SEC. 838. AUTHORITY TO DISPOSE OF CERTAIN MATERIALS FROM AND TO ACQUIRE ADDITIONAL MATERIALS FOR THE NATIONAL DEFENSE STOCKPILE.

(a) DISPOSAL AUTHORITY. —Pursuant to section 5(b) of the Strategic and Critical Materials Stock Piling Act (50 U.S.C. 98d(b)), the National Defense Stockpile Manager may dispose of the following materials contained in the National Defense Stockpile in the following quantities:

(1) 27 short tons of beryllium.

(2) 131,000 short tons of chromium, ferroalloy.

(3) 2,973 short tons of chromium metal.

(4) 8,380 troy ounces of platinum.

(5) 275,741 pounds of contained tungsten metal powder.

(6) 12,433,796 pounds of contained tungsten ores and concentrates.

(b) ACQUISITION AUTHORITY.—

(1) AUTHORITY.—Using funds available in the National Defense Stockpile Transaction Fund, the National Defense Stockpile Manager may acquire the following materials determined to be strategic and critical materials required to meet the defense, industrial, and essential civilian needs of the United States:

(A) High modulus and intermediate modulus high strength carbon fibers.

(B) Tantalum.

(C) Germanium metal.

(D) Tungsten rhenium metal.

(E) Boron carbide powder.

(2) AMOUNT OF AUTHORITY.—The National Defense Stockpile Manager may use up to $58,000,000 in the National Defense Stockpile Transaction Fund for acquisition of the materials specified paragraph (1).

(3) FISCAL YEAR LIMITATION.—The authority under paragraph (1) is available for purchases during fiscal year 2016 through fiscal year 2021.

Section-by-Section Analysis

This proposal would authorize certain disposals of materials from, and acquisition of materials for, the National Defense Stockpile (Stockpile) under the Strategic and Critical Materials Stock Piling Act (Act).

DISPOSAL

Subsection (a) of this proposal would authorize the National Defense Stockpile Manager to dispose of materials that have been determined, based upon the analysis required by the Act to be excess to requirements and no longer needed for the Stockpile. The materials listed in the proposal were among those that had been previously authorized for disposal under the Strom Thurmond National Defense Authorization Act for Fiscal Year for Fiscal Year 1999 and the National Defense Authorization Act for Fiscal Year 2000. All revenue goals required by these authorizations will be met by the end of Fiscal Year (FY) 2015 without needing to dispose the complete stockpiles of the listed materials, which have been determined now to be excess to Department of Defense needs.

ACQUISITION

Subsection (b) of this proposal would provide authority under section 5(a)(1) of the Act (50 U.S.C. 98d(a)(1)) to acquire strategic and critical materials for the Stockpile.

The five materials for which acquisition authority is requested have been identified as necessary to meet the military, industrial, and essential civilian needs of the United States through a rigorous analytical requirements determination processes and are identified in both the 2013 Biennial Report to the Congress on Stockpile Requirements (Report) and the 2015 Reports. The Report is prepared pursuant to the Act, which applies a rigorous analytical process to identify strategic and critical materials required to sustain the United States during various military conflict scenarios developed by the Under Secretary of Defense for Policy. A discussion of the materials follows.

High Modulus and Intermediate Modulus High Strength Carbon Fibers. High modulus and high strength carbon fibers are used in various critical defense and National Security Space (NSS) applications such as rocket motors, missiles, pressure vessels, manned and unmanned military aircraft, helicopters blades, commercial launch vehicles, wing structures and satellites. These systems are critical for global Intelligence, Surveillance and Reconnaissance and sustained engagement capabilities. The lone producer of both NSS and

Department of Defense (DoD) qualified high-modulus fibers M46J, M55J, M60J, as well as the high-strength, intermediate-modulus fibers T800H and T1000G is Toray Industries, Inc., located in Ehime, Japan. It operates at capacity with material lead times for all fibers of approximately 12 months, which substantially limits supply chain agility and responsiveness to United States (U.S.) military and space operational requirements. U.S. defense industry consumers are completely dependent on this single, foreign source of supply; consequently, any supply disruption, either from a natural disaster, conflict, increased demand or policy shift would put many DoD and NSS platforms at risk.

Tantalum. Tantalum is used in various critical defense systems including super-alloys for high-temperature sections of jet engines, shaped charges, explosively formed penetrators, missile systems, ignition systems, night-vision goggles and global positioning systems. Defense demand for tantalum equally is split between aircraft engines/parts and electronic components. There is no domestic mining of tantalum despite the U.S. being the world's largest consumer, accounting for a third of global demand. The needs of the large domestic downstream processing industry are met by imports of tantalum, mainly from Australia, Canada and Mozambique. The U.S. is 100 percent import-reliant for primary tantalum. The FY 2013 Report noted tantalum demand may exceed supply during a national emergency scenario.

Germanium Metal. High-purity germanium is a critical component in the manufacture of lenses for infrared devices and solar cells. These systems are critical for national defense surveillance, reconnaissance and nighttime engagement capabilities. There is only one domestic producer of high-purity germanium; however, production capacity is limited and unable accommodate a surge in demand in the event of a national emergency. The current Stockpile inventory of germanium is 13,362 kilograms. The 2013 Report and subsequent analysis indicate a possible shortage 6,346 kilograms, which is the amount requested by this proposal.

Tungsten - 3% Rhenium Ingots. Tungsten – 3% rhenium ingots are used to produce Tungsten - 3% rhenium (W-3%Re) wire. W-3%Re wire is used for high-temperature filaments in high-power, high-frequency vacuum electronics components, including microwave tubes used in radar, communications, and electronic warfare systems. Defense systems requiring W-3%Re wire include the AN/SPY-1D radar that serves as the central component of the Aegis Weapons System deployed on Burke-class guided missile destroyers. The lone producer of W-3%Re wire for DoD applications ceased production in February 2013 and has indicated that they may cease production by 2017 of the W-3%Re ingots, from which the 3%Re wire is produced. Current W-3%Re microwave tube production is reliant on a dwindling stock of W-3%Re wire likely to be exhausted in early 2015. DoD is planning to implement a two-prong solution to this supply chain issue. The first is to establish domestic production of W-3%Re wire at a new vendor using Defense Production Act Title III Program (DPA) authorities. The second is to establish a Stockpile of W-3%Re ingots to mitigate the impact of ingot production cessation does occur. The stockpile of ingot will allow production of the wire, which in turn will allow the U.S. to continue microwave tube production in the event of a national emergency. The DPA has been authorized; and award for domestic production of wire is expected to occur within the coming months. W-3%Re supply issues and DoD's risk mitigation plan will be addressed in the 2015 Report.

Boron carbide. Boron carbide (B4C) is used in armor, nuclear and industrial applications, including body armor. Boron carbide supply chain concerns are focused primarily on body armor, since need for body armor increases significantly during wartime surge and sustainment requirements. B4C-based body armor utilizes solid B4C ceramic plates, which are made in the U.S. from a refined B4C powder. Refined B4C powder is produced from crude B4C powder. Currently, DoD supply chains rely primarily on foreign sources for refined B4C powder. DoD supply chains currently are 100 percent foreign-reliant for the crude B4C powder. Potentially, he only B4C crude production plant located in a NATO country may cease production for economic reasons. A shutdown would cause reliance on production of crude in Ukraine, India, and China. Adding inventories of B4C crude and refined ceramic grade B4C will address possible shortfalls. The 2015 Report predicts a B4C shortfall, and that a stockpile of approximately 88.5 MT of refined, ceramic grade B4C should be sufficient for a one-year national emergency requirement.

Budgetary Implications: The National Defense Stockpile Transaction Fund (Fund) had an unobligated balance of $202 million at the end of FY 2014. Operating costs of the Stockpile are projected to average approximately $46.5 million for fiscal years 2016 - 2020. In addition to $46.5 million of annual operating costs, $41 million of new acquisitions were previously approved in the National Defense Authorization Act for FY 2014 and are currently being executed. $58 million will be required in order to execute the new acquisitions being proposed. Current resources of the Fund are insufficient to support the proposed acquisitions. The proposed authorization to dispose of excess materials would generate sufficient revenue to finance these acquisitions, provided that the revenues generated from these disposals are retained in the Fund rather than transferred to fund programs unrelated to the National Defense Stockpile. This proposal, if enacted, will allow for the acquisition of strategic and critical materials and for the Stockpile to remain financially positioned to continue the mission intended by the Act.

Proposed Acquisitions ($Millions)							
Material	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Total**	**Appropriation**
Carbon Fibers	$4.70	$4.70	$0.00	$0.00	$0.00	$9.40	National Defense Stockpile Transaction Fund
Tantalum	$5.25	$5.25	$5.25	$5.25	$5.25	$26.25	National Defense Stockpile Transaction Fund
Germanium Metal	$2.85	$2.85	$2.85	$2.85	$2.85	$14.25	National Defense Stockpile Transaction Fund
Tungsten - 3% Rhenium Metal	$2.08	$2.08	$0.00	$0.00	$0.00	$4.16	National Defense Stockpile Transaction Fund
Boron Carbide	$0.00	$1.30	$1.30	$1.30	$0.00	$3.90	National Defense Stockpile Transaction Fund
TOTAL	**$14.88**	**$16.18**	**$9.40**	**$9.40**	**$8.10**	**$57.96**	National Defense Stockpile Transaction Fund
Proposed Disposal Revenues ($Millions)							
Material	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Total**	**Appropriation**
1. Beryllium	$0.00	$0.00	$0.00	$0.00	$2.00	$2.00	National Defense Stockpile Transaction Fund
2. Chromium, Ferro	$28.14	$28.14	$25.62	$28.14	$28.14	$138.18	National Defense Stockpile Transaction Fund

3. Chromium Metal	$1.20	$1.20	$1.20	$1.20	$1.20	$6.00	National Defense Stockpile Transaction Fund
4. Platinum	$0.00	$0.00	$0.00	$0.00	$13.50	$13.50	National Defense Stockpile Transaction Fund
5. Tungsten Metal Powder	$0.00	$0.00	$0.00	$0.00	$2.78	$2.78	National Defense Stockpile Transaction Fund
6. Tungsten Ores and Concentrates	$37.24	$31.04	$23.28	$23.28	$43.26	$158.10	National Defense Stockpile Transaction Fund
TOTAL	**$66.58**	**$60.38**	**$50.10**	**$52.62**	**$90.88**	**$320.56**	National Defense Stockpile Transaction Fund
Net of Acquisition and Disposal	**$51.70**	**$44.20**	**$40.70**	**$43.22**	**$82.78**	**$262.60**	National Defense Stockpile Transaction Fund
Operations Costs	**$49.55**	**$48.66**	**$44.71**	**$44.27**	**$45.06**	**$232.25**	National Defense Stockpile Transaction Fund
Total Impact to Transaction Fund	**$2.15**	**($4.46)**	**($4.01)**	**($1.05)**	**$37.72**	**$30.35**	National Defense Stockpile Transaction Fund

Changes to Existing Law: This proposal would not change the text of any existing statute.