DLA Strategic Materials Stockpiling

May 5, 2011
Agenda

- Programs Responsibilities and Delegations
- Enabling Legislation and Funding
- Recurring Congressional Reports
- Current Stockpile and Storage Operations
- NDS Commodities and Excess Material
- Stockpile Program Review and Reconfiguration
- Why the Interest in Strategic Materials
- Vision for New Stockpile
- Congressional Interest
Program Responsibilities and Delegations

• National Defense Stockpile Policy set by statute
  – Strategic & Critical Materials Stock Piling Acts

• Management Oversight/Policy Implementation

  Secretary of Defense
  Under Secretary of Defense
    (Acquisition, Technology & Logistics)
  Deputy Under Secretary of Defense
    (Logistics & Material Readiness)
  Defense Logistics Agency
    (DLA Acquisition)
  DLA Strategic Materials

Operational Issues: DLA Strategic Materials
Enabling Legislation and Funding

• Strategic & Critical Materials Stockpiling Act
  – Requirements report to determine what strategic materials need to be bought or sold
  – Annual Materials Plan to receive congressional approval for actions
  – Operations Report to recap annual actions
  – Establishes Market Impact Committee
  – Identifies sales constraints
  – Provides for special release authority

• National Defense Authorization Acts
  – Authority to buy or sell specific materials
  – Sets quantities and revenue levels
  – Mandates programs to receive revenues from material sales

• Funding
  – DLA Strategic Materials operations are funded through National Defense Stockpile (NDS) Transaction Fund
  – Not part of Defense Working Capital Fund
  – Self-sustaining
Recurring Congressional Reports

• Biennial NDS Requirements Report
  – Determines what should be bought, held or sold
  – OSD sets planning assumptions
  – Due on January 15

• Annual Materials Plan (AMP)
  • Annual business plan
  – Based in part on NDS Requirements Report
  – Authority expires annually
  – Coordinated with Presidential-appointed interagency Market Impact Committee
  – Due February 15

• Annual Operations Report
  • Summary of acquisitions, sales, inventory and financial reports
  • Due January 15
Currently, DLA Strategic Materials stores 21 commodities at 10 locations.

Low carbon ferrochrome is one of the 10 materials stored at Warren Depot, Warren, Ohio.

• DLA Strategic Materials marketing analyst Andrew Green (left) and procurement analyst Martha Hochberg are shown getting an up-close look at the material that is readily offered for sale.
Current Storage Operations

- The early stockpile was formed using materials from a variety of sources, including foreign sources.

Shipment of tin from Netherlands East Indies, arrived per S.S. A.B. HAMMOND Jan. 25, 1946
Pier 4 Staten Island, weighed Feb. 14, 1946.
Current NDS Commodities

- Zinc at Scotia, NY
- Manganese at Point Pleasant, WV
- Ferrochrome at Warren, OH
- Tungsten at Hammond, IN
NDS Material Declared Excess

• The 1993 and 1994 Requirements Reports concluded that the bulk of the NDS inventory was excess to DoD needs

• Starting with the National Defense Authorization Act (NDAA) for FY1994, Congress began authorizing the sale of NDS inventory

• By 2000, virtually the entire inventory had been determined to be excess & authorized for sale or disposal
Review of Current Stockpile

- Reviews of U.S. stockpiling strategies began in 2006
  - In 2007, National Academies of Science completed reviews of the National Defense Stockpile program
    - NAS recommended a new Stockpile approach with improved planning
    - Suggested building of robust supply chains for essential materials to better reduce the impact of supply shortfalls or surges in demand.
  - A working group was convened in Jan. 2008 by Deputy Undersecretary of Defense for Industrial Policy.
    - Working group included representation from each of the military services, DoD Joint Staff, Department of Commerce, U.S. Geological Survey, and Defense Contract Management Agency.
    - **WG Conclusion:** Stockpile Should Be Reconfigured!
Reconfiguration to SMSP

Oct 2010 – DLA-SM began Strategic Materials Security Program (SMSP) implementation

Aug 2010 – AT&L provided Reconfiguration Implementation Report to Congress

2010 NDAA – Required a report outlining Implementation Plan for NDS reconfiguration

Jul 2009 – DLA Strategic Materials testified before Readiness Subcommittee of HASC

Jun 2008 – AT&L notified Congress of suspension/curtailment of sales of 13 commodities in NDS inventory

Apr 2009 – AT&L provided Reconfiguration of NDS Report to Congress

Jan 2008 – AT&L established OSD Strategic Materials Working Group

Oct 2007 – Senate Appropriations Committee (SAC) requested material and supplier information

Aug 2006 Report to Congress – Recommended further study

2006 House Report 109-89 directed review of disposal policy

2007 – National Academies of Science commissioned to assess Congressional concerns
Primary SMSP Benefits

- Improve ability to project material needs
- Improve response to emergent material needs
- Leverage buying power of the Department
- Enable planners to take advantage of world market conditions
- Use of mitigation tools to ensure timely availability of materials at a predictable cost
- Improve Department access to material demand and supply information by issuing “Alerts”
Why the Interest in Strategic and Critical Materials?
Metal Prices Recently Skyrocketed

Peak price increases since January 2003

<table>
<thead>
<tr>
<th>Electronics</th>
<th>Structure</th>
<th>Engine</th>
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<tbody>
<tr>
<td>Copper</td>
<td>Aluminum</td>
<td>Nickel</td>
</tr>
<tr>
<td>Tungsten</td>
<td>Titanium</td>
<td>Cobalt</td>
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<tr>
<td>Germanium</td>
<td>Chromium</td>
<td>Molybdenum</td>
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<td>Indium</td>
<td>Manganese</td>
<td>Rhenium</td>
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<td>300%</td>
<td>600%</td>
<td>325%</td>
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<td>300%</td>
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<td>300%</td>
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US Reliance on Imports is Expanding at an Accelerated Rate

### 1997 U.S. Net Import Reliance for Selected Nonfuel Mineral Materials

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Percent</th>
<th>Major Sources (1993-96)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARIZONE</td>
<td>100</td>
<td>China, Japan, Hong Kong, Germany</td>
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<tr>
<td>SALT</td>
<td>100</td>
<td>Germany, Italy, France</td>
</tr>
<tr>
<td>ALUMINUM</td>
<td>100</td>
<td>China, Japan, Hong Kong, Germany</td>
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<tr>
<td>COPPER</td>
<td>100</td>
<td>Chile, Peru, Mexico</td>
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<tr>
<td>PLATINUM</td>
<td>100</td>
<td>Russia, South Africa, Brazil</td>
</tr>
<tr>
<td>TANTALUM</td>
<td>100</td>
<td>China, Japan, South Korea</td>
</tr>
<tr>
<td>COAL</td>
<td>100</td>
<td>China, Australia, India</td>
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<tr>
<td>BARIUM</td>
<td>100</td>
<td>China, Australia, India</td>
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<td>REE</td>
<td>100</td>
<td>China, Australia, India</td>
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<td>CADMIUM</td>
<td>100</td>
<td>China, Australia, India</td>
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<tr>
<td>MANGANESE</td>
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<td>ASBESTOS</td>
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<td>SILICON</td>
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<td>China, Australia, India</td>
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<td>SACCHARITE</td>
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<td>CERAMIC</td>
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<td>MANKIND</td>
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<td>China, Australia, India</td>
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<tr>
<td>DIAMOND</td>
<td>100</td>
<td>China, Australia, India</td>
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<tr>
<td>STONE</td>
<td>100</td>
<td>China, Australia, India</td>
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**Notes:** Percentages based on the value of imports. Additional commodities for which there is some import dependence, but data are either limited or not available to determine import reliance levels:

- Anthracite, Australia, South Africa
- Zinc, China, Korea, Japan

**Source:** USGS Mineral Commodity Summaries

### 2009 U.S. Net Import Reliance for Selected Nonfuel Mineral Materials

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<td>China, Mexico, Belgium, Hong Kong</td>
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### “Top Ten” Shortfall Materials

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<th>Strategic Material</th>
<th>Important Defense Uses</th>
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</thead>
<tbody>
<tr>
<td>Aluminum Oxide</td>
<td>Abrasives</td>
</tr>
<tr>
<td>Antimony</td>
<td>Flame retardants; batteries</td>
</tr>
<tr>
<td>Bauxite, Refractory Grade</td>
<td>High temperature applications</td>
</tr>
<tr>
<td>Fluorspar, Acid Grade</td>
<td>Hydrofluoric acid</td>
</tr>
<tr>
<td>Manganese Metal</td>
<td>Wireless communications equipment</td>
</tr>
<tr>
<td>Neodymium</td>
<td>Magnets, lasers</td>
</tr>
<tr>
<td>Tantalum</td>
<td>Capacitors; super alloys</td>
</tr>
<tr>
<td>Tin</td>
<td>Solder, alloys</td>
</tr>
<tr>
<td>Tungsten</td>
<td>Cutting tools; super alloys</td>
</tr>
<tr>
<td>Yttrium</td>
<td>Displays and lighting</td>
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</table>
What is the Vision for the New Stockpile?
What is DLA Strategic Materials Doing?

- Moving from traditional stockpiling to acquisition support and commodity/specialty metal expertise
- Performing commodity/specialty metal risk assessments and developing risk mitigation strategies
- Assessing global marketplace and analyzing geopolitical issues for impact on availability of materials
- Continuing to collect data and market intelligence
  - On individual elements
  - On downstream manufacturing into metals, alloys, and semi-fabricated products
- Establishing relationships with key military material experts
- Consolidating DoD material requirements
Congress Is More Than Willing to Help With Strategic Materials Issues (Especially Rare Earths)

- **H. R. 1314** Resource Assessment of Rare Earths Act of 2011 (Introduced April 1, 2011),
  - To direct the Secretary of the Interior to conduct a global rare earth element assessment, and for other purposes.

- **H.R.618**: Rare Earths and Critical Materials Revitalization Act of 2011 (February 10, 2011)
  - To develop a rare earth materials program, to amend the National Materials and Minerals Policy, Research and Development Act of 1980, and for other purposes.

- **H. R. 6523** Section. 843. Assessment and Plan for Critical Rare Earth Materials in Defense Applications (Passed in House, January 5, 2010)
  - The Secretary of Defense shall undertake an assessment of the supply and demand for rare earth materials in defense applications and identify which, if any, rare earth material meets both of the following criteria: (A) The rare earth material is critical to the production sustainment, or operation of significant United States military equipment. And (B) The rare earth material is subject to interruption of supply, based on actions or events outside the control of the Government of the United States.

- **H.R. 6160**: Rare Earths and Critical Materials Revitalization Act of 2010 (Passed House September 29, 2010)
  - Create an Energy Department research and development program aimed at ensuring a long-term domestic supply of the critical materials. assed in the 111th Congress by 325-98 vote,

- **H.R. 4866**: The Rare Earths Supply-Chain Technology and Resources Transformation Act of 2010 (RESTART)
  - Reestablish a competitive domestic rare earths minerals production industry; a domestic rare earth processing, refining, purification, and metals production industry; a domestic rare earth metals alloying industry; and a domestic rare earth based magnet production industry and supply chain in the United States. Includes establishment of RE Stockpile.

- **S. 3521**: Rare Earths Supply Technology and Resources Transformation Act of 2010 (RESTART)
  - Same as above. Includes establishment of RE Stockpile.

  - Required the Secretary of Defense to assess the rare earth material supply chain to determine if any of the materials were strategic or critical to national security.

- **P.L. 111-84**: Fiscal Year 2010 National Defense Authorization Act
  - Tasked GAO to assess DoD rare earth usage and risk mitigation plans.
## Other Countries Who Stockpile

### JAPAN
- **JOGMEC** – Japan Oil, Gas and Metals National Corporation
  - Have maintained a materials stockpile since 1983
  - NAS report cites JOGMEC as holding 7 strategic materials
    - Chromium, Cobalt, Manganese, Molybdenum, Nickel, Tungsten, Vanadium
  - Operates as an economic stockpile has transparency
- Japanese government has set aside $1.25 billion to help solve the current rare earth market situation for its industries including:
  - $38 million to promote recycling
  - $390 million in capital investments to improve its domestic rare earth industry
  - $370 million to be put towards mining projects
  - $180 million to guarantee debt of mining projects and to build a strategic stockpile

### KOREA
- **KORES** – Korea Resources Corporation
  - Established in 1967
  - Business activities include:
    - Exploration & development of mineral resources
    - Technological & financial support
    - Mineral stockpiling of rare metals (NOT TO BE CONFUSED WITH RARE EARTH METALS) but they're inventory includes REEs, and materials to support their economy.
    - Research and development projects
    - Operates as an economic endeavor--Has transparency
    - KORES is able to invest in a number of projects including copper, gold, lithium, and rare earth exploration and mining projects all over the world (E.G. Chile, Bolivia, Canada, & South Korea)

- It has been shown that other countries may be creating strategic stockpiles as well although accurate information on these projects is much less transparent, these countries include:
  - China
  - India
  - Russia

It is not clear the full extent of these stockpiles but there is evidence to support they are both strategic and economic in purpose.