



Emerging Contaminants (EC) Directorate

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**DMSMS**  
2008

# New 'Standard' for Chemical Management at the Department of Defense: Meeting Present and Future Needs

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## Presentation Outline

- ❖ **Brief Overview of the Department of Defense's (DoD's) Emerging Contaminants (EC) Proactive Program**
- ❖ **Executive Order (EO) 13423**
- ❖ **DoD's Present Toxic and Hazardous Chemicals Reduction Plan (the Plan) under EO 13423**
- ❖ **The Plan's Future Role in Responding to Legislation such as RoHS and REACH**

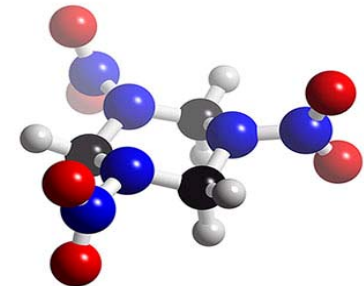
European Union (EU) regulations: Restriction of Hazardous Materials and Registration, Evaluation, Authorisation and Restriction of Chemical Substances (for the first time, chemicals are regulated in materials, known as 'articles').



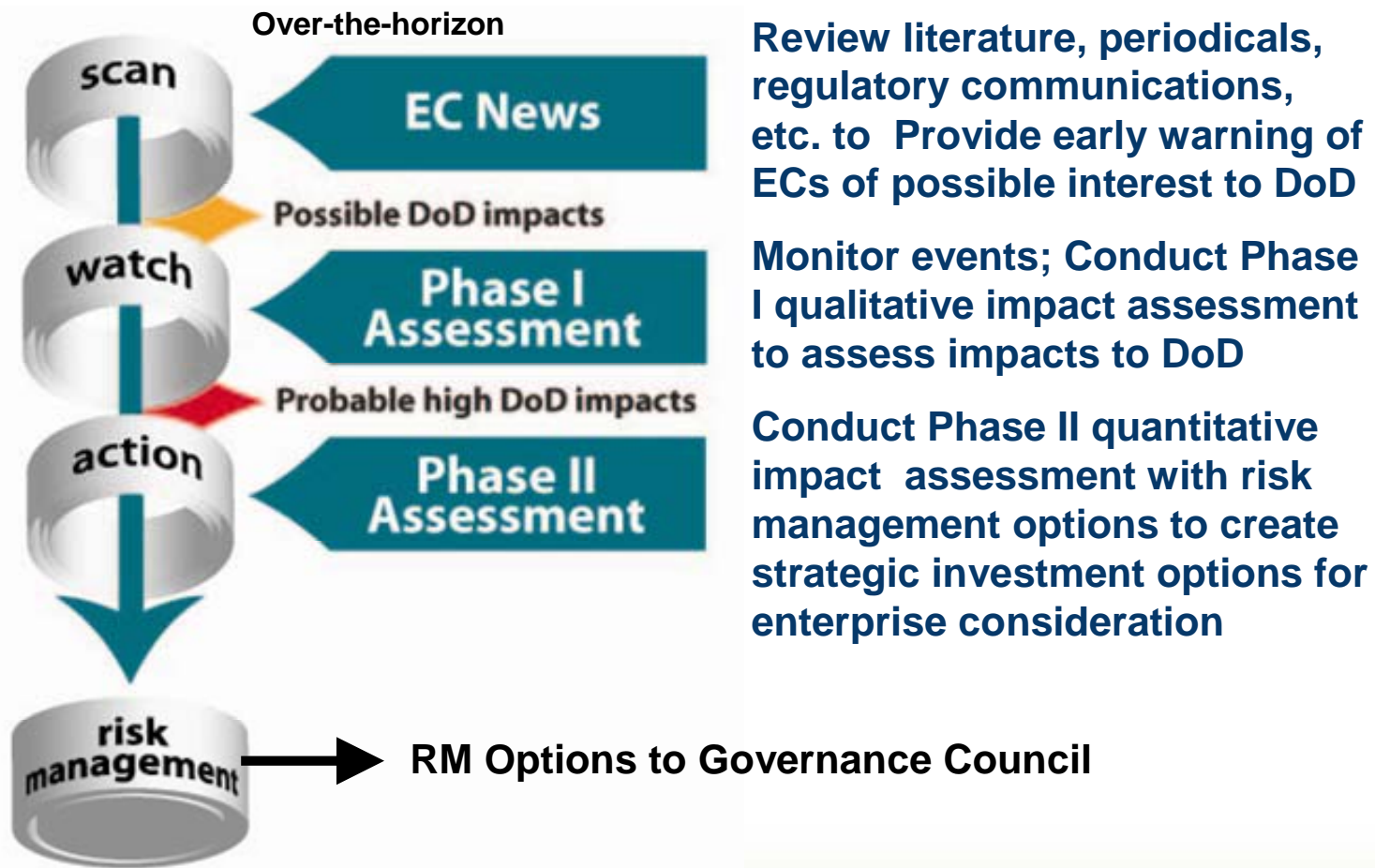
# What Is an Emerging Contaminant?

## At DoD, ECs are defined as

- ❖ Chemicals & materials with
  - ◆ Perceived or real threat to human health or environment
  - ◆ Either no peer reviewed health standard or an evolving standard
- ❖ May have
  - ◆ Insufficient human health data/science
  - ◆ New detection limits
  - ◆ New exposure pathways

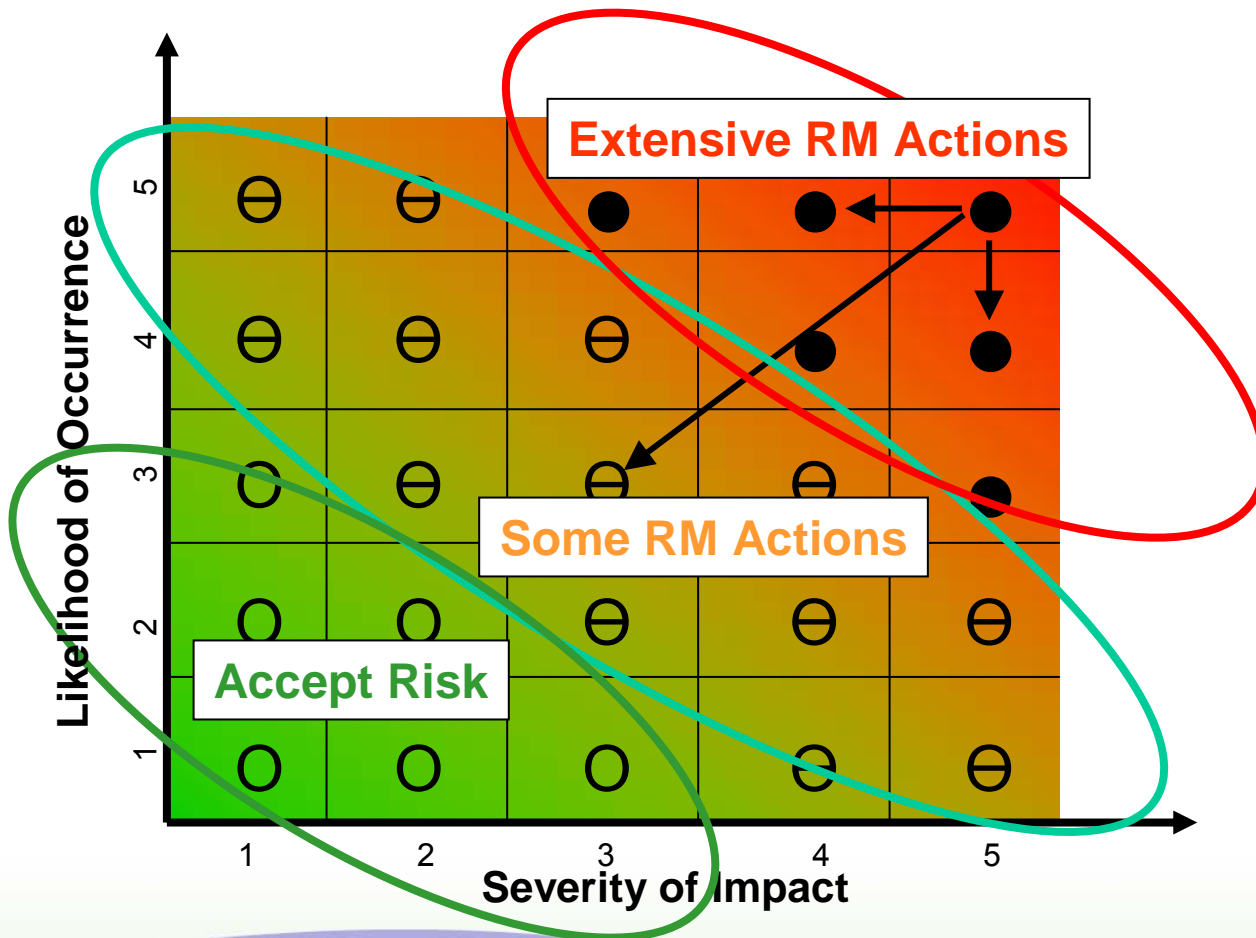


# EC “Scan-Watch-Action” Process



# Integrated Risk Management (RM)

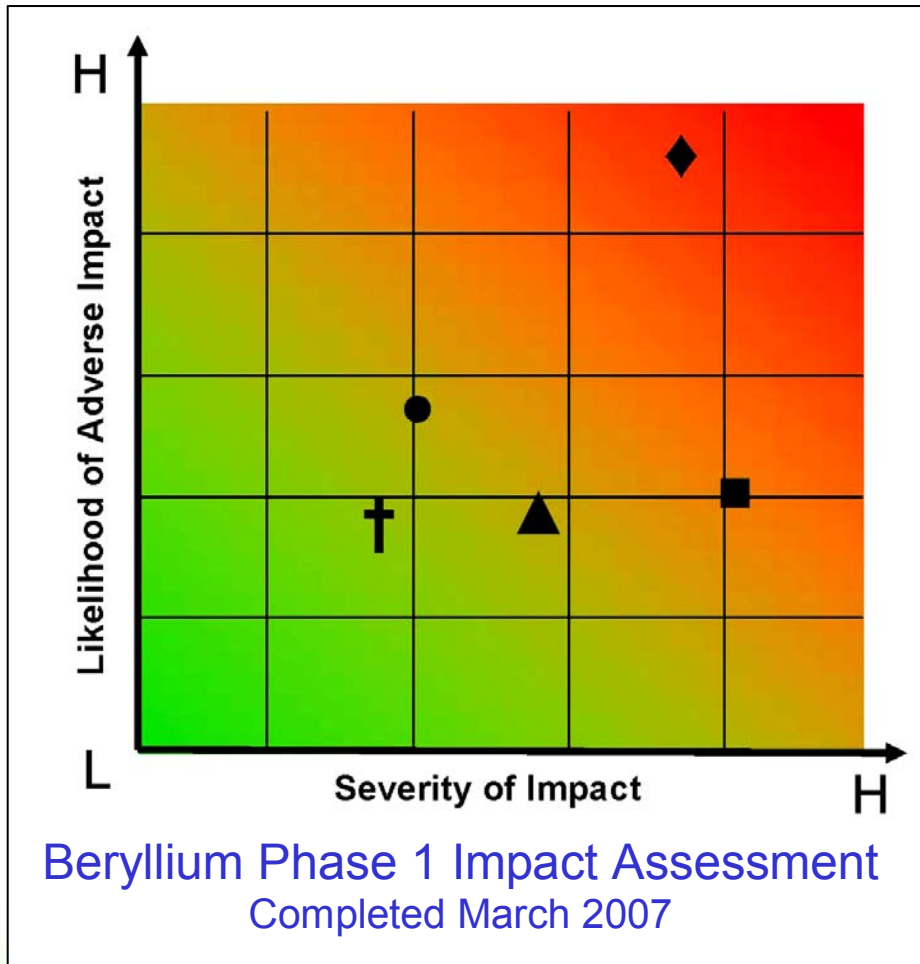
## RM Options



- Fill tox science gaps
- RDT&E
- Material substitution
- Process changes
- Regulatory engagement
- Stockpile material
- Exposure assessment & monitoring
- Personal Protective Equipment (PPE)
- Acquisition changes
- Benchmark with industry
- Risk communication
- Training



## Example: Beryllium and the Relative Risks to EH&S and Readiness & Training





## Executive Order 13423

- ❖ Signed by President Bush, January 24, 2007
- ❖ Entitled, “*Strengthen Federal Environmental, Energy and Transportation Management*”
- ❖ Rescinds Several Previous EOs, Including
  - ◆ EO 13101
  - ◆ EO 13123
  - ◆ EO 13134
  - ◆ EO 13148
  - ◆ EO 13149



# EO 13423 Goals Determined by Areas

- ❖ Acquisition
- ❖ Electronic Stewardship
- ❖ Energy Efficiency
- ❖ Fleets
- ❖ Recycling
- ❖ Renewable Energy
- ❖ Sustainable Building
- ❖ *Toxic Chemical Reduction*
- ❖ Water Conservation





## Contributors to the Plan Thus Far

- ❖ **Systems Acquisition Environment Safety and Occupational Health (Systems Acq. ESOH)**
- ❖ **Emerging Contaminants (EC)**
- ❖ **Environmental Management Systems (EMS)**
- ❖ **Green Procurement (GP)**
- ❖ **Hazardous Material Business Transformation (Hazmat BT)**
- ❖ **Hazardous Waste (HW)**
- ❖ **Ozone Depleting Substances (ODS)**
- ❖ **Toxics Release Inventory (TRI)**



# DoD's Toxic and Hazardous Chemicals Reduction Plan under EO 13423

- Submitted to Office of the Federal Environmental Executive (OFEE) in early February 2008
- Concurrence by the Services on identifying initial chemicals for reduction by November 2008 deadline currently underway; DLA has already concurred



# Elements of the Plan

## ❖ Sound Business Approach

- ◆ Uses EMS (environmental management system) ‘framework’
- ◆ Recognizes best practices and potential barriers
  - » Major relevant programs ‘screened’ with OFEE guidance/checklist
- ◆ Reveals overlaps and deficiencies (‘gaps’)
  - » Plenty of programs and policies
  - » Accountability needs improvement

## ❖ Lifecycle Management Towards Sustainability

- ◆ Weapon Systems *and* Facilities

## ❖ Reduce Toxic/Hazardous Chemicals Across

- ◆ *All* phases: Procurement, Use, Release and Disposal based on Milestones



## Advantages of the Plan

- ❖ **Establishes a Centralized Policy at the Office of the Secretary of Defense for Chemical Management Activities**
  - ◆ More efficiency
  - ◆ Less duplication
- ❖ **Increases Visibility into DoD Systems to**
  - ◆ Advance the identification and prioritization of mission-critical chemicals
  - ◆ Reduce potential occupational health hazards
  - ◆ Decrease the Department's chemical risks, liabilities as well as costs



## Other Benefits of the Plan

### ❖ Better Informs Policy Decisions on

- ◆ DoD's chemical stockpiles
- ◆ DoD's own research into 'green chemistry' alternatives
- ◆ DoD's support of related research at Universities, etc.
- ◆ Responsiveness and competitiveness of U.S. industries
  - » REACH
    - NATO interoperability
    - Foreign military sales (FMS)



# Conclusions

- ❖ **At Present: DoD's EC Program Helps 'Forecast' Chemical Risks and Makes Recommendations**
  - ◆ Goal: Not always chemical reduction, but improved management
- ❖ **For the Future: DoD's Chemicals Plan under EO 13423 Can Assist the Department in Becoming 'REACH'-Ready**
  - ◆ Goal: Toxic and hazardous chemicals reduction
- ❖ **Without Sufficient Preparedness for REACH: Disruptions to the Defense Industrial Supply Chain Are Inevitable**
  - ◆ Case in point: RoHS effectively outlawed the use of lead in electronics
    - » Lessons learned late (an expensive way to learn!)
      - DoD is not a large buyer in many chemical markets
      - DoD does not control availability of these products globally
      - Resulted in flood of unleaded (unqualified?) electronics in supply chain
- ❖ **Only Question: How Much of an Impact Will REACH Have on Readiness?**



Emerging Contaminants (EC)

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**What is an emerging contaminant?**

Emerging Contaminants (ECs) are chemicals or materials that are characterized by:

- A perceived or real threat to human health or environment
- A lack of published health standards or a standard that is evolving or being reevaluated

A contaminant may be "emerging" because of the discovery of a new source, a new pathway to humans, or a new detection method or technology. This means that contaminants that are already known, have toxicity values, or are already regulated may still be considered emerging because the science has evolved to the point where the regulatory climate can be expected to change.


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Last Updated: January 7, 2008

**Announcements**

[Cleaner Sustainable Industrial Materials and Processes Workshop](#)  Document Size: 264959 bytes  
Conference announcement

**What's New**

[Lockheed Martin New Policy on Hexavalent Chrome Usage and Substitutes](#)  Document Size: 43008 bytes  
Lockheed Martin establishes new policy regarding use of substitutes for Hexavalent Chrome.

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## For More Information

### • Including

- ◆ Defense-Related Websites and FAQs (for example, ITAR\*) on REACH
- ◆ Participation in DoD/supplier meetings and discussions on REACH

### • Contact

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**THANK YOU FOR YOUR ATTENTION!**

\*International Traffic in Arms Regulations



# Back-up Slides



# Overview of 'REACH'

## ❖ What Is REACH?

- ◆ A new European law; NOT a regulatory Agency like EPA

## ❖ What Are Its Goals?

- ◆ To improve the protection of
  - » Human health
  - » The environment
- ◆ To concurrently enhance the EU chemical industry's
  - » Innovative capability
  - » Competitiveness

## ❖ How Will These Goals Be Achieved?

- ◆ Through *better* identification of the properties of chemicals
- ◆ Through *earlier* identification of the properties of chemicals



# The Reach of 'REACH'

## ❖ Who Is Regulated?

- ◆ All 27 EU member states, and some voluntary states

## ❖ Who Else Is Effected?

- ◆ “Manufacturers **and importers** will be required to gather information on the properties of their substances, which will help them manage them safely, and to register the information in a central database”

## ❖ When Will REACH Become Effective?

- ◆ REACH became effective or ‘entered into force’ in June 2007 with the formation of the new European Chemicals Agency (ECHA) located in Helsinki, Finland



# More on 'REACH'

## ❖ Why REACH?

- ◆ 99% of chemicals used in products are not thoroughly tested
- ◆ The public is largely unaware that toxic chemicals may be contained in everyday products
- ◆ Consumers expect that products allowed to be sold to them are deemed to be safe by authorities

## ❖ What Is the EU Chemical Industry's Position?

- ◆ Proponents say: Chemical industry is 3rd largest in Europe, employing 1.9 million people; implementation will restore the public's image and confidence in the industry, while moving it towards sustainability

## ❖ Why Now?

- ◆ REACH replaces 40 difference pre-existing laws governing chemicals
- ◆ "The benefits of the REACH system will come gradually, as more and more substances are phased into REACH"



# Implementation of 'REACH'

## ❖ Interim Strategy

- ◆ REACH Implementation Projects (RIPs) to help enable a smooth transition from existing chemical legislation on
  - » Process descriptions, IT system, guidance documents

## ❖ Regulatory Responsibility

- ◆ European Chemicals Bureau (ECB) in Ispra, Italy: “Main practical experience from administering the practical implementation of the pre-REACH chemicals legislation...responsibility of developing those tools and methodologies”
- ◆ ECHA: “Will run the databases necessary to operate the system, co-ordinate the in-depth evaluation of suspicious chemicals and run a public database in which consumers and professionals can find hazard information”

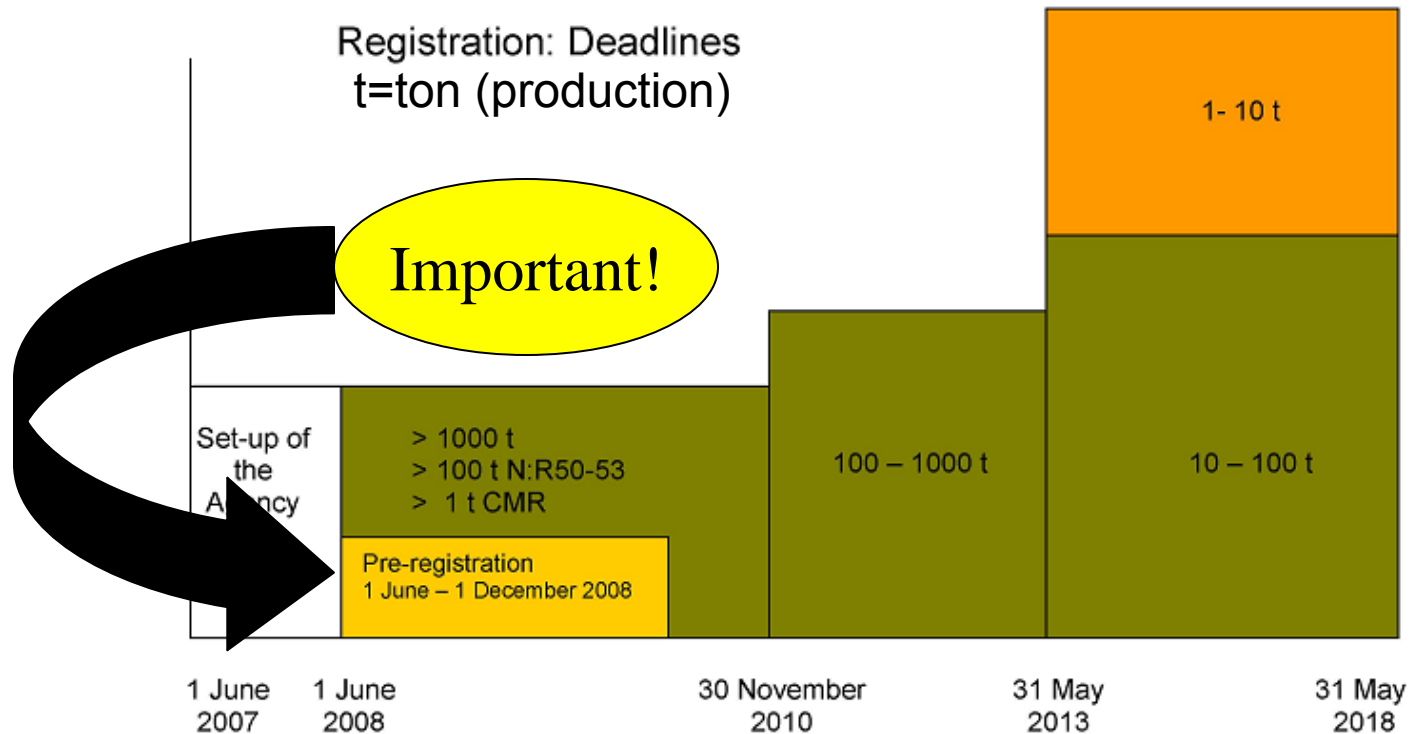
## ❖ Industrial Responsibility

- ◆ Obligated to submit pre-registration dossiers for existing substances and registration dossiers for new substances
  - » Burden of proof on manufacturers to assure safety of products before making a profit
  - » Product labels covered by Global Harmonized System (GHS) instead of REACH



# 'REACH' Dates

- ❖ **Overarching Goal: 30,000 Substances Registered in the Next 10 Years**





## The U.S. Responds

- ❖ **Remember: DoD cannot register products**
  - ◆ And U.S. companies must use EU representative
- ❖ **U.S. Commerce Department Training Sessions**
  - ◆ But commercial mandate different than defense mandate
- ❖ **ANSI (American National Standards Institute) Manufacturers Networks on Chemicals Regulations' to**
  - ◆ Share and disseminate information
  - ◆ Identify issues of concern
  - ◆ Share best practices
  - ◆ Explore training needs
  - ◆ Leverage resources
  - ◆ Avoid duplication



## The U.S. Responds (cont.)

### ❖ **ASTM (American Society for Testing and Materials)**

- ◆ Declarable Substances Committee (Committee F40) Formed in 2005
  - » Addresses laws that have placed restrictions on the content of certain hazardous substances in materials used in several industries, including packaging, vehicles, and electrical and electronic devices
- ◆ Virtual Meeting on Producing REACH Guide Held in September 2007
  - » Will assist with supply chain management (WK15430)
  - » Will provide instruction throughout the inventory process involving planning and processing orders; handling; transporting, and storing all materials purchased, processed, or distributed among all the players on the chain...
  - » Draft guide expected by early 2008

### ❖ **State Activities**

- ◆ Some states taking more pro-active role to prepare their industries



# Implications for DoD and Defense Industry

## ❖ No 'Blanket' Defense Exclusions/Exemptions

- ◆ Expected for some, but not all, military- and aerospace-related uses
  - » Many uncertainties, including individual country's rights
- ◆ "The Regulation also calls for the progressive substitution of the most dangerous chemicals when suitable alternatives have been identified"

## ❖ 'Importers'

- ◆ Includes members of the Department's supply chain

## ❖ Consequences, Other Than FMS

- ◆ Obtaining materials eliminated by REACH may become more difficult (depending on how large a customer we are)
- ◆ Costs of materials eliminated by REACH will increase
- ◆ Specification/Use of REACH-prohibited chemicals by DoD will be costly as well as a source of liability (worker health and safety, etc.)
- ◆ Unknown impacts to interoperability (NATO)



# Is 'REACH' Really a Compliance Issue?

## ❖ U.S. Defense Department Lawyers Might Say:

- ◆ *DoD should not/does not have to 'comply'*

## ❖ But What About...

- ◆ Being perceived as a 'bad' neighbor in host countries
- ◆ Possibly exposing European citizens to toxic/hazardous chemicals working on U.S. bases overseas
- ◆ The potential unlawful transport of newly regulated substances off of those bases (if we are, indeed, able to get them in!)

