PNNL-24739

Pacific Northwest
NATIONAL LABORATORY

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Walk the Talk: How PNNL is developing a Supply Chain Security Culture

September 2015

G Hund

Prepared for the U.S. Department of Energy
under Contract DE-AC05-76RL01830

PACIFIC NORTHWEST NATIONAL LABORATORY
operated by
BATTELLE
for the
UNITED STATES DEPARTMENT OF ENERGY
under Contract DE-AC05-76RL01830

Printed in the United States of America

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Pacific Northwest National Laboratory
Richland, Washington 99352

1.0 Overview

For the past decade, a team at the Pacific Northwest National Laboratory (PNNL) has engaged industry to "go beyond compliance" in controlling and securing their supply chains to ensure their goods are not diverted to nuclear weapons programs. This work has focused on dual-use industries that manufacture products that can be used in both commercial applications and in the development of a nuclear weapon. The team encourages industry to self-regulate to reduce proliferation risks. As part of that work, PNNL interviewed numerous companies about their compliance practices in order to understand their business and to build awareness around best practices to ensure security of goods and information along their supply chains.

As a result, PNNL has identified seven indicators that a company can adopt as part of their commitment to nonproliferation ideals. The indicators are described in detail in the attached flyer and include:

1. Communicate corporate governance statement on nonproliferation
2. Participate in relevant nonproliferation codes of conduct or pledges
3. Preferentially select business partners that maintain strong nonproliferation practices
4. Develop a corporate policy on reporting anomalous incidents to appropriate parties
5. Participate in governmental export control rulemaking
6. Require nonproliferation training and education for employees
7. Acknowledge noncompliance if it occurs

Believing that national laboratories should follow these same best practices, the team is leading an effort to help laboratories "walk the talk," starting at PNNL. The team is actively working to implement a lab-wide supply chain security program, including promotion of a supply chain security culture, similar to that which has been developed for safety. Adopting a supply chain security culture means that numerous operations and departments at the lab will be made aware of the importance of supply chain security.

The lead for this effort, Gretchen Hund, met with senior PNNL representatives in contracts, legal, export control, counter-intelligence, technology commercialization, training, and communications to describe the concept and to discuss the steps required to implement a supply chain security program so that PNNL could more cohesively "walk the talk." After meeting with the department leads, it was clear that PNNL is already doing much of what is necessary (as captured in the attached flyer) but that more can be done to fully embrace the culture and to build awareness and engagement among lab staff. A meeting with a full cross-section of the PNNL departments was further evidence of the lab's strong commitment to seeing this effort succeed.

Ms. Hund presented the concept on October 22, 2014 to the Research Operations Council (ROC) that represents operations from across the lab. The ROC members were interested in seeing PNNL take a leadership role in promoting this concept. They were especially supportive of the idea that supply chain security should be embraced by all divisions of the lab, not just the National Security Directorate.

To this end, Gretchen worked with PNNL's previous Lab Director, Mike Kluse, to orchestrate a video of Kluse declaring the lab's commitment to a supply chain security culture. This video aired at an international meeting that the lab hosted with a cross-section of U.S. and foreign government officials, industry representatives, non-governmental organizations, and financiers and insurers: the *International Seminar on Due Diligence, Risk Assessment and Supply Chain Management: Combatting Nuclear Proliferation*, held in Vienna, Austria, on March 12 and 13, 2015. It was well-received by seminar participants. The video also aired at the Export Control Coordinators Organization (ECCO) annual meeting March 17 to 19, 2015, which was attended by export control leaders from all of the national laboratories (presentation attached). Several ECCO attendees praised the leadership role PNNL was playing for supply chain security. Two participants asked for a copy of the video that they might use on their lab's website. PNNL is hosting the next ECCO meeting this coming spring, which will be an excellent opportunity for the team to highlight PNNL's further progress in embracing the supply chain security culture.

Moving forward, the PNNL team will continue working with PNNL leaders to promote more widespread and visible adoption of the supply chain security culture, to the extent permitted by lab managers. The team will work to incorporate the supply chain security principles across all elements of the lab. For example, the team is in discussions with the training department to develop curriculum on supply chain security culture, with the goal that the training content will be required for all PNNL staff. Lessons learned and "don't let this happen to you" stories will also be drafted and shared with staff, including the large number of students and overall interns who join the lab each summer. The PNNL team will continue sharing the lab's "walk the talk" initiative at various venues, including the ECCO meeting in the spring.

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Walk the Talk: How PNNL is Developing a Supply Chain Security Culture

Pacific Northwest National Laboratory (PNNL), in support of the U.S. Department of Energy, is at the forefront of developing solutions to stop the spread of weapons of mass destruction. The laboratory oversees controlled technology and information and needs to protect these valuable assets with a strong supply chain security culture. PNNL's management and research staff recognize that it is not enough to support the U.S. Government through nonproliferation program work—we need to "walk the talk" in our daily operations as a model for others. The table below illustrates PNNL's progress to date in fostering a culture of supply chain security.

Supply Chain Security Indicator	PNNL Walking the Talk
1. Communicate corporate governance statement on nonproliferation	Our vision is "PNNL science and technology inspires and enables the world to live prosperously, safely, and securely." Battelle's mission states, "We are guided by the belief, shared by our employees, that no business objective is worth achieving at the expense of our integrity and ethics." One of PNNL and Battelle's core values is also integrity. PNNL's Lab Director released a video sharing PNNL's commitment to controlling and securing our information and technology at all times.
2. Participate in relevant nonproliferation codes of conduct or pledges	Beyond general expectations for ethical behavior and integrity or general export control guidance, no explicit nonproliferation code of conduct exists at PNNL nor does one currently exist that targets National Laboratories. PNNL is considering developing such a code for the organization.
3. Preferentially select business partners that maintain strong nonproliferation practices	In sole-source contracts, PNNL can require its contracting entity to abide by the PNNL nonproliferation standards (supply chain security controls). PNNL is also exploring options to include this requirement in bidder criteria for procurements.
4. Develop a corporate policy on reporting anomalous incidents to appropriate parties	PNNL mandatory staff training includes being alert for individuals who may attempt to gather sensitive information and reporting unusual requests or suspicious activities. This is supportive of growing a supply chain culture that ensures sensitive technology, information, or equipment does not end up in the wrong hands.
5. Participate in governmental export control rulemaking	PNNL supports U.S. agencies in rulemaking, such as providing economic analysis in support of the National Nuclear Security Administration's revision of the Code of Federal Regulations Title 10 Part 810, which controls the export of unclassified nuclear technology and assistance. PNNL is active in the Export Control Coordinators Organization to support U.S. government efforts.
6. Require nonproliferation training and education for employees	All PNNL staff (including interns and subcontractors) complete mandatory training that includes export control and defines the importance of protecting all sensitive information, technology, and equipment. All work is reviewed by a Derivative Classifier before release. All material planned for foreign distribution must be reviewed by trained export control office staff members prior to delivery.
7. Acknowledge noncompliance if it occurs	Operational reports, including infractions, are shared with the regional DOE office and DOE Office of Science headquarters to demonstrate a commitment to transparency and maintaining a supply chain security culture.

RELATED EFFORTS

The following activities are further enhancing PNNL's efforts to make nonproliferation a mainstay of our operations:

- **Maintaining an effective export management and compliance program** - PNNL's Export Controls Office maintains the export management and compliance program, closely monitoring and regularly auditing operations to verify compliance.
- **Technology commercialization and transfer** - PNNL's Commercialization team verifies that its contracting entity has an export compliance program in place and that the contract has proper language so that PNNL's property/knowledge is not used for proliferation purposes.
- **Messaging and reporting** - PNNL staff present on the subject of integrating nonproliferation into corporate sustainability and on building and maintaining a culture around supply chain security at national and international meetings.

WHAT'S NEXT?

A strong supply chain security culture means avoiding complacency. PNNL continues to explore opportunities to improve supply chain security:

- More explicitly weave supply chain security into our corporate governance statement so our stakeholders clearly understand this lab-level commitment.
- Implement selection criteria for nonproliferation practices in bidding/procurement processes.
- Incorporate more lessons learned into training to better convey the importance of controlling information, technology, and equipment.
- Strive to build a code of conduct for ourselves and to serve as a thought leader among U.S. national laboratories.
- Reiterate behavior expectations for securing information (at conferences, in public spaces, etc.).
- Include in the Export Controls Office a requirement that all presentations and papers to be given/released be reviewed first by the appropriate manager to ensure that no sensitive information is included.

Where did the seven indicators come from?

In 2013 PNNL research staff published an article defining seven indicators for a strong supply chain security culture. A single set of widely accepted indicators would facilitate transparent reporting by companies on their activities, enabling regulators, investors, employees, and the general public to understand which companies are going beyond compliance.

An indicators-based approach is not new: thousands of companies use similar sets of shared metrics to report on their sustainability performance. By judging PNNL's own operations against this set of indicators, the laboratory helps set a global transparency norm for others to consider following.

Reference: Kurzrok AJ, and G Hund. (2013). "Beyond compliance: Integrating nonproliferation into corporate sustainability." *Bulletin of the Atomic Scientists*. 69:31. DOI: 10.1177/0096340213485946.

- Broaden public messages on export control and counterintelligence awareness to emphasize nonproliferation and the need to maintain a supply chain security culture.
- Help partners and sponsors adopt similar measures within their supply chains.
- Translate the indicators into metrics and report on our progress regularly.

PNNL is committed to measuring progress toward meeting these indicators and to work with others to grow and maintain a supply security culture.

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Walk the Talk: How PNNL is Developing a Supply Chain Security Culture

GRETCHEN HUND

Director, Pacific Northwest National Laboratory's Center for Global Security

Export Control Coordinators Organization, 27th Annual ECCO Training

Arlington, Virginia
Mach 17, 2015

Overview

- The nuclear security and nonproliferation work of the Pacific Northwest National Laboratory (PNNL) and that of its suppliers demands critical attention to export controls and nonproliferation activities.
- In the *Bulletin of the Atomic Scientists (*2013), Kurzrok and Hund published seven indicators to help companies report on nonproliferation excellence to stakeholders.
- PNNL is actively using these indicators to measure its own efforts to foster a supply chain security culture.

Bulletin of the Atomic Scientists

IT IS 5 MINUTES TO MIDNIGHT

Feature

Bulletin of the Atomic Scientists
69(2) 31–42
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sagepub.co.uk/journalsPermissions.nav
DOI: 10.1177/0096340213485946
http://thebulletin.sagepub.com

SAGE

Beyond compliance: Integrating nonproliferation into corporate sustainability

Andrew Kurzrok and Gretchen Hund

Abstract

Proliferators continue to seek dual-use commodities that can be exploited to create weapons of mass destruction, and the private sector has a critical role to play in guarding against this threat. Corporate sustainability, which helps firms and outside stakeholders monitor the impacts of business operations, has emerged as a framework for engagement with industry on its nonproliferation responsibilities. However, the existing literature has not considered how to integrate nonproliferation into the current infrastructure of corporate sustainability, particularly into voluntary reporting standards or socially responsible investment analysis. These tools are essential market mechanisms that incentivize superior behavior on other challenges such as environmentally responsible management, respect for human rights, and fair labor practices. The authors outline the history of corporate sustainability and argue that nonproliferation should be considered a sustainability issue. They propose a nonproliferation pledge and a series of nonproliferation indicators as potential first steps that could build awareness and distinguish between firms based on how successful they are at meeting nonproliferation goals.

Keywords

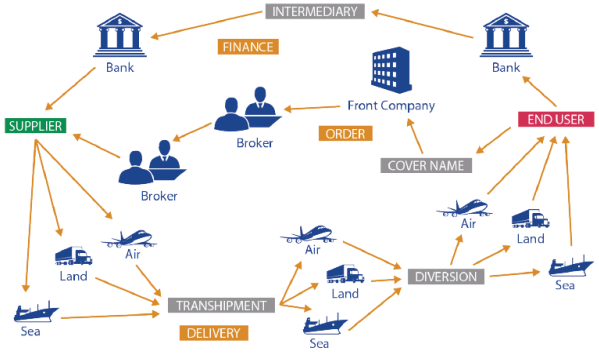
corporate social responsibility, corporate sustainability, dual-use, export control, nonproliferation

In July 2012 the US Justice Department announced the indictment of Parviz Khaki, an Iranian citizen accused of conspiring to procure materials and equipment for Iran's nuclear program. Beginning in 2008, Khaki and his accomplices allegedly contacted American dual-use commodity manufacturers, seeking products that Iran could use to improve its uranium centrifuges. Khaki allegedly stated that the products were for legitimate Chinese firms, when in reality they were destined for Iran. In two instances, items shipped to China arrived in Iran only days later (United States District Court, 2012).

The Khaki case is not unique. Instead of seeking commodities with explicitly nuclear applications, proliferators are increasingly purchasing dual-use commodities, deceiving firms and governments about their true procurement motivations, and exploiting the international financial and trade systems in the process. As the gatekeeper of international manufacturing, shipping, and

Nonproliferation Indicators

1. Communicate nonproliferation sentiment in company's corporate governance statement
2. Participate in relevant nonproliferation codes of conduct or pledges
3. Preferentially select business partners that also maintain strong nonproliferation practices
4. Develop a corporate policy on sharing suspicious inquiries with appropriate parties
5. Participate in governmental export control rulemaking
6. Report on nonproliferation training and education for employees
7. Acknowledge noncompliance if it occurs



Supply chain security culture is needed to help control proliferation activities.

How are we doing?

1. Communicate nonproliferation commitment in company's corporate governance statement
   - PNNL & Battelle Mission, Vision and Value statements
     - "PNNL science and technology inspires and enables the world to live prosperously, safely, and securely"
     - "We [Battelle] are guided by the belief, shared by our employees, that no business objective is worth achieving at the expense of our integrity and ethics"
     - "We employ the highest ethical standards, demonstrating honesty and fairness in every decision and action"
   - PNNL Director Mike Kluse video statement
2. Participate in relevant nonproliferation codes of conduct or pledges
   - None currently exist that target National Laboratories
3. Preferentially select business partners that maintain strong nonproliferation practices
   - In sole-source contracts, PNNL can require contracting entities to abide by our nonproliferation (supply chain security controls) standards
   - Exploring options to include this in bidder criteria for procurement

How are we doing?

4. Develop a corporate policy on reporting anomalous inquiries with appropriate parties
   - Identifying/reporting suspicious behavior included in mandatory staff training
5. Participate in governmental export control rulemaking
   - Economic analysis in support of the National Nuclear Security Administration's revision of Code of Federal Regulations Title 10 Part 810 is one example
6. Report on nonproliferation training and education for employees
   - Included in mandatory staff training; all information must be reviewed by derivative classifier and/or export control as necessary before release
7. Acknowledge noncompliance if it occurs
   - Reported regularly to regional and HQ offices

What's next?

- More explicitly weave sentiment into our corporate governance statement.
- Implement selection criteria for nonproliferation practices in bidding and procurement processes.
- Incorporate more lessons learned into training to better convey the importance of controlling information, technology, and equipment.
- Strive to build a code of conduct for ourselves and to serve as a thought leader among the national laboratories.
- Reiterate importance of individual behavior to control information.
- Require that all presentations and papers to be given/released be reviewed first by the appropriate manager to ensure that no sensitive information is included.
- Broaden public messages on export control and counterintelligence to emphasize nonproliferation and the need to maintain a supply chain security culture.
- Help partners/sponsors adopt similar measures within their supply chains.
- Translate the indicators into metrics and report on our progress regularly.

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