Assessing the impacts of Amended Toxic Substances Control Act (TSCA) to the DoD Mission and the Defense Industrial Base (DIB)

**DIB Mission Assurance and IB Risks Posed by Chemical Regulation**

Presented by:
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Introduce the Industrial Analysis Group (IAG)

Problem Statement (DIB sector perspective)

Pilot Assessment Results

Degrees of Potential Market Collapse Due to Regulation

National Security Exemptions
Industrial Analysis Group (IAG) Mission

Mission Statement:

- Deliver actionable acquisition insight to DCMA, DoD senior leadership, and the national critical infrastructure community by continuously analyzing industrial capabilities and identifying strategic risks with recommended solutions through a Mission Assurance (MA) framework in order to ensure Defense Industrial Base (DIB) industrial capabilities are available to provide the most critical goods and services needed by the warfighter.

- Lead the execution of DCMA’s regulatory responsibility for national DIB Sector Mission Assurance.

Acquisition Strategy requires Industrial Analysis considerations prior to milestone decisions.

Major Milestones:

- Pre-Concept
- Materiel Solution Analysis
- Technology Maturation & Risk Reduction
- Engineering & Manufacturing Development
- Production & Deployment
- Operations & Support

Design  Development  Production  Sustainment
**What IAG Does For DoD**

1. DCMA is the lead DoD component for the DIB sector. **Ensures DIB industrial capabilities are available to provide the most critical goods and services needed by the Warfighter.**

2. Executes industrial base assessments in support of statutory and regulatory acquisition program requirements (e.g. supports Milestone Decisions). **Feeds DIB MA Process.**

3. **Shares industrial base intelligence** among DCMA, DoD Enterprise, and National Critical Infrastructure community to assist in understanding the DIB, build collective knowledge, assess/manage risk, maintain readiness, and prioritize workload/funding.

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"Director, DCMA executes assigned national sector responsibilities for the DIB on behalf of the SECDEF and synchronizes these activities with the MA Construct."

~ From DRAFT DoD Instruction 3020.45, “Mission Assurance Construct” (May 2017) ~
Industrial Base Assessments (IBA)

Objective – Determine IB Risk

1. How important is a capability to DoD (criticality)?

2. How likely is it that the capability will be disrupted (fragility)?
UNSEEN RISK - these risks are buried within a complex, global supply chain

- Can be enablers of Key Performance Parameters (KPPs) and U.S. Military strategic advantage
- Fundamental ingredients - higher probability of impacting a greater number of programs
- May enable a wide variety of industrial and maintenance processes
- Chemical sector accounted for 2% of GDP in 2016 (largest contributor in manufacturing)
What Risks Can Result from Legislation/Regulation?

MARKET COLLAPSE and Unavailability of Chemical/Material

- Increased burden on industry
- Limit competition by increasing barriers to entry
- Suppress innovation by decreasing design choice
- Foreign supplier dependency
- Increased cost of goods & services
- Program schedule delays
- Performance issues due to unmanaged substitution

→ Operational readiness impacts
What Can Be Done to Manage Potential Risk?

BALANCE human health risk management with industrial base and mission risk

- Monitor pending regulatory and statutory changes
- Proactive industrial base assessment
  - Industry participation is essential
- Exemptions
  - Support with data (Gov & Industry) to make case
  - DIB capabilities sustained under certain conditions
- Alternative chemicals/materials or methods
  - Tradeoffs
- Risk acceptance
- Develop organic industrial capability
OBJECTIVES

- Investigate NMP and MeCl chemical form, DoD purchase quantity, DoD customers, and end users
- Determine supplier fragility and assess criticality for NMP, MeCl, and alternatives
- Evaluate the market impact of the proposed TSCA regulation
- Project the market effect of a national security exemption

SELECT FINDINGS

- Air Force is dominant user of MeCl; Air Force and Navy top users of NMP
- Most common purchase form is a mixture containing MeCl or NMP
- At least 17 MDAPS supported; aviation heavy
- Common defense applications: paint removal, cleaning, coating reapplication
- Market impact if TSCA restrictions are put in place:
  - Some indicated they’d be out of business (incl. dominant DoD source)
  - DoD sales are insufficient to maintain overall business
  - Some indicated they would exit market (incl. dominant DoD source)
  - Others (perhaps more diversified) indicated minimal to no impact

CONCLUSIONS

- Industry participation was poor
- DoD demand is minimal compared to overall NMP/MeCl production
- Current industrial capability risk is LOW (there are many active suppliers)
- Alternatives exist, but are less effective and Services are hesitant to adopt. Recommend Joint, comprehensive trade-off assessment
- TSCA regulation likely to result in market correction and immediate DoD impacts; formation of defense unique niche market dependent on foreign market viability
- National security exemption might not prevent market collapse in this situation due to commercial demand dominance
Degrees of Potential Market Collapse Due to Regulation

Defense Unique Niche Market Stabilized by Foreign Demand
- DoD demand is small fraction of commercial demand
- Exemption is in place to allow U.S. defense uses of chemical
- *Foreign markets have less regulation and remain profitable*

**IMPACT:** Supplier market correction, but capabilities will remain. May see off-shoring of industrial capabilities.

Defense Unique Niche Market
- DoD demand is small fraction of commercial demand
- Exemption is in place to allow U.S. defense uses of chemical
- *Foreign markets are not profitable*

**IMPACT:** Major supplier market correction. Capabilities will be sustained by Government investment. Limited number of suppliers (IB risk).

Market Collapse
- DoD demand and Government investment is not incentive enough
- Domestic and Foreign markets are not profitable

**IMPACT:** Capability loss (operational risk)
When Is a National Security Exemption Effective?

Potential Conditions for Stabilizing Industrial Capability Using an Exemption:

- Criticality
- Minimum Sustainment Rate (MSR)
- Product diversity
- Defense vs. commercial demand distribution
- Competition
- Foreign market viability
- Timeline
- Alternative solution
Thank You