

CRS Report for Congress

The Specialty Metal Provision and the Berry Amendment: Issues for Congress

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Summary

Congress took action in the FY2007 National Defense Authorization Act (P.L. 109-364) to move the specialty metal provision from the Berry Amendment [Title 10, United States Code (U.S.C.) 2533a] into a separate section of Title 10 (10 U.S.C. 2533b). Section 843 of P.L. 109-364 directed the Secretary of Defense to establish a Strategic Materials Protection Board to determine, analyze, and recommend strategies to ensure the domestic availability of materials designated as critical to national security. The Board met in July 2007 and issued a report in September 2007.

The FY2008 National Defense Authorization Act (P.L. 110-181) contains two provisions which may impact the procurement of specialty metal. Section 803 requires the Strategic Materials Protection Board to perform an assessment of the viability of domestic producers of strategic materials, the purpose of which is to assess which domestic producers are investing, or plan to invest on a sustained basis, in the development of a continued domestic production capability of strategic materials to meet national defense requirements. Such an assessment will be evaluated in any decision DOD makes to grant future waivers to the specialty metal provision. Section 804 appears to change the requirement that DOD procure all specialty metal from domestic sources. This provision does not apply to contracts or subcontracts for the acquisition of commercially available “off-the-shelf” items (with certain exceptions), as defined in the Office of Federal Procurement Policy Act, Section 35(c). In light of the new requirements, DOD is required to review and amend existing rules.

The specialty metal provision raises several questions, among them: (1) to what extent do United States (U.S.) national security interests and industrial base concerns justify waiver of the specialty metal provision; and (2) if the United States does not produce a 100% domestic specialty metal, should DOD restrict procurement from foreign sources? Debate over the specialty metal provision invites renewed debate over the efficacy of domestic source restrictions and whether the rationale for every restriction represents a balanced and reasonable approach.

Some policymakers believe that the specialty metal provision conflicts with free trade policies and that the presence and degree of such competition is the most effective tool for promoting efficiencies and improving quality. Others believe that domestic specialty metal suppliers need the protections afforded by domestic source provisions, and that keeping a robust, domestic specialty metal industry is a hedge against any future enemy threat.

This report examines the specialty metal provision, potential oversight issues for Congress, and options that Congress may choose to consider. As events warrant, this report will be updated.

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The Specialty Metal Provision in the Berry Amendment: Issues for Congress

Introduction

This report examines the specialty metal provision which was originally part of the Berry Amendment;¹ the potential oversight issues for Congress, and options that Congress may wish to consider. The debate over the specialty metal provision may also renew interest in the debate over the viability of other domestic source restrictions. There is congressional interest in the specialty metal provision because: (1) the specialty metal restriction affects major defense contractors who produce components for commercial airplanes; (2) some prime defense contractors as well as subcontractors on the second, third, and fourth tiers have stated that they were unable to comply with the Berry Amendment specialty metal requirement; (3) the Department of Defense (DOD) has authorized the use of waivers to purchase non-compliant items (non-compliant specialty metal are metal that do not meet the 100% domestic source requirement of the Berry Amendment); and (4) the long-term impact of the specialty metal provision on the costs of defense equipment and programs, particularly on the requirement that weapon system components be certified as made in the United States.

As early as March 2006, DOD had learned that some items containing foreign specialty metal were being delivered under some DOD contracts. As a result, the Defense Contract Management Agency issued interim instructions which detailed a policy and process for how DOD would provide contractors a “conditional acceptance” of these metals.²

FY2008 National Defense Authorization Act and Revisions to Existing Specialty Metal Rules

P.L. 110-181, the FY2008 National Defense Authorization Act, contains two new provisions which may impact the specialty metal provision. Section 803 would require the Strategic Materials Protection Board to perform an assessment of the viability of domestic producers of strategic materials, the purpose of which is to assess which domestic producers are investing, or plan to invest on a sustained basis, in the development of a continued domestic production capability of strategic

¹ The specialty metal provision of the Berry Amendment was enacted in the 1973 DOD Appropriations Act, P.L. 92-570. For more information on the Berry Amendment, see CRS Report RL31236, *The Berry Amendment: Requiring Procurement to Come from Domestic Sources*, by Valerie Bailey Grasso.

² Defense Contract Management Agency. Specialty Metals Clause Compliance. March 10, 2006 (revised), at [<http://guidebook.dcmam.mil/225/instructions.htm>].

materials to meet national defense requirements. Such an assessment will be evaluated and weighted in any decision to grant future waivers to the specialty metal provision. Section 804 amends the specialty metal provision and appears to soften the requirement that all specialty metal come from domestic sources. With several exceptions noted, this provision does not apply to contracts or subcontracts for the acquisition of commercially available “off-the-shelf” items, as defined in the Office of Federal Procurement Policy Act, Section 35(c). Within 180 days, DOD is required to review and amend existing rules for the domestic nonavailability determinations that apply to the existing specialty metal provision. The long-term impact of these new changes may not become evident until the Strategic Materials Protection Board has performed its assessment and DOD has determined how decisions will be made regarding the use of waivers for domestic non-availability determinations (DNAD).

Strategic Materials Protection Board. The Strategic Materials Protection Board (SMPB) held its first meeting on July 17, 2007. The Board agreed to the following:

- that the term “materials critical to national security” would be taken to mean “strategic materials critical to national security” or simply “strategic materials,” and would include those specialty metals listed in 10 U.S.C. 2533b, and any other materials that the Board chose to so designate;
- that the Board should initially focus its efforts on determining the need to take action to ensure a long term domestic supply of specialty metals as designated in 10 U.S.C. 2533b;
- to adopt certain Terms of Reference (**Appendix**) to shape its deliberations; and
- to direct the Board’s Executive Secretary to conduct an initial analysis of national security issues associated with strategic materials; and to report the results of that analysis at the next SMPB meeting.³

FY2007 National Defense Authorization Act and the Enactment of a New Specialty Metal Provision

Congress enacted provisions in the FY2007 that changed DOD procurement of specialty metal. P.L. 109-364 created a new specialty metal provision separate from the Berry Amendment. P.L. 109-364 contained a provision that moved the statutory requirements for the procurement of specialty metal from the Berry Amendment to a separate section of Title 10.⁴ This provision authorized a one-time waiver of the Berry Amendment for non-compliant specialty metal that were incorporated into items produced, manufactured, or assembled in the United States before the date of the act’s enactment. It also established a Strategic Materials Protection Board, to recommend changes for future domestic source restrictions.

³ Office of the Under Secretary of Defense (Acquisition, Technology & Logistics.) First meeting of the Strategic Materials Protection Board, September 2007, p. 2.

⁴ 10 U.S.C. 2533b.

Rationale for the Proposed House and Senate Versions of the Specialty Metal Provision. The House-version of the proposed FY2007 National Defense Authorization bill, H.Rept. 109-452, contained a provision that would move the statutory requirements for the procurement of specialty metal from the Berry Amendment to a separate section of Title 10. H.Rept. 109-452 offered new language to clarify that the Berry Amendment applied to prime contracts as well as subcontracts. H.Rept. 109-452 stated that allowing foreign contractors to purchase specialty metal, from any source, not only would defeat the intent of the Berry Amendment, but also create a grave risk to national security. The report noted that the committee was aware that certain suppliers claimed that they were inadvertently non-compliant with the specialty metal requirement. The House provision would have allowed a 12-month period for suppliers to become compliant with the specialty metal requirement. It was the intent of the House that all current exceptions and waivers to the Berry Amendment would remain.

The Senate-version of the bill, S.Rept. 109-254, proposed an amendment to codify the specialty metal requirement in a newly-created section of Title 10. Facing the dilemma of how to supply equipment needed to fight the war, the Senate drew upon the original intent and purpose of the specialty metal provision, as interpreted in a memorandum by then-Secretary of Defense Melvin Laird. This memorandum gave DOD the authority to exercise some administrative flexibility in acquiring critical equipment and components for military systems. The Laird memorandum is a key to understanding how and why the provision came to be, as discussed in the original memorandum here:

The bulk of these specialty metals which are used in one form or another in myriad items purchased by the Department of Defense are actually procured at the subcontract level — often many subcontract tiers removed from the prime contract — so as to make impracticable any precise evaluation of all such purchases, even at enormous expense in both money and time. It is apparent, from the legislative history of this provision, that it was not intended that this Department achieve or attempt to achieve the impossible in its implementation. Rather, it is clear that its purpose is to afford reasonable protection to the specialty metals industry to help preserve our domestic production capacity to satisfy mobilization requirements, without forcing a massive disruption of our existing procurement methods and programs. An accommodation is therefore needed to give maximum effect to this new requirement without losing sight of other Congressional objectives that the Department of Defense function in an efficient and economical manner in meeting its mission.⁵

S.Rept. 109-254 acknowledged that specialty metal suppliers were required by DOD to certify that their products or components were compliant with the Berry Amendment.

⁵ Memorandum for Secretaries of the Military Departments and Directors of the Defense Agencies, by Melvin Laird, Secretary of Defense. November 30, 1972. Excerpts of the Laird memorandum appeared under “Items of Special Interest — Application and Interpretation of the Berry Amendment” in P.L. 109-364, the FY2007 National Defense Authorization Act. This and related research was conducted by Ann Eschete and M-J. Oboroceanu of the Knowledge Services Group, Foreign Affairs, Defense and Trade Division, Congressional Research Service.

Background on Specialty Metal Provision

In order to protect the U.S. industrial base during periods of adversity and war, Congress passed a set of domestic source restrictions which became known as the Berry Amendment. Specialty metal represented one of fourteen different provisions that were covered under the Berry Amendment.⁶

Specialty Metal Defined. Specialty metals are defined in the Defense Federal Acquisition Regulation Supplement (DFARS). They include steel, metal alloys, titanium and titanium alloys, and zirconium and zirconium base alloys.⁷

Under the Berry Amendment, specialty metal shall be melted in the United States or its outlying areas, and any specialty metal incorporated in items shall be melted in the United States or its outlying areas. This rule does not apply to specialty metal which are either melted in a qualified country, incorporated in an article manufactured in a qualifying country, or purchased by a subcontractor at any tier of the supply chain.⁸

Application. Specialty metal is used in DOD contracts primarily for military aircraft, weapons, and equipment, and within integrated circuits, wiring, and electrical components. The Berry Amendment did not apply to purchases of specialty metal by subcontractors, at any tier, except if used in producing items for six applications: aircraft, missile and space systems, ships, tanks, weapons, and ammunition. These six applications were identified in the Laird memorandum; when enacted as part of the Berry Amendment, DOD estimated that the great bulk of the specialty metal procured fell within these six major classes of programs. DOD concluded that any attempt to identify and control the use of such metal, for the remaining small quantities involved in other procurement, would not be cost-effective nor justify the effort.

Origin of the Specialty Metal Provision in the Berry Amendment.

The specialty metal provision first appeared in the 1973 Defense Appropriations Act.⁹ Congress was concerned with protecting domestic source materials for the Vietnam War. At that time, the domestic specialty metal sector was hurt by subsidized imports into the United States. In order to insure an adequate domestic

⁶ For a history of the Berry Amendment, see CRS Report RL31236, *Berry Amendment: Requiring Defense Procurement from Domestic Sources*, by Valerie Bailey Grasso.

⁷ The Defense Federal Acquisition Regulation Supplement develops and maintains the acquisition rules which govern DOD. See [<http://www.acq.osd.mil/dpap/dars/index.htm>]

⁸ DFARS 252.225-7014-Preference for Domestic Specialty Metals. The qualifying countries are Australia, Belgium, Canada, Denmark, Egypt, Germany, France, Greece, Israel, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, and Northern Ireland.

⁹ P.L. 92-570, the 1973 DOD Appropriations Act, was amended to add the following text: “Wood (whether in the form of fiber or yarn or contained in fabrics, materials, or manufactured articles), or specialty metals not grown, reprocessed, reused, or produced in the United States or its possessions.”

base for domestic items, Congress provided a guarantee to domestic suppliers for a portion of DOD's specialty metal business.

The Test of Reasonableness. From the inception of the specialty metal provision, both Congress and DOD emphasized that a test of reasonableness would be applied; that the specialty metal provision should not pose an administrative burden upon DOD contractors nor the federal government.

DOD's Actions. In a March 7th hearing before the Air and Land Forces Subcommittee of the House Armed Services Committee, Lieutenant General Donald J. Hoffman, Air Force Military Deputy, asked that Congress give its support to relieving the Air Force from the more arduous aspects of the specialty metal waiver process, as discussed below.

I would ask for the Committee's continued help in one area, and that is the area of specialty metals. In last year's authorization act, Congress provided some relief in the area of electronic components, where the source of minute amounts of specialty metals cannot be traced throughout the commercial production supply chain. This relief is certainly helpful, but I would ask that there be further consideration for relief in the area of commercial products. Tracing the source of metals and commercial products is very problematic for industry, particularly where DOD is a very small part of their market. The cost of creating a separate supply chain that is able to trace specialty metals down to the lowest tier, such as fasteners, is something industry has been unwilling to accept if it is to remain commercially competitive.

While the Congress has authorized a waiver process, the justification and support of the waivers can be very labor intensive. As an example, the waiver process last year for the AMRAM (Advanced Medium Range Air-to-Air) missile, the government contractor spent over 2,200 man hours to review 4,000 parts, and produced a documentation to justify the waiver. This documentation was eight inches tall in printed form. All this work was to justify a waiver for \$14,000 on an item that is valued at \$566,000.¹⁰

Original Congressional Intent. Beginning with the 1973 Defense Appropriations Act, the objective of Congress was to use a thoughtful and reasonable approach in adding specialty metal to the list of items covered under the Berry Amendment. In the initial debate over the specialty metal provision, Senator Jacob Javits observed that the implementation of the provision would require thought and reasonableness, as discussed here:

As an example, I would certainly hope that the Department of Defense in administering this provision would take into consideration the fact that it would be a virtual impossibility for a company participating in a defense contract to try to ascertain for itself, let alone for the myriad of suppliers of small component metals parts, that there was no small amount of metals used which would come within the definition of specialty metals. I would hope that the Department of

¹⁰ Statement of Lieutenant General Donald J. Hoffman, Military Deputy, Office of the Assistant Secretary of the Air Force for Acquisition, before the Subcommittee of Air and Land Forces, House Armed Services Committee, March 7, 2007.

Defense in the administration of this provision, while seeking to carry out the broad intent of protecting the special metals industry, would have sufficient flexibility and discretion under this provision so that they would not be required to go to ridiculous extremes which would result in an almost impossible administrative burden placed upon Government contractors, and the addition of needless expenses to the Government in carrying out its procurement practices.¹¹

Oversight Issues for Congress

The specialty metal provision of the Berry Amendment prohibits DOD from procuring metal that is not produced in the United States.¹² Such a policy alone is difficult to manage; when coupled with the Secretary of Defense's waiver authority and a myriad of exceptions written into the law, the policy became difficult to execute. The very nature of the specialty metal provision itself creates unanticipated consequences for DOD and the defense industry.

Three issues stand out as policy questions that Congress may choose to consider in its oversight role. First, how does the specialty metal provision affect competition among the different contractor tiers in the U.S. defense industrial base? Second, what are the factors that contribute to the success or failure of the administration and enforcement of the specialty metal provision? Third, how does one weigh the reliability of having a domestic supplier base in times of urgent and compelling need, coupled with the desire to promote global trade?

Competition

Effect on the Defense Industrial Base. Competition for defense work is affected by the availability of sufficient quantity and quality of specialty metal; such metal may be critical and vital to the war-fighting effort if they are used for "high-tech" electronics and communications like personal digital assistants. Creating separate electronic chips for military use only, with no foreign content, would be an expensive undertaking, and some companies have elected not to do so even if it means not being able to sell to DOD.

Competition Affects Suppliers Differently. Some members of the defense industry often describe the specialty metal issue as a debate between companies that advocate for global trade versus those that advocate for a dedicated domestic industrial supplier base. On the one hand, some view major aerospace companies as eager to seek waivers of domestic source restrictions because doing so would increase their access to foreign markets for specialty metal. Some industry leaders have maintained a view that domestic source restrictions like the Berry Amendment are inconsistent with a policy to encourage global competition. Yet

¹¹ Excerpt from Senator Jacob Javits' remarks on the passage of H.R. 16593, Making Appropriations for the Defense Establishment for Fiscal Year 1973. 118 Congressional Record S17967 (October 13, 1972).

¹² 10 U.S.C. § 2533a, Requirement to Buy Certain Articles from American Sources; Exceptions.

some believe that the presence of competition, particularly from the foreign markets, makes it more difficult for domestic suppliers to survive. Each supplier in the defense industrial base views competition differently.

For example, major defense contractors contend that global competition for commercial and defense work requires establishing and developing foreign trading partners, and that the capacity of domestic suppliers to meet the needs of major defense contractors is insufficient. Some contractors, especially those whose primary market is the U.S. defense industry, know their client base, what they have to buy, and thus are locked into one dedicated supply chain. Yet many other contractors, particularly at the third and fourth tiers of the supply chain, market to both military and commercial sectors; they find that carrying separate supply chains is cost-prohibitive and poses a significant administrative burden. Some companies may not know who the ultimately purchaser of their product will be, so they cannot be certain whether the end use is for a commercial or military application. For a military customer, each item or parts of an item must be traced to a 100% domestic content.

Doing Business with DOD Could Mean Maintaining Separate Production Lines. The specialty metal provision as contained in the Berry Amendment required a 100% compliance; there was no provision for non-compliant metal. As an example, when DOD purchased avionics, electronics, components, and subassemblies, items with specialty metal were required to be 100% domestic. However, the integration of the global supply chain meant that cheaper, foreign metal could make up virtually all products, and that there were fewer companies that could certify that all of the metal used in the production of their items were wholly domestic in origin. Suppliers who wanted to sell to DOD and to the commercial sector could be forced to maintain two separate production lines; this would raise DOD's costs.

Competition Between Foreign and Domestic Firms Is Affected by the Berry Amendment Because the United States Is Not a “Qualifying Country” Under the Berry Amendment. The Berry Amendment permits the procurement of products from certain qualifying countries. Qualifying countries are defined as countries that have a Memorandum of Understanding or other international agreement with the United States.¹³ Under the Berry Amendment, qualifying countries are allowed to sell products to DOD, because DOD has determined that it is not in the public interest to restrict the procurement of products from qualifying countries. This decision affects U.S. companies in this way: the United States is not listed as a qualifying country under the Berry Amendment. For this reason, the Berry Amendment would appear to prohibit any U.S. company from selling items to DOD, unless the company can certify that any items, composed of any non-compliant specialty metal, are from qualifying countries only. This posed a hardship for some domestic companies that could not meet this requirement.

The Berry Amendment also allowed for the procurement of specialty metal melted in a qualifying country or incorporated in an article manufactured in a qualifying country. If an item was made overseas in a qualifying country and

¹³ DFARS 225.872-1.

incorporated specialty metal not melted in America (or in a qualifying country), then DOD may purchase that foreign-made item. The effect of this rule meant that qualifying countries could use metal from any source, even a non-qualifying country, and sell products to DOD.

Administration/Enforcement

Administration. Can DOD administer and properly execute the new specialty metal provision? The new specialty metal provision may not be entirely enforceable, because it may be nearly impossible to determine to any degree of certainty whether the smallest of the nuts, bolts, screws, and fasteners that make up DOD weapons systems and equipment are of 100% domestic content.

Waivers. Other problems include the use of waivers. The use of waivers to accommodate both DOD and defense contractors suggests that the Berry Amendment may be difficult to enforce. In April 2004, the Secretary of the Air Force approved a permanent waiver of the requirements of the Berry Amendment for 23 commercial aircraft systems, representing more than 1,200 aircraft in the Air force's inventory. The first waiver was granted in October 2002, when the Senate voted to grant Boeing a waiver of the Berry Amendment to purchase Russian titanium on more than 100 of its 767 air refueling tankers that were to be leased to the Air Force. At the time, DOD and the Senate affirmed that this was an exception, that the Berry Amendment would be consistently enforced in the future; yet another waiver was granted in December 2002, allowing United Technologies Corporation to purchase Russian titanium to manufacture jet engines for the Boeing C-17.¹⁴ The Government Accountability Office (GAO) later found that the Air Force granted waivers without a thorough analysis of all available options.¹⁵

The debate over the specialty metal provision was largely fueled by voluntary disclosures, made by companies who sell to DOD, that the companies were in violation of the Berry Amendment specialty metal requirement. For example, the National Semiconductor Corporation disclosed that specialty metal used in its products do not meet the requirement. "To the best of our knowledge, no other semiconductor manufacturer currently is capable of meeting that standard," wrote Gerry Fields, Vice-President; Texas Instruments and the Intel Corporation made similar disclosures. Each company has stated that, due to the global supply chain for their production line, they would be unable to meet present and future specialty metal requirements.¹⁶ The Semiconductor Industry Association (SIA), which represents

¹⁴ Haflich, Frank. "Latest Buy America" Waiver Fuels Probe of Metals Impact, *American Metals Market*, March 25, 2003.

¹⁵ Government Accountability Office. Defense Procurement: Air Force Did Not Fully Evaluate Options in Waiving Berry Amendment for Selected Aircraft. GAO-05-957, September 2005, 21 p. A list of Berry Amendment waivers granted by DOD since June 2003 appear in the Appendices of this report.

¹⁶ Memorandum on Berry Amendment/Buy American Act - DFARS Clause 252.225-7014, Gerry Fields, Vice-President, Worldwide Quality Network and New Product Execution. National Semiconductor Corporation, March 7, 2006; also, Request for Confirmation of (continued...)

about 85% of U.S.-based semiconductor industry, states that integrated circuits from products made by SIA member companies may contain small quantities of non-compliant specialty metal. Such quantities constitute a small percentage of the item's overall metal content. Further, SIA opines that the application of a domestic preference to specialty metal, as currently applied by DOD and the FY2007 Defense Authorization bill, does not take into account the economic realities that have shaped the development of the specialty metal industry and indeed the entire global technology sector.¹⁷

During FY2007, DOD approved a "Domestic Non-Availability Determination (DNAD)" to permit the procurement of non-compliant (non-domestic) fasteners.¹⁸ As several suppliers voluntarily disclosed their use of non-compliant specialty metal in defense weapon systems, DOD proposed a temporary modification to the specialty metal provision through a series of interim instructions. On March 10, 2006, the Defense Contract Management Agency issued guidance to its contracting officials on how to handle the acceptance of non-compliant specialty metal, until a long-term solution could be developed. On June 1, 2006, the Undersecretary of Defense for Acquisition, Technology, and Logistics issued a memorandum which authorized a "conditional acceptance and withholding of payment" based on two considerations: (1) a financial consideration (or offset to the federal government) to support the

¹⁶ (...continued)

Compliance with the Berry Amendment, by Brent Thornton, Quality Assurance Manager, HiRel, Defense, and Aerospace Products, March 23, 2006; Memorandum on Domestic Preference for Specialty Metals, *Texas Instruments*, May 12, 2006.

¹⁷ SIA's Position on the Berry Amendment, May 9, 2006. Since 1977, SIA has identified itself as a leading voice for the semiconductor industry. SIA member companies comprise more than 85% of the U.S. semiconductor industry. Collectively, the chip industry employs a domestic workforce of 225,000 people. According to SIA, over 70% of U.S. manufacturing facilities are on U.S. soil, but greater than 75% of the industry revenue is affected by specialty metal provisions. These provisions affect military contracts and the availability of commercial products for the military. SIA points out that procurement regulations affect semiconductors in two ways: first, the military relies on a commercial off-the-shelf (COTS) acquisition model for many components. Second, semiconductors are used in downstream products supplied under military contracts and subcontracts. Because of these trends, they note their customers have a more direct exposure to government procurement than do semiconductor companies themselves. Accessed online at [<http://www.sia-online.org>].

¹⁸ [<http://www.dcmil.dnadmil.mil/dnad/>]. DOD has issued DNADs for a number of items. In the Fastener DNAD, it was determined that satisfactory quality and sufficient quantity of specialty metal in the form of fasteners could not be procured as and when needed. Subsection (b) of 10 U.S.C. 2533b states that if such a determination is made, subsection (a) does not apply. Thus, the restriction in subsection (a) of 10 U.S.C. 2533b does not apply to fasteners. Contracting officers may procure end items, and components thereof, containing fasteners, notwithstanding the country where the specialty metals contained in such items were melted or produced. DOD will revisit the basis for this DNAD if it learns that the circumstances which formed the basis of the determination have changed. Thus, the DNAD will be revised if and when compliant specialty metal of satisfactory quality and sufficient quantity, in the required form, can be procured as and when needed.

conditional acceptance, and (2) a comprehensive corrective action plan provided by the contractor.¹⁹

Effect on Joint Ventures and Partnerships. Many of the companies that signaled their inability to meet the specialty metal requirement were part of the Berry Amendment Reform Coalition, an organization of industry associations that represents thousands of companies that provide products, services, and personnel to the federal government. The Coalition asserts that the specialty metal provision can have a harmful effect on the ability of defense contractors to partner with other companies. Prime contractors who rely on small and mid-size companies to deliver components, such as fasteners and components from electronic circuit boards, find compliance with the Berry Amendment may be nearly impossible. According to the Coalition, because of Berry Amendment requirements, the cost of a fastener for a military plane can be as much as 5 times more than the cost of a fastener for a commercial airplane. Additionally, the cost of using domestic titanium (for a U.S. company) can be as much as 40% higher than the cost of using non-domestic titanium.²⁰

The Administrative Burden. The cost of compliance with administrative requirements of the specialty metal provision could be unsustainable. Many companies report that they are unable to develop a compliance measure that would support a 100% across the board systematic reporting system of every type of metal that is used in the melting process. Such a system of compliance would be difficult, if not impossible to maintain. Further, since contractors have smaller percentages of their business line devoted to DOD contracts, it is not cost-effective for contractors to develop such a system. Many have signaled that if forced to do so, they would terminate their business relationship with DOD and increase their capacity for commercial work.

Enforcement. Failure to adhere to the specialty metal provision can be costly to DOD contractors. For example, federal law required that parts made for the F-15 Eagle and the F/A-18 Hornet fighters be composed entirely of domestic titanium. Boeing was required to use domestically melted titanium in C-17 transport plans, F-15 fighters and F/A-18 fighter and attack planes during the 1990s, but failed to do so. The federal government maintained that the delivery of non-conforming aircraft violated the False Claims Act.²¹ Boeing was charged with violating the False Claims

¹⁹ Defense Contract Management Agency, Interim Instruction, Non-compliance with the Preference for Domestic Specialty Metals Provision, DFARS 252.225-7014, revised March 10, 2006, 4 p.; and OUSD(A&TL). Memorandum on Berry Amendment Compliance for Specialty Metals, by Kenneth J. Krieg, June 1, 2006, 2 p.

²⁰ Senate Berry Amendment Streamlining Proposal: Myth versus Reality. A position paper of the Berry Amendment Reform Coalition. July 18, 2006, 4 p. The Berry Amendment Reform Coalition is an organization of about a dozen industry associations that reportedly support alternative approaches that promote a reasonable and balanced solution. [<http://www.nedassoc.org/>].

²¹ Title 31, U.S.C. 3729-3733. Under the False Claims Act, those who knowingly submit, or cause another person or entity to submit, false claims for payment of government funds

Act because it used Russian-melted titanium in the manufacture of military aircraft. While the case was under investigation, the federal government withheld a \$9.6 million contract payment from Boeing. Boeing and the federal government reached a \$6 million settlement. Boeing also agreed to forfeit the remaining \$3.6 million of the contract payment.²²

Reliability

In Urgent Situations and Times of War. The issue of reliability has been the cornerstone of why domestic source restrictions, like the specialty metal provision, are viewed by some as essential to the viability of the domestic defense industrial base. Central to the issue of reliability is the basic premise upon which the Berry Amendment was first adopted. The Berry Amendment, which dates from the eve of World War II, was established for a narrowly defined purpose: to ensure that U.S. troops wore military uniforms wholly produced within the United States and to ensure that U.S. troops were fed with food products solely produced in the United States.²³ There were at least two congressional concerns: (1) that the United States maintain a vibrant domestic industrial base by requiring that military troops wear uniforms made in the United States, and consume food produced in the United States; and (2) that the nation be prepared in the event of adversity or war. So the dominant congressional belief has maintained that the United States has an obligation to see that domestic industries remain productive.

Many view domestic source restrictions, like the specialty metal provision, as a way to insure that, in urgent situations and times of war, the United States will have access to critical items needed to ensure national security. Those who advocate for maintaining a robust capability among the domestic sources for titanium, as an example, argue that these companies will ensure that, should a global shortage of titanium develop or if the United States loses a key trading partner, the United States will not become unduly dependent on another country for a critical item. Furthermore, having domestic suppliers who have the protection of the Berry Amendment may ensure that domestic production lines remaining open and viable.

²¹ (...continued)

are liable for three times the government's damages, plus civil penalties of \$5,500 to \$11,000 per false claim.

²² "Boeing to pay \$6 million to settle Russian titanium charges." *St. Louis Journal*, September 29, 2004; and "Boeing reaches \$6 million titanium settlement." *Metals Place*, September 29, 2004.

²³ On April 5, 1941, the Berry Amendment was enacted as part of the Fiscal Year (FY) 1941 Fifth Supplemental National Defense Appropriations Act, P.L. 77-29, 10 U.S.C. § 2241 note. The Berry Amendment was made permanent when P.L. 102-396, Section 9005, was amended by P.L. 103-139, Section 8005. Since then, Congress has regularly added or subtracted Berry Amendment provisions. On December 13, 2001, passage of the FY2002 National Defense Authorization Act codified the Berry Amendment, repealing Sections 9005 and 8109 of the above-mentioned bills. The Berry Amendment is now codified at 10 U.S.C. 2533a.

Maintaining a Productive and Profitable Domestic Base. An argument that is often raised is that, as an example, the three domestic titanium producers would not be viable if the Berry Amendment did not exist. Yet a look at the three domestic titanium producers, as illustrated in **Table 1**, reveals that they are robust companies that have different income streams, and are not wholly dependent on the Berry Amendment. Industry estimates are that the domestic titanium producers have about 16% of the defense market, worldwide, and about 99% of the DOD market. One company, Allegheny Technologies, recently announced a \$325-million investment in a titanium sponge facility; this will help the company to increase its capacity to handle additional work, particularly their melt capacity, with the result of increasing their worldwide market share.²⁴

Domestic Restrictions Protect the U.S. Industrial Base. There is a third reason often expressed - that products consumed by Americans should be made at home, and that the Berry Amendment represents jobs for the smaller, domestic companies in America. However, when compared to the jobs generated by the major defense contractors in the global supply chain, the number of local jobs is proportionately smaller.

²⁴ A Roundtable on the Buy American Act and Berry Amendment. Moderated by Robert Dickman, Executive Director of the American Institute of Aeronautics and Astronautics, September 2006.

Table 1. The Three Leading Domestic Titanium Companies

Specialty Metal Companies	Locations	Number of Employees (approximate number)	Annual Sales
Allegheny Technologies	Headquartered in Pittsburgh, PA; operations in Pennsylvania, Alabama, South Carolina, Illinois, Massachusetts; locations in Europe, Asia, Australia	9,500	\$5.45 billion (as of December 31, 2007)
RTI International Metals, Inc.	Headquartered in Niles, Ohio; composed of two business groups, the Titanium Group and the Fabrication & Distribution Group, at 18 locations in the United States, Canada, Europe, and Asia.	1,400	\$505.4 million (as of December 31, 2006)
Titanium Metals Corp. (TIMET)	Headquartered in Denver, CO; R&D in Henderson, NV; Mills in Nevada, Ohio, and Pennsylvania; European operations in England, Wales, France, and Italy	2,400	\$1,183.2 million (as of December 31, 2006)

Source: Financial and company website information, accessed on the Internet, January 31, 2008.²⁵

Options for Congress

It is important to note that the specialty metal provision in the Berry Amendment had been in place since 1972. Any change in the law will likely have both upstream and downstream effects. How will the change affect prime contractors and subcontractors on the second, third, and fourth tiers, as well as U.S. domestic suppliers? It may take some time for DOD to implement the change in policy.

Six possible options for policymakers to consider are listed below: (1) eliminate the specialty metal provision, or eliminate the Berry Amendment; (2) combine the Berry Amendment and the Buy American Act into one statute; (3) enforce a new specialty metal provision; (4) limit the inclusion of non-compliant specialty metal; (5) require more congressional oversight; and (6) convene a blue-ribbon panel, a "Specialty Metal Commission."

²⁵ The source for this information was the individual company websites as well as the Hoover Financial Index. Also, additional research was conducted by Carolyn Smith of the Knowledge Services Group, Foreign Affairs, Defense and Trade Division, Congressional Research Service.

Eliminate the Specialty Metal Provision

Congress could eliminate the specialty metal provision. Congress could also eliminate the Berry Amendment. Some question whether the Berry Amendment is still a good policy, given the global supply chain; others question whether each item needs the protection of a domestic source policy.

The effect: Eliminating the specialty metal provision or the Berry Amendment would be met with fierce opposition, particularly from domestic suppliers without a strong foreign market. Domestic source restrictions like the Berry Amendment, to some extent, do help to insure that there is a dedicated domestic source for DOD products.

Combine the Berry Amendment and the Buy American Act. One option is to combine the Berry Amendment and the Buy American Act (BAA) into one statute. The Berry Amendment is often confused with the BAA; often the two legislative initiatives are referred to interchangeably. BAA is the major domestic preference statute of the federal government, and prohibits the federal government from procuring items that are less than 50% domestic in origin.²⁶ The BAA governs all federal government procurement, not just DOD's procurement. Since the Berry Amendment and BAA have similar goals, one solution would be to create one standard – to marry the Berry Amendment and BAA into one domestic source standard. For example, since the Berry Amendment requires a 100% compliance, and the Buy American Act requires a 51% compliance, one alternative would be that the combined Berry Amendment/BAA could have a 65% compliance requirement.

Legislative initiatives have been introduced to change the BAA. One example, the Buy American Improvement Act of 2005, was introduced during the first session of the 109th Congress; if enacted into law, this bill would have raised the Buy American Act's minimum domestic content standard from 51% to 75%, an amount much closer to the 100% standard of the Berry Amendment. Senator Feingold introduced this bill and offered the following comments:

The bill that I am introducing today, the Buy American Improvement Act, focuses on the Federal Government's responsibility to support domestic manufacturers and workers and on the role of Federal procurement policy in achieving this goal. The reintroduction of this bill, which I first introduced in 2003, is part of my ongoing effort to find ways to stem the flow of manufacturing jobs abroad... This (Buy American Act of 1933) is an important law but, regrettably, it contains a number of loopholes that make it too easy for government agencies to buy foreign-made goods. My bill, the Buy American Improvement Act, would strengthen the existing act by tightening its waiver provisions. Secondly, my bill would increase the minimum American content standard qualification under the Act from the current 50 percent to 75 percent. The definition of what qualifies as an American-made product has been a source of much debate. To me, it seems clear that American-made means manufactured in this country. This

²⁶ See CRS Report 97-765, *The Buy American Act: Requiring Government Procurements to Come from Domestic Sources*, by John R. Luckey.

classification is a source of pride for manufacturing workers around our country. The current 50 percent standard should be raised to a minimum of 75 percent.”²⁷

The effect: Although the bill did not survive, there was some support in the Congress for raising the Buy American Act minimum domestic content standard. While combining the two legislative initiatives appears to be a simpler solution, DOD would likely object because, with a more restrictive requirement, procurement costs for the federal government’s goods and services would likely increase.

Enforce the New Specialty Metal Provision

One new specialty metal provision became effective in the FY2007 National Defense Authorization Act, while modifications to these provisions were enacted in the FY2008 National Defense Authorization Act. The first provision prohibits DOD from using funds for “end items or components” for aircraft, missile and space systems, ships, tank and automotive items, weapon systems, or ammunition containing a specialty metal not melted or produced in the United States.²⁸ This provision grants the Secretary of Defense the authority to give a “one-time waiver” of the specialty metal domestic source requirement, under certain conditions.²⁹

Finally, the new specialty metal provision authorizes the creation of a Strategic Materials Protection Board. The Board would evaluate whether each item under the Berry Amendment should be covered, and determines if and when new items should be added. The Board should represent both public and private sectors, meet periodically, and publish its proceedings in the Federal Register.

Implementation of the modifications to the specialty metal provision (found in the FY2008 National Defense Authorization Act) will take a measured and

²⁷ S. 395, The Buy American Improvement Act of 2005.

²⁸ This provision prohibits DOD or a prime contractor from purchasing metal not wholly domestic. A number of exceptions may be granted under the new provision. The exceptions are: (1) when the available quantity and quality are insufficient; (2) for “unusual and compelling circumstances;” (3) for existing reciprocal and offsetting trade agreements with foreign governments; (4) with the requirements of section 36 of the Arms Export Control Act (22 U.S.C. 2776) and with 10 U.S.C. 2457; (5) for commissaries, exchanges, and other nonappropriated fund instrumentalities; (6) for purchases under the simplified acquisition threshold; (7) for purchases of electronic components where the degree of specialty metal content is “de minimis” in value, compared to the overall value of the lowest level electronic component produced that contains such specialty metal.

²⁹ The conditions are: (1) the metals were incorporated into items produced, manufactured, or assembled in the United States before the date of enactment of this Act, and (2) contracting officials determine that the contractor is in compliance with the specialty metals provision; that it would not be practical or economical to remove the non-compliant specialty metals; and, that the contractor has submitted a plan to ensure compliance with the specialty metals requirement; (3) the non-compliance is not knowing or willful, and (4) the Undersecretary of Defense for Acquisition, Technology, and Logistics or the military service acquisition executive gives final approval.

studied approach. Congress and DOD will need to come to terms with what these modifications mean.

Amend the Defense Federal Acquisition Regulation Supplement, Part 225.872-1. Congress could recommend that DOD amend the “List of Qualifying Countries” by adding the United States as a “qualified country.” In this way, domestic companies would have an opportunity to compete on an equal basis in the global supply chain for specialty metal, and not have to pay more for materials nor undergo a rigorous accounting of its sources for metal.

Limit the Use of Non-Compliant Specialty Metal

Congress could limit the use of non-compliant specialty metal. One approach is the application of a market-based” standard – so that DOD can tie the amount of non-compliant specialty metal permitted to the percentage of business that the contractor has with DOD – so if a contractor acquires 16% of the DOD market, it will be permitted to use 16% of non-compliant specialty metal.

Require More Congressional Oversight

Congress Could Require Congressional Approval Before Non-Compliant Specialty Metal Can Be Used in Certain Defense Contracts.

As an example set forth in 10 U.S.C. 2306(b) Congress enacted six legal criteria that must be met for the Multi-Year Procurement Program(MYP) to be operational.³⁰ Such a set of conditions could determine under what circumstances non-compliant specialty metal could be used in defense contracts, and might include the following criteria:

- That the use of non-compliant specialty metal will result in a substantial savings of the total anticipated costs throughout the life of the contract;
- That the percentage of specialty metal used for the weapons program is expected to remain substantially unchanged during the contract period, in terms of rate of production and procurement, and total quantities;
- That the contract for the use of non-compliant specialty metal will be subject to re-competition on a five-year basis, to give the domestic specialty metal industry an opportunity to develop the capacity and capability to meet future program requirements;

³⁰ According to the Defense Acquisition University, a multi-year procurement (MYP) is “a method of competitively purchasing up to 5 years’ requirements in one contract, funded annually as appropriations permit.” Congress set up specific rules that must be met before a program gains MYP status.

- That the estimates of both the cost of the contract and the anticipated cost avoidance are realistic and supportable through independent audits and investigations;
- That there is a reasonable expectation that throughout the life of the contemplated contract period, the head of the military service will request funding for the contract, at the level required, to avoid contract cancellation;
- and, that the use of such non-compliant specialty metal, in this particular weapons system, is critical to the national security of the United States.

The effect: Congress has used six criteria to evaluate each weapon program's appropriateness for MVP status, and has reached conclusions as to when a weapons program does not meet all of the requirements for MVP. The process has been perceived, for the most part, as fair and balanced.

Require More Transparency and Openness in the Use of Specialty Metal for All Defense Contracts Regarding Costs and Performance. Congress could require that all Request for Proposals³¹ for defense contracts include the specialty metal provision, where applicable, and publish the rules governing the use of non-compliant specialty metal on the Federal Business Opportunities website. Once the contracts are awarded, Congress could require that any modifications or changes to the program that impact on the six designated criteria must be reported to Congress within thirty days (rather than wait until the next cycle of congressionally-directed hearings).

Require DOD to Publicly Disclose When Waivers Are Granted. Congress could require publication of the number and types of waivers granted to purchase items that are non-compliant, and tighten the waiver process so that waivers are not granted for inappropriate or arbitrary reasons.

The effect: Requiring more transparency and openness may pose more of an administrative burden on DOD. However, more transparency engenders more public confidence in the process.

Require a Congressional Report for Each Platform/Component Where Foreign Specialty Metals Are Used in Defense Contracts. One approach that Congress may consider is to require DOD to produce a separate report for each platform or component of a weapons program where foreign specialty metal are used. For example, in the Future Combat System, where there are about 20-24 separate platforms, each platform would be supported by a separate report which calculates the sources, types, and percentages of specialty metal content, both foreign and domestic.

³¹ A Request for Proposal is a formal process for companies to submit bids for contracts.

The effect: Examining the specialty metal content by platform will get at data that is often buried in the aggregate numbers of larger reports on the entire weapons program. The level and specificity of detail could pose an administrative burden on DOD and defense contractors.

Grant a Time-Limited Period of Acceptance Under the Specialty Metal Provision to Give DOD and Congress Time to Study the Upturns and Downturns in the Market. A time-limited period of acceptance would mean a periodic review of the specialty metal provision and its effect on the industrial base on each protected item. It may be that all domestic source items need the protection of the Berry Amendment or other domestic source restrictions, but not all of the time, nor at the same time. Such granting of protection could be based on market forces and more tied to forecasts of upturns or downswings in the market.

This would also give Congress an opportunity to study the effect of the Berry Amendment and the specialty metal provision on socioeconomic subsidy programs for small and minority-owned businesses.

The effect: It is difficult to predict the effect because the Berry Amendment has never been tied to market forces or to the state of the economy.

Grant Prime Contractors the Authority to Conditionally Accept Non-Compliant End Items Without Fear of Substantial Penalties.

Congress could shift the authority and responsibility to the prime contractor, rather than to DOD, to provide a type of conditional acceptance of certain items. Congress could also give the prime contractor the authority, under a prescribed set of circumstances, to waive the responsibility of the “downstream contractor” on the 2nd, 3rd, or 4th tiers of the supply chain, meaning that these contractors would not have to account for the accounting of the percentages of non-compliant specialty metal used in end items.

Encourage the Use of Domestic Specialty Metal. Congress could develop steps to further support a stronger domestic specialty metal industry; one way is by encouraging the development technological capabilities and advances by providing tax incentives for investment in scientific and manufacturing technology. Congress could create a socioeconomic subsidy program to support the domestic specialty metal suppliers; one approach would be to create a partnership between DOD and domestic suppliers. Such an approach was described as a way to develop a greater capacity to meet the delivery requirements for aviation parts in the military, as noted in the FY2007 National Defense Appropriations Act, P.L. 109-289), where the increased demand for domestic steel suppliers was highlighted:

The Department of Defense's demand for iron-based alloy aviation specialty steels has dramatically increased as a result of continuing deployments to the overseas theaters of operation. Today, there is only one domestic supplier for a unique process which utilizes vacuum induced melt/vacuum arc re-melt, the process which gives aviation grade steels their required properties. These specialty steels are critical to building high technology U.S. military weapon systems. Further, there has been a related and dramatic increase in the raw material needed to make these specialty steels. Lead times for these raw materials have grown from 3 months to 1

year. According to the Army, the overall effect on lead times for spare part deliverables has swelled in some cases to greater than 24 months. As such, the conferees encourage the Department of Defense to partner with domestic industry to develop a greater capacity to meet the delivery requirements for aviation parts to the military within an acceptable time frame. The conferees suggest that the Department explore a 50/50 cost share project between the Federal government, private industry, and/or state governments as the best means to create this capacity as rapidly as possible.³²

Appoint a Blue-Ribbon Berry Amendment Commission

Congress could follow the example of the Packard Commission by creating an independent body to study the specialty metal provision, the Berry Amendment, and its impact on the defense industry.³³ The advantage of an independent body is that it can include members of the public and private sectors, congressional, defense industry, and other experts. However, the body has to be *perceived* as being independent, with the power to change existing policy.

³² H.Rept. 109-676.

³³ In July 1985, President Reagan asked David Packard, Chairman of the Hewlett-Packard Corporation and a former Deputy Secretary of Defense, to chair an independent Blue Ribbon Commission which came to be known as the Packard Commission. The Packard Commission was directed to conduct a broad study of defense management including the budget process, procurement, organization and operation, and legislative oversight, and to make recommendations for streamlining and improving defense management. Executive Order 12526, July 15, 1986.