legitimate basis for slowing the development and implementation of a self-regulatory approach. The time is ripe for companies and industries to be proactive in contributing to the control and security of nuclear material and technologies throughout their supply chains. There are direct benefits to companies and industries that choose to adopt such practices as well as to nonproliferation and nuclear security. ■

Gretchen Hund and Amy Seward are senior scientists at Pacific Northwest National Laboratory.

³ The UNGC is an international framework for economic, ecological, and social sustainability that sets out 10 principles in the areas of human rights, the labor market, environmental protection, and corporate corruption.

⁴ Collaboration with organizations includes the Institute of Science and International Security (ISIS), the Stimson Center, the World Institute for Nuclear Security (WINS), Brookings, the American Physical Society, and the American Association for the Advancement of Science. PNNL has also presented research on this topic in several international meetings including the Licensing and Enforcement Experts Meeting (LEEM) at both the Nuclear Suppliers Group (Budapest) and Missile Technology Control Regime (Rio de Janeiro) in 2009. The work has also been presented at several Institute for Nuclear Materials Management (INMM) meetings and at the International Atomic Energy Agency (IAEA).

⁵ Keynote speech made by AREVA CEO Anne Lauvergon at the annual Carnegie Endowment International Nonproliferation Conference, 2009.

⁶ Vacuum components have application in the uranium enrichment process, in which the concentration of the U-235 isotope is raised to levels where it is usable in civil nuclear power generation, and at higher levels, is potentially usable in a nuclear weapon.